Switch-Mode and Uninterruptible Power Supplies, Electronic Fuses

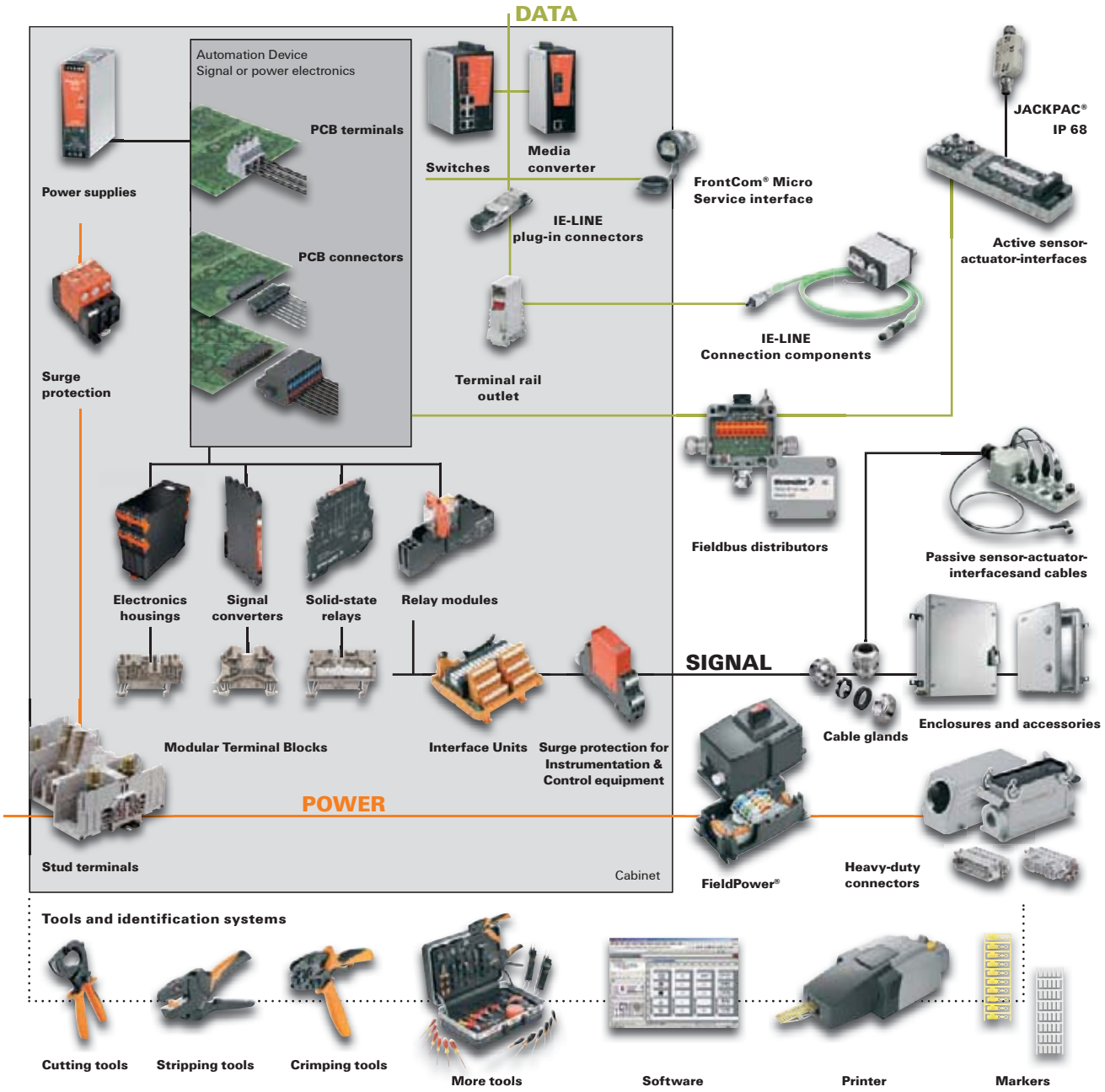
Catalogue 2013

Power Supply

Weidmüller

The World of Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. Immerse yourself in our world of Industrial Connectivity.
Let's connect.



Switch-Mode and Uninterruptible Power Supplies, Electronic Fuses
Catalogue 4.3

Power supplies – Overview

connectPower 1ph PRO-M

- Single-phase switched-mode power supply modules, very slim design
- High degree of efficiency
- Power category 70...1,000 W
- Up to five devices can be connected in parallel without a diode module
- International approvals

connectPower 3ph PRO-M

- 3-phase switched-mode power supply modules, very slim design
- High degree of efficiency
- Power category 120...1,000 W
- Up to five devices can be connected in parallel without a diode module
- International approvals

connectPower PRO-M Extension modules

- Capacity module for increasing the peak current
- Diode modules for redundant construction
- Relay module for monitoring the output voltage

connectPower PRO-M Application solutions

- Wide-range input
  85...264 V AC
  80...430 V DC
- Alarm relay
- Metal snap-on foot
- International approvals

connectPower 1ph PRO-H

- Single-phase switch-mode power supplies
- High MTBF values
- Cl. I Div. 2 + ATEX
- Performance class: 70 to 600 W
- Output: 12, 24, 36 and 48 V DC

connectPower PRO-H Multi-phase

- Multi-phase switch-mode power supplies
- 85...132 / 187...550 V AC
- UL approval
- Performance class: 180 to 600 W

connectPower PRO-H Redundancy modules

- 15 A or 25 A
- 100 % load sharing
- Remote On/Off
- International approvals
- Cl. I Div. 2 + ATEX

connectPower 1ph ECOLINE

- Single-phase switched-mode power supply modules
- Compact form
- Metal housing
- Power category 70...1,000 W
- International approvals

connectPower 3ph ECOLINE

- 3-phase switched-mode power supply modules
- Compact form
- Metal housing
- Power category 120...1,000 W
- International approvals

connectPower ECOLINE Diode modules

- Diode module for 100 % decoupling of switched-mode power supply modules
- Optimum doubling of output power
- Redundancy operation
- Up to 40 A output current can be set
- International approvals

connectPower 1ph INSTAPOWER

- Single-phase switched-mode power supply modules for the distribution board
- Compact form
- Power category 24 and 48 W
- Universal input and output voltage 5...48 V
- International approvals

connectPower 1ph WAVEPOWER

- Single-phase switched-mode power supply unit
- Slim design 22.5 mm
- Power category 12 W
- International approvals

connectPower 1ph

- Single-phase switched-mode power supply modules
- Metal housing
- Power category 55 W and 160 W
- Universal input and output voltage 5...48 V
- International approvals
- 300-watt performance category, with active PFC

connectPower 3ph

- 3-phase switched-mode power supply modules
- Metal housing
- Up to 5 devices can be directly connected in parallel
- Professional display and processing of all relevant signal states
- International approvals

connectPower DC/DC converters

- Compact form
- Metal housing
- Universal input and output voltage of 5 V to 48 V
- International approvals

connectPower UPS control unit

- Two 24 V models in 10 A/20 A and 40 A
- Temperature-compensated charging feature, for a long battery life
- Integrated battery diagnostics including continuous availability test
- Status relay and additional transistor outputs for remote monitoring
- Convenient LED displays for easy error analysis

connectPower battery module

- Maintenance-free, lead-acid batteries from 1.3 Ah to 17 Ah
- Integrated temperature sensor for optimal battery charging
- Integrated fuse for reliable activation
- Support capacity up to 40 A / 30 min or 10 A / 90 min
- Robust metal housing for wall mounting

connectPower buffer module

- Maintenance-free UPS on a capacitor basis, with a capacity to support 20 A / 200 ms
- Parallel switching to increase the output current or support time
- Status notification via LED and relay contact

Power supplies – Overview

compactPower 1ph unregulated power supplies

- Single-phase unregulated power supplies
- Compact form
- Standard voltage ~230/400 V to IEC38 +/– 15 V tap
- Reliable short-circuit and overload protection

compactPower 3ph unregulated power supplies

- 3-phase unregulated power supplies
- Compact form
- Nominal voltage to IEC38 +/- 5 V tap
- Reliable short-circuit and overload protection

WAVEGUARD

- Electronic fusing
- Visual fault indication and potential-free contact
- Reset input
- Compact form

FieldPower® IP 65 switched-mode power supply

- 3-phase switch-mode power supply unit, 24 V / 5 A on FieldPower® power bus, 5 x 2.5...6 mm²
- Integrated input fuse
- Decentralised 24 V DC generation and distribution for widely distributed facilities
- Reduced voltage drops in DC systems
- Increased energy efficiency because of minimal transmission losses

Electrical cabinet socket outlet

- Simple installation in electrical cabinet
- TS 35 module can be rail mounted
- VDE mark of conformity
- Two-pole with earthing contact

Power supplies – Selection

PRO-M

Mains 1ph Input voltage 85...265 V AC, 80...370 V DC Input frequency 50 / 60 Hz CE, cURus, cULus; C-Tick, GL					
Output voltage			24 V		
Output current	3 A	5 A	7,5 A	10 A	20 A
Order No.	8951330000	8951340000	8951350000	8951360000	8951370000
Page	A.5	A.5	A.6	A.6	A.7

PRO-M expansion modules

Mains 1ph Input voltage 85...265 V AC, 80...430 V DC, Input frequency 50 / 60 Hz CE, cURus*, cULus; C-Tick, GL				
Output voltage	Diode module	Diode module	Relay module	Capacity module
Output current	20 A	40 A		
Order No.	1222210000	1222220000	1222230000	1222240000
Page	A.10	A.10	A.11	A.12

PRO-H

Mains 1ph Input voltage 85...264 V AC, 85...132 / 187...265 V AC (Depending on model) Input frequency 50 / 60 Hz CE; UL; CSA; Class I Div.2; ATEX Zone 2 (Depending on model)				 Similar to illustration		
Output voltage	12 V	12 V	24 V	24 V	24 V	24 V
Output current	6 A	12 A	3.8 A	3.8 A (CL 2)	7.5 A	15 A
Order No.	1105430000	1105440000	1105790000	1194410000	1105810000	1105820000
Page	A.17	A.17	A.18	A.18	A.19	A.19

PRO-M

Mains 1ph / 3ph Input voltage 85...265 V AC, 120...300 V DC Input frequency 50 / 60 Hz CE, cURus, cULus; C-Tick					
Output voltage	1ph / 24 V	3ph / 24 V			
Output current	40 A	5 A	10 A	20 A	40 A
Order No.	8951380000	8951390000	8951400000	8951410000	8951420000
Page	A.7	A.8	A.8	A.9	A.9

PRO-M application solutions

Mains 1ph Input voltage 85...265 V AC, 80...430 V DC, Input frequency 50 / 60 Hz CE, cURus*, cULus; C-Tick, GL		
Output voltage	24 V	
Output current	10 A	
Order No.	1165480010	
Page	A.15	

PRO-H

Mains 1ph Input voltage 85...264 V AC, 85...132 / 187...265 V AC (Depending on model) Input frequency 50 / 60 Hz CE; UL; CSA; Class I Div.2; ATEX Zone 2 (Depending on model)		 Similar to illustration	 Similar to illustration	 Similar to illustration		
Output voltage	24 V	36 V	48 V	48 V	48 V	48 V
Output current	25 A	16.5 A	2 A	4 A	7.5 A	12.5 A
Order No.	1105840000	1194430000	1194420000	1105850000	1105860000	1105870000
Page	A.20	A.20	A.21	A.21	A.22	A.22

Power supplies – Selection

PRO-H redundancy module

24 V DC CE, UL, UR, Class I Div.2; ATEX		
Output voltage	24 V	24 V
Output current	15 A	20 A
Order No.	1105880000	1105890000
Page	A.25	A.25

INSTAPOWER

Mains 1ph Input voltage 85...265 V AC, 120...300 V DC, 110...370 V DC* Input frequency 50 / 60 Hz CE, cURus*, cULus; * Not all models		 class 2		 class 2
Output voltage	5 V		12 V	
Output current	2 A	5 A	1.5 A	4 A
Order No.	9928890005	8754960000	9928890012	8754970000
Page	A.40	A.41	A.39	A.42

connectPower

Mains 1ph Input voltage 85...265 V AC*, 120...300 V DC* Input frequency 50 / 60 Hz CE, UR / UL, CSA * Not all models					
Output voltage	5 V		15 V		24 V
Output current	3 A	8 A	3 A	8 A	2.3 A
Order No.	9927480005	9925340005	9927480012	9925340012	9927480024
Page	A.47	A.49	A.47	A.49	A.46

PRO-H

Mains 1ph/2ph Input voltage *400...500 V AC, *100...500 V AC *depending on model Input frequency 50 / 60 Hz CE; UL; UR;	 Similar to illustration	 Similar to illustration	 Similar to illustration
Rated input voltage	100...500 V AC	100...500 V AC	100...500 V AC
Output voltage	24 V	24 V	24 V
Output current	7.5 A	15 A	25 A
Order No.	1194480000	1194490000	1194310000
Page	A.23	A.23	A.24

INSTAPOWER

Mains 1ph Input voltage 85...265 V AC, 120...300 V DC, 110... 370 V DC Input frequency 50 / 60 Hz CE, cURus*, cULus; * Not all models			 class 2		 class 2
Output voltage	15 V	24 V		28 V	48 V
Output current	1.5 A	1 A	2 A	1 A	1 A
Order No.	9928890015	9928890024	8739140000	9928890028	8879230000
Page	A.39	A.38	A.43	A.38	A.44

connectPower

Mains 1ph / 3ph Input voltage 85...265 V AC*, 120...300 V DC* Input frequency 50 / 60 Hz CE, UR / UL, CSA * Not all models					
Output voltage	1ph / 24 V		1ph / 48 V		3ph / 24 V
Output current	6.5 A	12.5 A	1.04 A	3.5 A	2.3 A
Order No.	9925340024	9916250024	9927480048	9925340048	9917790324
Page	A.48	A.50	A.46	A.48	A.51

Power supplies – Selection

ECOLINE

Mains 1ph Input voltage 90...265 V AC Input frequency 50 / 60 Hz Partially switchable from 115 / 230 V AC CE, cURus*, cULus*; GL*, GOST * Not all models					
Output voltage	24 V				
Output current	3 A	5 A	10 A	20 A	40 A
Order No.	8708660000	8708670000	8708680000	8778870000	8862780000
Page	A.28	A.29	A.30	A.31	A.32

ECOLINE diode modules

40 V DC max. CE, cURus, cULus; GOST			
Output voltage	40 V		
Output current	2 x 10 A		2 x 20 A
Order No.	8710620000		8768650000
Page	A.37		A.37

connectPower DC/DC converter

Input voltage 9...16 V DC CE, UL / UR, CSA, Class 1, Div.2			
Output voltage	12 V	15 V	24 V
Output current	3 A	3 A	2 A
Order No.	9919371212	9919371215	9919371224
Page	A.53	A.53	A.53

ECOLINE

Mains 3ph Input voltage 3x 340...575 V AC, Input frequency 50 / 60 Hz CE, cURus, cULus; GL*, GOST * Not all models				
Output voltage	24 V			
Output current	5 A	10 A	20 A	40 A
Order No.	8862730000	8708700000	8708710000	8708730000
Page	A.33	A.34	A.35	A.36

WAVEPOWER

Mains 1ph 85...264 V AC 120...300 V DC CE, UL, CSA		
Output voltage	24 V	
Output current	0.5 A	
Order No.	9918840024	
Page	A.45	

connectPower DC/DC converter

Input voltage 18...30 V DC CE, UL / UR, CSA, Class 1, Div.2					
Output voltage	5 V	12 V	15 V	24 V	24 V
Output current	8 A	3 A	3 A	2 A	10 A
Order No.	9919372405	9919372412	9919372415	9919372424	1313320010
Page	A.54	A.54	A.52	A.52	A.57

Power supplies – Selection

UPS control unit

Input voltage 20 ... 30 V DC CE, TÜV, cURus*, cULus*, GL* * in preparation		
Output voltage	24 V	24 V
Output current	max. 24 A	max. 48 A
Order No.	1370050010	1370040010
Page	B.5	B.5

Buffer module

Input voltage 22.5 ... 30 V DC CE, TÜV, cURus, cULus, GL* * in preparation	
Output voltage	24 V DC
Output current	max. 22 A
Order No.	1251220000
Page	B.8

WAVEGUARD

with screw connection Rated voltage 24 V DC CE, cURus					
Output voltage	24 V				
Output current	1.6 A	3.15 A	6.3 A	8 A	0.5...5 A
Order No.	8618890000	8618910000	8618930000	8618940000	8710270000
Page	C.4	C.4	C.5	C.5	C.6

compactPower 1ph unregulated power supplies

Mains 1ph Input voltage 230 V / 400 V ± 15 V Input frequency 50 / 60 Hz CE, cURus, cULus						
Output voltage	24 V					
Output current	1.5 A	3 A	6 A	8 A	11 A	18 A
Order No.	8575260000	8575270000	8575280000	8575300000	8575310000	8575320000
Page	D.4	D.4	D.5	D.5	D.6	D.6

Battery module

					
Rated voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Nominal capacity	1,3 Ah	3,4 Ah	7,2 Ah	12 Ah	17 Ah
Order No.	in preparation	1251070000	1251080000	1251090000	1251110000
Page		B.6	B.6	B.7	B.7

WAVEGUARD

with tension clamp connection Rated voltage 24 V DC CE, cURus					
Output voltage			24 V		
Output current	1.6 A	3.15 A	6.3 A	8 A	0.5...5 A
Order No.	8621040000	8621030000	8621020000	8621010000	8727630000
Page	C.4	C.4	C.5	C.5	C.6

compactPower 3ph unregulated power supplies

Mains 3ph Input voltage 3x 400 V ± 5 % Input frequency 50 / 60 Hz CE, cURus, cULus						
Output voltage			24 V			
Output current	11 A	18 A	22 A	26 A	32 A	42 A
Order No.	8628620000	8628630000	8628650000	8628660000	8628670000	8628680000
Page	D.7	D.7	D.8	D.8	D.9	D.9

Power supplies – Selection

FieldPower® IP65 switched-mode power supply

Mains 3ph Input voltage 400 V AC		
Output voltage	24 V	24 V
Output current	5 A	5 A
Order No.	1132320000	1101940000
Page	E.6	E.7

Electrical cabinet socket outlet

Earthed socket outlet for the TS35 mounting rail VDE	
Output voltage	250 V AC
Output current	16 A
Order No.	8734580000
Page	E.24

Switch-mode power supplies

Switch-mode power supplies

The switch-mode power supplies feature a high degree of efficiency, compact dimensions and minimal heat generation.

They are an excellent, reliable solution for providing power in all automation applications – safely providing 24 V DC voltage.

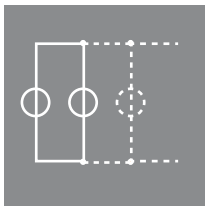
The different product series are optimised for the automation industry: they feature Ex approvals for the processing industry, a flat shape perfect for distribution tasks within buildings, or provide decentralised control voltages.

All-purpose usage: with a wide range of AC/DC inputs, single-, double- or three-phase versions, and a wide temperature range. Additional performance increases are possible using simple parallel circuitry. Weidmüller switch-mode power supplies can be depended upon for all applications because of their high efficiency and their resistance to both short circuits and overloads.

Wedimüller offers a system of one- and three-phase swtich-mode power supplies especially for the PRO-M family. These can be expanded with additional modules to create whole system solutions. The appropriate system can be assembled for any type of application: with redundancy circuits containing decoupled outputs, monitoring of the output voltage or triggering of circuit breakers.

International use

A wide-range input (both DC as well as AC voltages can be used; no switching required) and extensive approvals (UL/CSA and GL (EMC 1 – bridge)).

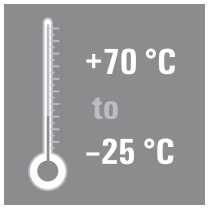


Parallel connection

Module power can be increased by connecting upto five power supplies in parallel without diode module.

Narrow

Space-saving configuration in the switching cabinet through very narrow housing construction and side-by-side connectability.



Robust

Wide temperature range from –25 °C ... +70 °C.

Wide choice

The right power supply for every application: 1-phase 3 A, 5 A, 7.5 A, 10 A, 20 A, 40 A and 3-phase 5 A, 10 A, 20 A, 40 A.

connectPower

connectPower PRO-M

connectPower PRO-H

connectPower ECOLINE

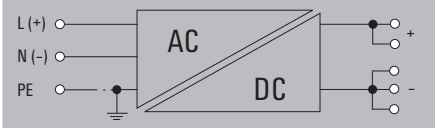
connectPower INSTAPOWER

connectPower WAVEPOWER

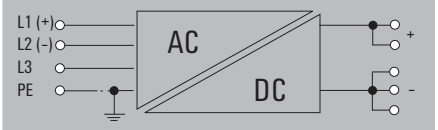
connectPower

connectPower DC/DC converters

connectPower PRO-M



Pay attention to polarity of DC connection



Two-Phase operation also possible

Max. limiting average on state current [A]

Type\Temp.	45°C	50°C	55°C	60°C	65°C	70°C
1ph 24V / 3A	3.6	3.4	3.2	3	2.6	2.3
1ph 24V / 5A	6	5.7	5.3	5	4.4	3.8
1ph 24V / 7.5A	9	8.5	8	7.5	6.6	5.6
1ph 24V / 10A	12	11.3	10.7	10	8.8	7.5
1ph 24V / 20A	24	22.7	21.3	20	17.5	15
1ph 24V / 40A	48	45.3	42.7	40	35	30
3ph 24V / 5A	6	5.7	5.3	5	4.4	3.8
3ph 24V / 10A	12	11.3	10.7	10	8.8	7.5
3ph 24V / 20A	24	22.7	21.3	20	17.5	15
3ph 24V / 40A	48	45.3	42.7	40	35	30

Technical data

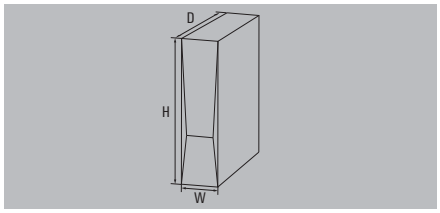
General technical data	
Current limiting	> 120 % I_N
Ambient temp. operating / storage temperature	-25 °C...+70 °C / -40 °C... +85 °C
Max. perm. air humidity (operation)	5 %...95 % RH
Degree of protection	IP20
Class of protection	I, with PE connection
Pollution degree	2
Insulation voltage input/output	3 kV I/O / 2 kV I/earth / 0.5 kV O/earth
MTBF	> 500.000 h acc. to IEC 1709 (SN29500)
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, without diode module
Housing version	metal, corrosion resistant
Indication	operation, green LED
Mounting position, installation notice	horizontal on mounting rail TS35, 50 mm spacing top and bottom for free air circulation, can be mounted side by side with no space in between
EMC / shock / vibration	
Noise emission acc. to EN55022	Class B
Noise immunity tests acc. to	EN61000-4-2 (ESD), EN61000-4-3 und EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	Acc. to EN 61000-3-2
Resistance against vibration and shock	Acc. to EN50178, shock: 30 g in all directions
Electrical safety (applied standards)	
Electrical equipment of machines	Acc. to EN60204
Safety transformers for switched-mode power units	Acc. to EN61558-2-17
Machinery with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PELV acc. to EN60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

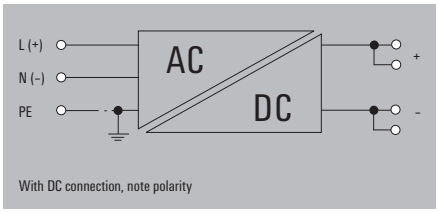
Project-planning data

Type	24 V / 3 A	24 V / 5 A	24 V / 7.5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A
	1 - phase						3 - phase			
Rated input voltage	100...240 V AC						3 x 400...500 V AC			
Mains voltage range	85...264 V AC						3 x 320...575 V AC			
Mains input current	1.3...0.6 A	2.1...0.9 A	2.1...0.9 A	2.8...1.2 A	5.6...2.4 A	11.1...4.7 A	0.3...0.28 A	0.55...0.5 A	1.0...0.9 A	2.5...2.0 A
Rec. fuse [char.]	2 A / D I / II	4 A / D I / II	6 A / D I / II	6 A / D I / II	10 A / D I / II	16 A / D I / II	2 A / D I / II	2 A / D I / II	2 A / D I / II	4 A / D I / II
	6 A, [B]	6 A, [B]	10 A, [B]	10 A, [B]	20 A, [B]	25 A, [B]	-	-	-	10 A, [B]
	2...4 A, [C]	3...5 A, [C]	5...10 A, [C]	5...10 A, [C]	10...12 A, [C]	14...16 A, [C]	1...2 A, [C]	2...3 A, [C]	3...5 A, [C]	6...8 A, [C]
Efficiency @ 230 V AC, @ 3x400 V AC	90 %	90 %	91 %	90 %	90 %	91 %	90 %	90 %	90 %	91 %
Rated power loss [W]	8 W	13 W	18 W	27 W	53 W	95 W	13 W	27 W	53 W	95 W
Installation width mm	33	40	50	60	121	180	40	60	121	180
Input terminals	Screw connection									
Conductor, solid min/max mm^2	0.5...6				0.5...6		0.08...4	0.5...6	0.5...6	
Conductor, flexible min/max mm^2	0.5...2.5				0.5...2.5		0.5...2.5	0.5...2.5	0.5...2.5	
Conductor, AWG/kcmil min/max	26 / 12				26 / 10		28 / 12	26 / 12	26 / 12	
Output terminals	Screw connection									
Number plus/minus	2 / 2	2 / 3								
Conductor, solid min/max mm^2	0.5...6				0.5...6	0.5...16	0.5...6		0.5...6	0.5...16
Conductor, flexible min/max mm^2	0.5...2.5				0.5...2.5	2.5...10	0.5...2.5		0.5...2.5	2.5...10
Conductor, AWG/kcmil min/max	26 / 12				26 / 10	22 / 6	26 / 12		26 / 10	22 / 6

connectPower
PRO-M

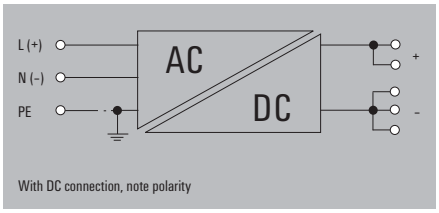
CP M SNT 70W 24V 3A





With DC connection, note polarity

CP M SNT 120W 24V 5A



With DC connection, note polarity

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (Derating @ 100 V AC)	85...264 V AC (Derating @ 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	0.6 A @ 230 V AC / 1.1 A @ 115 V AC	1.1 A @ 230 V AC / 2.0 A @ 115 V AC
DC current consumption	0.25 A @ 370 V DC / 0.7 A @ 120 V DC	0.4 A @ 370 V DC / 1.2 A @ 120 V DC
Input fuse (internal) / making current	Yes / max. 40 A	Yes / max. 40 A
Recommended back-up fuse	2 A / DI, safety fuse 6 A, Char. B, circuit breaker 2...4 A, Char. C, circuit breaker	4 A / DI, safety fuse 6 A, Char. B, circuit breaker 3...5 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC (adjustable via potentiometer on front)	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	3 A @ 60 °C	5 A @ 60 °C
Continous output current @ 24 V DC	3.6 A @ 45 °C, 3.2 A @ 55 °C, 2.3 A @ 70 °C	6.0 A @ 45 °C, 5.3 A @ 55 °C, 3.8 A @ 70 °C
Powerboost @ 24 V DC, 60 °C	3.6 A for 1 min, ED = 5 %	6 A for 1 min, ED = 5 %
General data		
Degree of efficiency	90 % @ 230 V AC / 88 % @ 115 V AC	90 % @ 230 V AC / 88 % @ 115 V AC
Power factor (approx.)	> 0.6 @ 230 V AC / > 0,65 @ 115 V AC	> 0.5 @ 230 V AC / > 0.6 @ 115 V AC
AC failure bridging time @ I_{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 100 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	130 / 33 / 125 mm	130 / 40 / 125 mm
Weight	0.57 kg	0.7 kg
Approvals		
Approvals	cULus; cURus; GL; GOSTME25	CE; cULus; cURus; GL; GOSTME25

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	4 (++ / –)	3 for L/N/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 12
Note		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!	

Ordering data

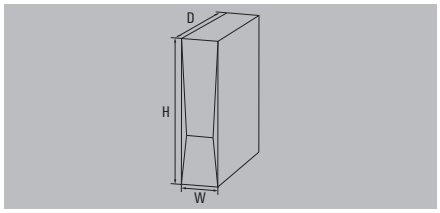
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Plastic clip-on foot	CP M SNT 70W 24V 3A	1	**8951330000**	CP M SNT 120W 24V 5A	1	**8951340000**
Metal clip-on foot	CP M SNT 70W 24V 3A	1	**8951330010**	CP M SNT 120W 24V 5A	1	**8951340010**
Note						

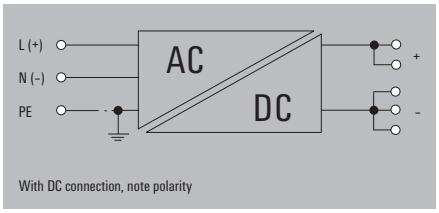
Accessories

Note		

connectPower
PRO-M

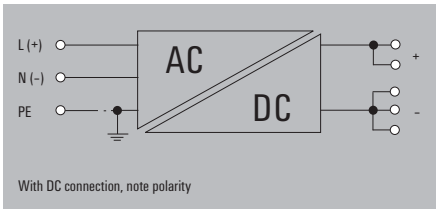
CP M SNT 180W 24V 7.5A





With DC connection, note polarity

CP M SNT 250W 24V 10A



With DC connection, note polarity

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (Derating @ 100 V AC)	85...264 V AC (Derating @ 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	0.9 A @ 230 V AC / 1.8 A @ 115 V AC	1.2 A @ 230 V AC / 2.4 A @ 115 V AC
DC current consumption	0.6 A @ 370 V DC / 1.7 A @ 120 V DC	0.8 A @ 370 V DC / 2.3 A @ 120 V DC
Input fuse (internal) / making current	Yes / max. 40 A	Yes / max. 12 A
Recommended back-up fuse	6 A / DI, safety fuse 10 A, Char. B, circuit breaker 6 A, Char. C, circuit breaker	4 A / DI, safety fuse 10 A, Char. B, circuit breaker 3...4 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC (adjustable via potentiometer on front)	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	7,5 A @ 60 °C	10 A @ 60 °C
Continous output current @ 24 V DC	9.0 A @ 45 °C, 8.0 A @ 55 °C, 5.6 A @ 70 °C	12 A @ 45 °C, 10.7 A @ 55 °C, 7.5 A @ 70 °C
Powerboost @ 24 V DC, 60 °C	9 A for 1 min, ED = 5 %	12 A for 1 min, ED = 5 %
General data		
Degree of efficiency	91 % @ 230 V AC / 88 % @ 115 V AC	90 % @ 230 V AC / 87 % @ 115 V AC
Power factor (approx.)	> 0.94 @ 230 V AC / > 0.99 @ 115 V AC	> 0.99 @ 230 V AC / > 0.97 @ 115 V AC
AC failure bridging time @ I_{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	130 / 50 / 150 mm	130 / 60 / 150 mm
Weight	1.05 kg	1.2 kg
Approvals		
Approvals	CE; cULus; cURus; GL; GOSTME25	cULus; cURus; GL; GOSTME25

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	5 (++ / –)	3 for L/N/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 12
Note		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!	

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Plastic clip-on foot	CP M SNT 180W 24V 7,5A	1	**8951350000**	CP M SNT 250W 24V 10A	1	**8951360000**
Metal clip-on foot	CP M SNT 180W 24V 7,5A	1	**8951350010**	CP M SNT 250W 24V 10A	1	**8951360010**

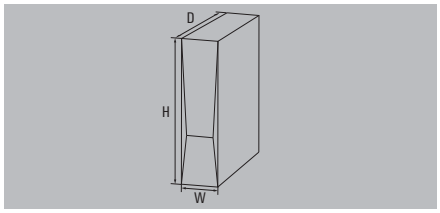
Note

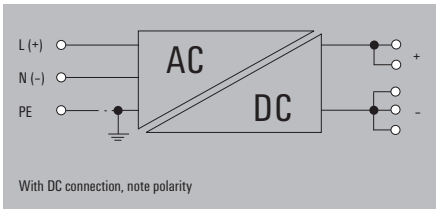
Accessories

Note

connectPower
PRO-M

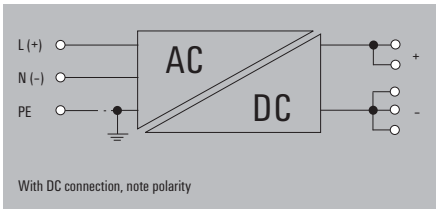
CP M SNT 500W 24V 20A





With DC connection, note polarity

CP M SNT 1000W 24V 40A



With DC connection, note polarity

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (Derating @ 100 V AC)	85...264 V AC (Derating @ 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	2.4 A @ 230 V AC / 4.8 A @ 115 V AC	4.7 A @ 230 V AC / 9.6 A @ 115 V AC
DC current consumption	1.5 A @ 370 V DC / 4.6 A @ 120 V DC	2.9 A @ 370 V DC / 9.1 A @ 120 V DC
Input fuse (internal) / making current	Yes / max. 5 A	Yes / max. 5 A
Recommended back-up fuse	6 A / DI, safety fuse 16 A, Char. B, circuit breaker 6...8 A, Char. C, circuit breaker	16 A / DI, safety fuse 20 A, Char. B, circuit breaker 16 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC(adjustable via potentiometer on front)	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	20 A @ 60 °C	40 A @ 60 °C
Continous output current @ 24 V DC	24 A @ 45 °C, 22.7 A @ 55 °C, 15 A @ 70 °C	48 A @ 45 °C, 42.7 A @ 55 °C, 30 A @ 70 °C
Powerboost @ 24 V DC, 60 °C	24 A for 1 min, ED = 5 %	48 A for 1 min, ED = 5 %
General data		
Degree of efficiency	90 % at 230 V AC / > 85 % at 115 V AC	91 % @ 230 V AC / 88 % @ 115 V AC
Power factor (approx.)	> 0.98 @ 230 V AC / > 0.99 @ 115 V AC	> 0.99 @ 230 V AC / > 0.99 @ 115 V AC
AC failure bridging time @ I_{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3	yes, max. 5
Height x width x depth	130 / 121 / 150 mm	130 / 180 / 150 mm
Weight	2.2 kg	3.9 kg
Approvals		
Approvals	cULus; cURus; GL; GOSTME25	cULus; cURus; GL; GOSTME25

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	5 (++ / –)	3 for L/N/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	2.5 / 10
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 6
Note		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!	

Ordering data

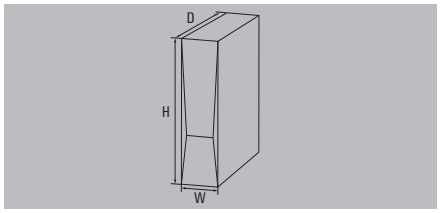
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Plastic clip-on foot	CP M SNT 500W 24V 20A	1	**8951370000**	CP M SNT 1000W 24V 40A	1	**8951380000**
Metal clip-on foot	CP M SNT 500W 24V 20A	1	**8951370010**	CP M SNT 1000W 24V 40A	1	**8951380010**
Note						

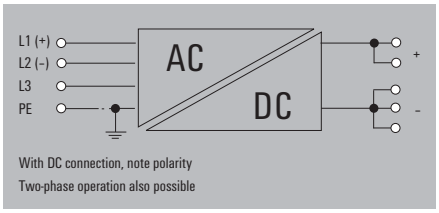
Accessories

Note		

connectPower PRO-M

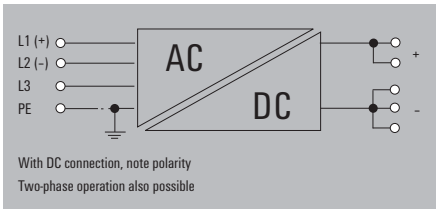
CP M SNT3 120W 24V 5A





With DC connection, note polarity
Two-phase operation also possible

CP M SNT3 250W 24V 10A



With DC connection, note polarity
Two-phase operation also possible

Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0.28 A @ 3 x 500 V AC / 0.3 A @ 3 x 400 V AC	0.5 A @ 3 x 500 V AC / 0.55 A @ 3 x 400 V AC
DC current consumption	0.18 A @ 800 V DC / 0.3 A @ 450 V DC	0.35 A @ 800 V DC / 0.6 A @ 450 V DC
Input fuse (internal) / making current	No / max. 50 A	No / max. 50 A
Recommended back-up fuse	2 A / DI, safety fuse 2...3 A, Char. C, circuit breaker	2 A / DI, safety fuse 2...3 A, Char. C, circuit breaker

Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC (adjustable via potentiometer on front)	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	5 A @ 60 °C	10 A @ 60 °C
Continous output current @ 24 V DC	6.0 A @ 45 °C, 5.3 A @ 55 °C, 3.8 A @ 70 °C	12 A @ 45 °C, 10.7 A @ 55 °C, 7.5 A @ 70 °C
Powerboost @ 24 V DC, 60 °C	6 A for 1 min, ED = 5 %	12 A for 1 min, ED = 5 %
General data		
Degree of efficiency	89 % @ 3 x 500 V AC / 90 % @ 3 x 400 V AC	89 % @ 3 x 500 V AC / 90 % @ 3 x 400 V AC
Power factor (approx.)	> 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC	> 0.65 @ 3 x 500 V AC / > 0.75 @ 3 x 400 V AC
AC failure bridging time @ I_{Nom}	> 50 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	> 40 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	130 / 40 / 125 mm	130 / 60 / 150 mm
Weight	0.7 kg	1.25 kg
Approvals		
Approvals	cULus; cURus; GL; GOSTME25	cULus; cURus; GL; GOSTME25

Connection data		Input	Output	Input	Output
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	5 (++ / –)	4 for L1/L2/L3/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.08 / 4	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		28 / 12	26 / 12	26 / 12	26 / 12
Note		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!	

Ordering data

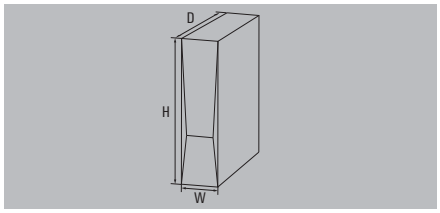
	Type	Qty.	Order No.	Type	Qty.	Order No.
Plastic clip-on foot	CP M SNT3 120W 24V 5A	1	**8951390000**	CP M SNT3 250W 24V 10A	1	**8951400000**
Metal clip-on foot	CP M SNT3 120W 24V 5A	1	**8951390010**	CP M SNT3 250W 24V 10A	1	**8951400010**
Note						

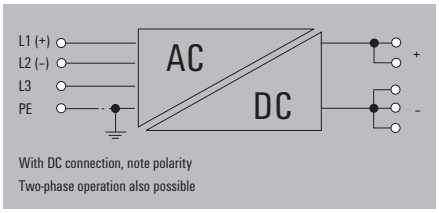
Accessories

Note		

connectPower
PRO-M

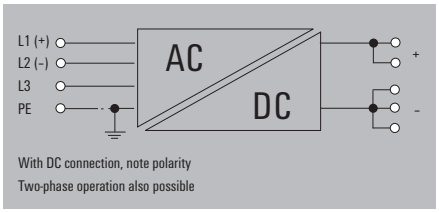
CP M SNT3 500W 24V 20A





With DC connection, note polarity
Two-phase operation also possible

CP M SNT3 1000W 24V 40A



With DC connection, note polarity
Two-phase operation also possible

Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0.9 A @ 3 x 500 V AC / 0.95 A @ 3 x 400 V AC	2.0 A @ 3 x 500 V AC / 2.5 A @ 3 x 400 V AC
DC current consumption	0.7 A @ 800 V DC / 1.2 A @ 450 V DC	1.3 A @ 800 V DC / 2.4 A @ 450 V DC
Input fuse (internal) / making current	No / max. 50 A	No / max. 60 A
Recommended back-up fuse	4 A / DI, safety fuse 3...5 A, Char. C, circuit breaker	6 A / DI, safety fuse 10 A, Char. B, circuit breaker 6...8 A, Char, C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC (adjustable via potentiometer on front)	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	20 A @ 60 °C	40 A @ 60 °C
Continous output current @ 24 V DC	24 A @ 45 °C, 21.3 A @ 55 °C, 15 A @ 70 °C	48 A @ 45 °C, 42.7 A @ 55 °C, 30 A @ 70 °C
Powerboost @ 24 V DC, 60 °C	24 A for 1 min, ED = 5 %	48 A for 1 min, ED = 5 %
General data		
Degree of efficiency	89 % @ 3 x 500 V AC / 90 % @ 3 x 400 V AC	91 % @ 3 x 500 V AC / 91 % @ 3 x 400 V AC
Power factor (approx.)	< 0.69 @ 3 x 500 V AC / > 0.82 @ 3 x 400 V AC	> 0.6 @ 3 x 500 V AC / > 0.6 @ 3 x 400 V AC
AC failure bridging time @ I_{Nom}	> 25 ms at 3 x 500 V AC / > 20 ms at 3 x 400 V AC	> 25 ms at 3 x 500 V AC / > 20 ms at 3 x 400 V AC
Parallel connection option	yes, max. 3	yes, max. 3
Height x width x depth	130 / 121 / 150 mm	130 / 180 / 150 mm
Weight	2.2 kg	4 kg
Approvals		
Approvals	cULus; cURus; GL; GOSTME25	cULus; cURus; GL; GOSTME25

Connection data		Input	Output	Input	Output
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	5 (++ / –)	4 for L1/L2/L3/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm^2	0.5 / 2	0.5 / 2.5	0.5 / 2.5	0.5 / 10
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 6
Note		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!		*) Recommendation applies only to AC operation; the max. permissible operating voltage is to be observed in all cases!	

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Plastic clip-on foot	CP M SNT3 500W 24V 20A	1	**8951410000**	CP M SNT3 1000W 24V 40A	1	**8951420000**
Metal clip-on foot	CP M SNT3 500W 24V 20A	1	**8951410010**	CP M SNT3 1000W 24V 40A	1	**8951420010**
Note						

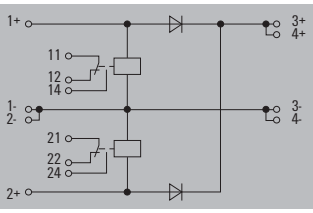
Accessories

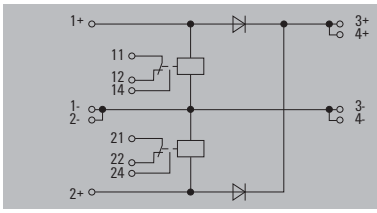
Note		

PRO-M: diode, capacity and relay modules

CP M DM20

CP M DM40





Technical data

Input		
Rated input voltage / DC input voltage range	24 V DC / 18...30 V DC	24 V DC / 18...30 V DC
Input current	2 x 10 A or 1 x 20 A	2 x 20 A or 1 x 40 A
Output		
Rated output voltage / Output voltage	24 V DC ± 1 % / Input voltage - 0.7 V	24 V DC ± 1 % / Input voltage - 0.7 V
Rated (nominal) output current @ U_{Nom}	20 A @ 60 °C	40 A @ 60 °C
Continous output current @ 24 V DC	24 A @ 45 °C, 22.5 A @ 55 °C, 15 A @ 70 °C	48 A @ 45 °C, 45 A @ 55 °C, 30 A @ 70 °C
Voltage monitoring / Floating contact	Yes, In both inputs / Yes	Yes, In both inputs / Yes
Switching thresholds	21.6 V DC, relay is on for Power Good, 20.4 V DC, relay is off for Power Fail	21.6 V DC, relay is on for Power Good, 20.4 V DC, relay is off for Power Fail
General data		
Degree of efficiency	> 97% @ 24 V input voltage	> 97% @ 24 V input voltage
Height x width x depth / Weight	130 / 34 / 150 mm / 0.3 kg	130 / 60 / 150 mm / 0.6 kg
Ambient temperature (operational) / Storage temperature	-25 °C...+70 °C / -40 °C...+85 °C	-25 °C...+70 °C / -40 °C...+85 °C
Humidity	5...95 %, no condensation	5...95 %, no condensation
Protection degree / Class of protection / Pollution severity	IP 20 / III, with no ground connection, for SELV / 2	IP 20 / III, with no ground connection, for SELV / 2
Insulation voltage	0.5 kV Input/output housing	0.5 kV Input/output housing
MTBF	> 500,000 h acc. to IEC 1709 (SN29500	> 500,000 h acc. to IEC 1709 (SN29500
Mounting position, installation notice	Horizontal on TS35 mounting rail,w. 50 mm clearance at top/bottom for air circulation. Can be mount side by side w. no space in between.	Horizontal on TS35 mounting rail,w. 50 mm clearance at top/bottom for air circulation. Can be mount side by side w. no space in between.
EMC / shock / vibration		
Noise emission acc. to EN55022	Class B	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD) | EN 61000-4-3 and EN 61000-4-8 (fields) | EN 61000-4-4 (burst) | EN 61000-4-5 (surge) | EN 61000-4-6 (conducted)	EN 61000-4-2 (ESD) | EN 61000-4-3 and EN 61000-4-8 (fields) | EN 61000-4-4 (burst) | EN 61000-4-5 (surge) | EN 61000-4-6 (conducted)
Resistance to vibration / Shock	1 g according to EN50178 / 15 g In all directions	1 g according to EN50178 / 15 g In all directions
Electrical safety (applied standards)		
Electrical machine equipment	Acc. to EN60204	Acc. to EN60204
For use with electronic equipment	Acc. to EN50178 / VDE0160	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PLEV acc. to EN60204	SELV acc. to EN60950, PLEV acc. to EN60204
Approvals		
Approvals	cCSAus; cULus; GL; GOSTME25	cCSAus; cULus; GL; GOSTME25
Connection data	**Input** / **Output**	**Input** / **Output**
Conductor connection system	Screw connection / Screw connection	Screw connection / Screw connection
Number of terminals	4 (1+, 2+, 1-, 2-) / 4 (3 +, 4 +, 3 -, 4 -)	4 (1+, 2+, 1-, 2-) / 4 (3 +, 4 +, 3 -, 4 -)
Wire cross-section, rigid min/max mm²	0.5 / 6 / 0.5 / 6	0.5 / 16 / 0.5 / 16
Wire cross-section, flexible min/max mm²	0.5 / 2.5 / 0.5 / 2.5	2.5 / 10 / 2.5 / 10
Wire cross-section, AWG/kcmil min/max	26 / 12 / 26 / 12	22 / 6 / 22 / 6
Note		

Ordering data

	Type	Qty.	Order No.
Plastic clip-on foot	CP M DM20	1	1222210000
Metal clip-on foot	CP M DM20	1	1222210010

	Type	Qty.	Order No.
Plastic clip-on foot	CP M DM40	1	1222220000
Metal clip-on foot	CP M DM40	1	1222220010

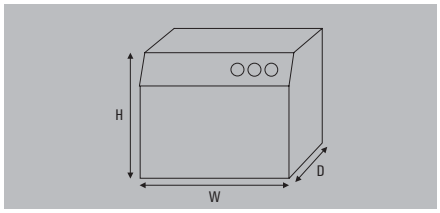
Note

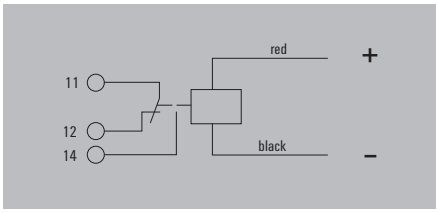
Accessories

Note

PRO-M: diode, capacity and relay modules

CP M RM24





Technical data

Input	
Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Output	
Voltage monitoring	Yes
Switching thresholds	21.6 V DC, relay is on for Power Good, 20.4 V DC, relay is off for Power Fail
Floating output	max. 250 V AC / 1 A, Relay
General data	
Height x width x depth	28 / 33 / 22 mm
Weight	75 kg
Ambient temperature (operational) / Storage temperature	-25 °C...+70 °C / -40 °C...+85 °C
Humidity	5...95 %, no condensation
Protection degree	IP 20
Class of protection	III, with no ground connection, for SELV
Pollution severity	2
Insulation voltage	0.5 kV Input/output housing
MTBF	> 500,000 h acc. to IEC 1709 (SN29500
Mounting position, installation notice	Plugged in to the front of the PRO-M power supply
EMC / shock / vibration	
Noise emission acc. to EN55022	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD) | EN 61000-4-3 and EN 61000-4-8 (fields) | EN 61000-4-4 (burst) | EN 61000-4-5 (surge) | EN 61000-4-6 (conducted) | EN 61000-4-11 (dips)
Resistance to vibration / Shock	1 g according to EN50178 / 15 g In all directions
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PLEV acc. to EN60204
Approvals	
Approvals	cURus; GL; GOSTME25

Connection data	**Input**	**Output**
Conductor connection system	PUSH IN	PUSH IN
Number of terminals		3 (CO contacts)
Wire cross-section, rigid min/max mm²		0.2 / 1.5
Wire cross-section, flexible min/max mm²		0.2 / 1.5
Wire cross-section, AWG/kcmil min/max		24 / 16
Note		

Ordering data

Type	Qty.	Order No.
CP M RM24	1	1222230000

Note

Accessories

Note

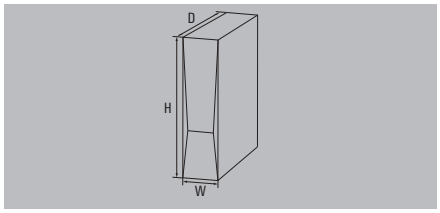
PRO-M: diode, capacity and relay modules

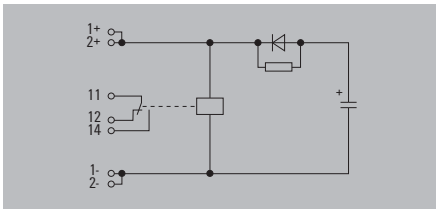
CP M CAP

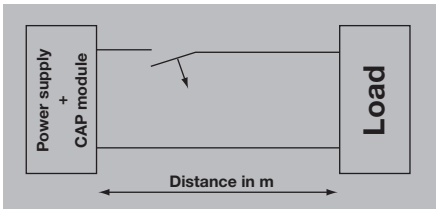
Pulse triggering for cable circuit breakers: with the Weidmüller capacitance module

The following conditions apply to the table entries:

- Ambient temperature of 20 °C
- Inner resistance of the circuit breakers is taken into account
- Half of the rated current flows to a neighbouring circuit before the short circuit is formed
- DC-compatible circuit breakers: Siemens 5SY series







Technical data

Input	
Rated input voltage / DC input voltage range	24 V DC / 18...30 V DC
Output	
Peak current output / Recovery time for the capacitor	Depending on the load (typically 40 A for 1 ms) / Approx. 1 sec.
Switching thresholds	21.6 V DC, relay is on for Power Good, 20.4 V DC, relay is off for Power Fail
Floating contact	Yes
General data	
Height x width x depth / Weight	130 / 34 / 150 mm / 0.4 kg
Ambient temperature (operational) / Storage temperature	-25 °C...+70 °C / -40 °C...+85 °C
Humidity	5...95 %, no condensation
Protection degree / Class of protection / Pollution severity	IP 20 / III, with no ground connection, for SELV / 2
Insulation voltage	0.5 kV Input/output housing
MTBF	> 500,000 h acc. to IEC 1709 (SN29500
Mounting position, installation notice	Horizontal on TS35 mounting rail,w. 50 mm clearance at top/bottom for air circulation. Can be mount side by side w. no space in between.
EMC / shock / vibration	
Noise emission acc. to EN55022	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD) | EN 61000-4-3 and EN 61000-4-8 (fields) | EN 61000-4-4 (burst) | EN 61000-4-5 (surge) | EN 61000-4-6 (conducted) | EN 61000-4-11 (dips)
Resistance to vibration / Shock	1 g according to EN50178 / 15 g In all directions
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PLEV acc. to EN60204
Approvals	
Approvals	cULus; GL; GOSTME25

Fuse tripping

Conductor cross section	B6	B10
0.75 mm²	10 m	
1.0 mm²	14 m	6 m
1.5 mm²	20 m	9 m
2.5 mm²	30 m	15 m
4 mm²	50 m	24 m
6 mm²		
	B16	
0.75 mm²		
1.0 mm²		
1.5 mm²	4 m	
2.5 mm²	6 m	
4 mm²	10 m	
6 mm²	16 m	
	C2	**C4**
0.75 mm²	11 m	6 m
1.0 mm²	14 m	8 m
1.5 mm²	21 m	12 m
2.5 mm²	34 m	19 m
4 mm²		32 m
6 mm²		
	C6	**C10**
0.75 mm²	3 m	
1.0 mm²	3.5 m	2 m
1.5 mm²	5.5 m	3 m
2.5 mm²	9 m	5 m
4 mm²	14 m	8 m
6 mm²		12 m

Connection data		Input	Output
Conductor connection system		Screw connection	Screw connection
Number of terminals		4 (++–)	3 (CO contacts)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 4	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12
Note		For low-impedance connections we recommend 2.5 mm².	

Ordering data

	Type	Qty.	Order No.
Plastic clip-on foot	CP M CAP	1	1222240000
Metal clip-on foot	CP M CAP	1	1222240010

Note

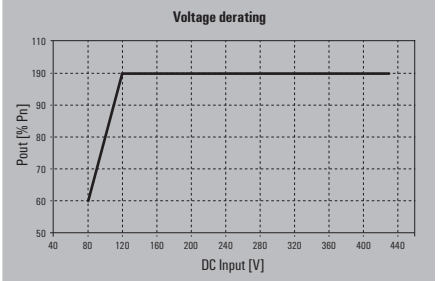
Accessories

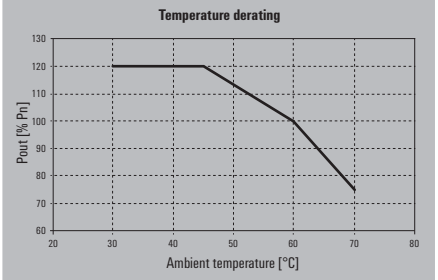
Note

PRO-M: Application solution for wind power
Switched-mode power supply with wide-range input

Application solution for wind power:

- 80 ... 430 V DC input
- Alarm contact
- Metal snap-on foot



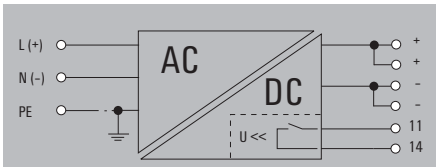


Technical data

General technical data	
Output characteristic curve / current limit	IU / > 120 % IN
Earth discharge current	< 3.5 mA
Ambient temperature (operational) / Storage temperature	–25 °C ... +70 °C / –40 °C ... +85 °C
Max. permitted humidity (operational)	5 %...95 % RH
Degree of protection	IP20
Class of protection	I, with PE connection
Pollution degree	2
Insulation voltage	3 kV AC 1 min. / 2 kV AC 1 min. / 0.5 kV AC 1 min.
MTBF	> 500,000 h according to IEC 1709 (SN29500)
Protection against reverse voltages from the load	30...35 V DC
Can be connected in parallel	Yes, without diode module
Housing version	Metal, corrosion resistant
Signal indication	Operations, green/red LED
Mounting position, installation notice	Horizontal on TS35 mounting rail, with 50 mm of clearance at top and bottom for air circulation. Can be mounted side by side with no space in between. Suitable for installation in rotating systems.
EMC / shock / vibration	
Noise emission acc. to EN55022	Class B
Noise immunity tests acc. to	EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	according to EN61000-3-2
Resistance against vibration and shock	according to EN50178, Shock: 5 g in all directions
Electrical safety (applied standards)	
Electrical equipment of machines	according to EN60204
Safety transformers for switched-mode power units	according to EN61558-2-17
Safety transformers for switched-mode power units	according to EN50178 / VDE0160
Safety extra low voltage	SELV according to EN60950, PELV according to EN60204
Protective separation / protection against electrical shock	VDE0100-410 / according to DIN57100-410
Protection against dangerous shock currents	according to VDE0106-101

PRO-M: application solutions for wind power

CP M SNT 250 W 24 V 10 A UW



Bei DC-Anschluss auf Polarität achten

Technical data

Input	
Rated input voltage / Input voltage range AC	100...240 V AC (wide-range input) / 85...264 V AC (Derating @ 100 V AC)
Frequency range AC	47...63 Hz
DC input voltage range	80...430 V DC
AC current consumption	1.2 A @ 230 V AC / 2.4 A @ 115 V AC
DC current consumption	0.8 A @ 370 V DC / 2.3 A @ 120 V DC
Input fuse (internal)	Yes
Recommended back-up fuse	4 A / DI, safety fuse 10 A, Char. B, circuit breaker 3...4 A, Char. C, circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	< 50 mV_{SS} @ 24 V DC, I_N
Rated (nominal) output current @ U_{Nom}	10 A @ 60 °C
Continous output current @ 24 V DC	12 A @ 45 °C, 10.7 A @ 55 °C, 7.5 A @ 70 °C
General data	
Degree of efficiency	90 % @ 230 V AC / 87 % @ 115 V AC
Power factor (approx.)	> 0.99 @ 230 V AC / > 0.97 @ 115 V AC
AC failure bridging time @ I_{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Height x width x depth / Weight	130 / 60 / 155 mm / 1.2 Kg
Additional equipment	
Status indicator	Green LED, red LED
Relay on/off	Output voltage > 21.6 V / < 20.4 V
Approvals	
Approvals	cULus; cURus; GL; GOSTME25

Connection data		Input	Output
Conductor connection system		Screw connection	Screw connection
Number of terminals		3 for L/N/PE	6 (+,+,-,-,COM,NO)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12
Note			

Ordering data

Type	Qty.	Order No.
CP M SNT 250W 24V 10AUW	1	1165480010

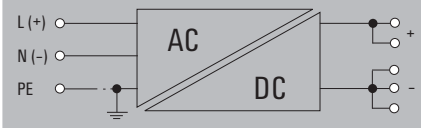
Note

Accessories

Note

connectPower

PRO-H

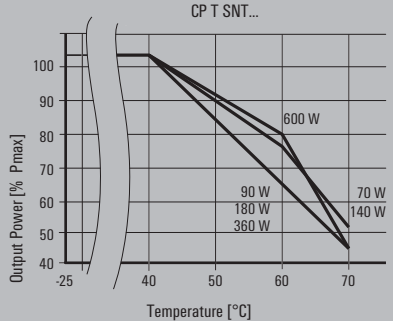


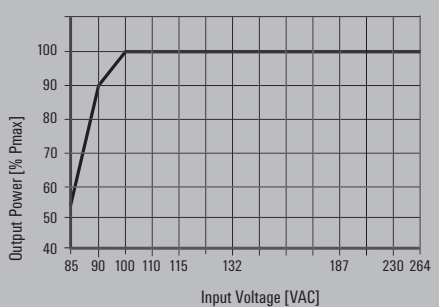
Max. limiting average on state current [A]

Type\Temp.	40 °C	50 °C	60 °C	70 °C
1 ph 12 V / 6 A	6.0	5.7	5.4	4.5
1 ph 12 V / 12 A	12.0	9.5	7.0	3.7
1 ph 24 V / 3.8 A	3.8	3.1	2.5	1.7
1 ph 24 V / 7.5 A	7.5	6.3	5.0	3.3
1 ph 24 V / 15 A	15.0	12.5	10.0	6.7
1 ph 24 V / 25 A	25.0	22.5	20.0	13.3
1 ph 36 V / 16.5 A	16.5	15.0	13.3	9.0
1 ph 48 V / 2 A	2.0	1.6	1.3	0.8
1 ph 48 V / 4 A	4.0	3.3	2.5	1.7
1 ph 48 V / 7.5 A	7.5	6.3	5.0	3.3
1 ph 48 V / 12.5 A	12.5	11.3	10.0	7.5
1-2 ph 24 V / 7.5 A	7.5	6.3	5.0	3.3
1-2 ph 24 V / 15 A	15.0	12.5	10.0	6.7
1-2 ph 24 V / 25 A	25.0	22.5	20.0	13.3

Technical data

General technical data			
Current limiting	> 100 % I_N		
Ambient temp. operating / storage temperature	-25...+70 °C	-25 °C...+85 °C	
Max. perm. air humidity (operation)	95 % RH		
Degree of protection	IP20		
Class of protection	I, with PE connection		
Pollution degree	2		
Insulation voltage input/output	4 kV I/O	2 kV I/earth	0.5 kV O/earth
MTBF according to IEC 61709	CP T ... 70/90 W		> 1.8 Mio. h
	CP T ... 140 W		> 1.2 Mio. h
	CP T ... 180/360/600 W		> 0.9 Mio. h
Protection against reverse voltages from the load	16 V DC / 35 V DC / 63 V DC		
Parallel connection option	yes, without diode module		
Housing version	metal, corrosion resistant		
Overload protection	Thermal protection, autom. restart		
Short circuit protection	Unlimited, autom. restart		
Indication	Dual LED Operational: Green LED; Error: Red LED		
Mounting position, installation notice	Horizontal on TS35 mounting rail, with 80 mm space at top and bottom. Side by side mounting with 50 mm clearance.		
Signal indication			
Power Good Signal	Trigger point	12 V version	9...11 V DC
		24 V version	18...22 V DC
		48 V version	36...44 V DC
Potential free, floating signal contact	NO contact	30 V DC/1.0 A max. for 12/24 V DC modules	
		48 V DC/ 0.5 A max. for 36/48 V DC modules	
Active output signal	70 W	11 V DC ± 1 V DC / 20 mA max.	
	140 W	11 V DC ± 1 V DC / 40 mA max.	
	90 W	22 V DC ± 2 V DC / 10 mA max.	
	180/360/600 W 24 V DC	22 V DC± 2 V DC / 20 mA max.	
	180/360/600 W 48 V DC	44 V DC± 4 V DC / 15 mA max.	
EMC / shock / vibration			
Noise emission acc. to EN55022	Class B		
Noise immunity tests acc. to	EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)		
Limiting of mains voltage harmonic currents	according to EN61000-3-2		
Vibration IEC 60068-2-6	3 axes, sinus, 10 - 55 Hz, 1 g, 1 oct./min.		
Shock IEC 60068-2-27	3 axes, 15 g, half sinus, 11 ms		
Electrical safety (applied standards)			
Electrical equipment of machines	according to EN60204		
Safety transformers for switched-mode power units	according to EN61558-2-4		
Machinery with electronic equipment	according to EN50178		
Safety extra low voltage	SELV according to EN60950		





connectPower PRO-H	CP T SNT 70 W 12 V 6 A	CP T SNT 140 W 12 V 12 A
		

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (auto-select)
Input voltage range AC	85...264 V AC	85...132 V AC, 187...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	1 A @ 230 V AC, 2 A @ 115 V AC	1.4 A @ 230 V AC, 2.5 A @ 115 V AC
Input fuse (internal) / making current	4 A / < 20 A (230 V AC)	4 A / < 20 A (230 V AC)
Recommended back-up fuse	6...16 A, char. B, circuit breaker	6...16 A, char. B, circuit breaker
Output		
Rated output voltage	12 V DC ± 1 %	12 V DC ± 1 %
Output voltage	12...14 V DC (adjustable via potentiometer on front)	12...14 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{SS} @ 12 V DC, I_{nom}	100 mV_{SS} @ 12 V DC, I_{nom}
Rated (nominal) output current @ U_{Nom}	6 A @ 40 °C	12 A @ 40 °C
Continous output current @ 24 V DC	6 A @ 40 °C, 5.4 A @ 60 °C, 4.5 A @ 70 °C	12 A @ 40 °C, 7 A @ 60 °C, 3.7 A @ 70 °C
General data		
Degree of efficiency	typ. 82 % @ 230 V AC	typ. 85 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	110 / 35 / 110 mm	110 / 54 / 110 mm
Weight	0.5 kg	0.7 kg
Approvals		
Approvals	BVATEX; CE; CSA; cURus; GOSTME25; UL	BVATEX; CE; CSA; cURus; GOSTME25; UL

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	2 (+ / -)	3 for L/N/PE	7 (+ / - / Signal)
Wire cross-section, rigid min/max	mm^2	0.5 / 2.5	1 / 2.5	0.5 / 2.5	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		24 / 12		24 / 12	
Note					

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	CP T SNT 70W 12V 6A	1	**1105430000**	CP T SNT 140W 12V 12A	1	**1105440000**
Note						

Accessories

Note		

connectPower PRO-H	CP T SNT 90 W 24 V 3,8 A	CP T SNT 90 W 24 V 3,8 A CL2 Class 2, UL1310
		

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC	85...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	1 A @ 230 V AC, 2.1 A @ 115 V AC	1 A @ 230 V AC, 2.1 A @ 115 V AC
Input fuse (internal) / making current	4 A / < 20 A (230 V AC)	4 A / < 20 A (230 V AC)
Recommended back-up fuse	6...16 A, char. B, circuit breaker	6...16 A, char. B, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	24...28 V DC (adjustable via potentiometer on front)	24...28 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{PP} @ 24 V DC, I_{nenn}	100 mV_{PP} @ 24 V DC, I_{nenn}
Rated (nominal) output current @ U_{Nom}	3.8 A @ 40 °C	3.8 A @ 40 °C
Continous output current @ 24 V DC	3.8 A @ 40 °C, 2.5 A @ 60 °C, 1.7 A @ 70 °C	3.8 A @ 40 °C, 2.5 A @ 60 °C, 1.7 A @ 70 °C
General data		
Degree of efficiency	typ. 85 % @ 230 V AC	typ. 85 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	110 / 35 / 110 mm	110 / 35 / 110 mm
Weight	0.5 kg	0.5 kg
Approvals		
Approvals	BVATEX; CE; CSA; cURus; GOSTME25; UL	

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	2 (+ / -)	3 for L/N/PE	2 (+ / -)
Wire cross-section, rigid min/max	mm^2	0.5 / 2.5	1 / 2.5	0.5 / 2.5	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		24 / 12		24 / 12	
Note					

Ordering data

	Type	**Qty.**	**Order No.**
	CP T SNT 90W 24V 3,8A	1	**1105790000**
	CP T SNT 90W 24V3,8ACL2	1	**1194410000**

Note		

Accessories

Note		

connectPower PRO-H	CP T SNT 180 W 24 V 7,5 A	CP T SNT 360 W 24 V 15 A
		

Technical data

Input		
Rated input voltage	100...240 V AC (auto-select)	100...240 V AC (auto-select)
Input voltage range AC	85...132 V AC, 187...264 V AC	85...132 V AC, 187...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	1.4 A @ 230 V AC, 2.5 A @ 115 V AC	2.5 A @ 230 V AC, 5 A @ 115 V AC
Input fuse (internal) / making current	4 A / < 20 A (230 V AC)	6.3 A / < 25 A (230 V AC)
Recommended back-up fuse	6...16 A, char. B, circuit breaker	10...16 A, char. B, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	24...28 V DC (adjustable via potentiometer on front)	24...28 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{pp} @ 24 V DC, I_{nenn}	100 mV_{pp} @ 24 V DC, I_{nenn}
Rated (nominal) output current @ U_{Nom}	7.5 A @ 40 °C	15 A @ 40 °C
Continous output current @ 24 V DC	7.5 A @ 40 °C, 5 A @ 60 °C, 3.3 A @ 70 °C	15 A @ 40 °C, 10 A @ 60 °C, 6.7 A @ 70 °C
General data		
Degree of efficiency	typ. 88 % @ 230 V AC	typ. 87 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	110 / 54 / 110 mm	110 / 80 / 110 mm
Weight	0.7 kg	1.1 kg
Approvals		
Approvals	BVATEX; CE; CSA; cURus; GOSTME25; UL	BVATEX; CE; CSA; cURus; GOSTME25; UL

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	7 (+ / - / Signal)	3 for L/N/PE	7 (+ / - / Signal)
Wire cross-section, rigid min/max	mm^2	0.5 / 2.5	1 / 2.5	0.5 / 2.5	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		24 / 12		24 / 12	
Note					

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	CP T SNT 180W 24V 7,5A	1	**1105810000**	CP T SNT 360W 24V 15A	1	**1105820000**
Note						

Accessories

Note		

connectPower PRO-H

	CP T SNT 600 W 24 V 25 A	CP T SNT 600 W 36 V 16,5 A
		

Technical data

Input		
Rated input voltage	100...240 V AC (auto-select)	100...240 V AC (auto-select)
Input voltage range AC	85...132 V AC, 187...264 V AC	85...132 V AC, 187...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	5 A @ 230 V AC, 10 A @ 115 V AC	1 A @ 230 V AC, 2 A @ 115 V AC
Input fuse (internal) / making current	12 A / < 30 A (230 V AC)	12 A / < 30 A (230 V AC)
Recommended back-up fuse	16...25 A, char. B, circuit breaker	16...25 A, char. B, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	36 V DC ± 1 %
Outpu voltage	24...28 V DC (adjustable via potentiometer on front)	36...42 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{PP} @ 24 V DC, I_{nenn}	100 mV_{SS} @ 36 V DC, I_{nom}
Rated (nominal) output current @ U_{Nom}	25 A @ 40 °C	16.5 A @ 40 °C
Continous output current @ 24 V DC	25 A @ 40 °C, 20 A @ 60 °C, 13.3 A @ 70 °C	16.5 A @ 40 °C, 13.3 A @ 60 °C, 9 A @ 70 °C
General data		
Degree of efficiency	typ. 89 % @ 230 V AC	typ. 87 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	125 / 165 / 125 mm	125 / 165 / 125 mm
Weight	2.8 kg	2.8 kg
Approvals		
Approvals	BVATEX; CE; CSA; cURus; GOSTME25; UL	

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	7 (+ / - / Signal)	3 for L/N/PE	7 (+ / - / Signal)
Wire cross-section, rigid min/max	mm^2	1 / 4	1 / 2.5	1 / 4	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		18 / 10		18 / 10	
Note					

Ordering data

	Type	**Qty.**	**Order No.**
	CP T SNT 600W 24V 25A	1	**1105840000**
	CP T SNT 600W 36V 16,5A	1	**1194430000**

Note

Accessories

Note

connectPower PRO-H

	CP T SNT 90 W 48 V 2 A	CP T SNT 180 W 48 V 4 A
		

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (auto-select)
Input voltage range AC	85...264 V AC	85...132 V AC, 187...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	1 A @ 230 V AC, 2.1 A @ 115 V AC	1.4 A @ 230 V AC, 2.5 A @ 115 V AC
Input fuse (internal) / making current	4 A / < 20 A (230 V AC)	4 A / < 25 A (230 V AC)
Recommended back-up fuse	6...16 A, char. B, circuit breaker	6...16 A, char. B, circuit breaker
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	48...56 V DC (adjustable via potentiometer on front)	48...56 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{SS} @ 48 V DC, I_{Nenn}	100 mV_{SS} @ 48 V DC, I_{Nenn}
Rated (nominal) output current @ U_{Nom}	2 A @ 40 °C	4 A @ 40 °C
Continous output current @ 24 V DC	2 A @ 40 °C, 1.3 A @ 60 °C, 0.8 A @ 70 °C	4 A @ 40 °C, 2.5 A @ 60 °C, 1.7 A @ 70 °C
General data		
Degree of efficiency	typ. 87 % @ 230 V AC	typ. 90 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	110 / 35 / 110 mm	110 / 54 / 110 mm
Weight	0.5 kg	0.7 kg
Approvals		
Approvals		BVATEX; CSA; cURus; GOSTME25; UL

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	2 (+ / -)	3 for L/N/PE	7 (+ / - / Signal)
Wire cross-section, rigid min/max	mm^2	0.5 / 2.5	1 / 2.5	0.5 / 2.5	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		24 / 12		24 / 12	
Note					

Ordering data

	Type	**Qty.**	**Order No.**
	CP T SNT 90W 48V 2A	1	**1194420000**
	CP T SNT 180W 48V 4A	1	**1105850000**

Note

Accessories

Note

connectPower PRO-H

	CP T SNT 360 W 48V 7,5 A	CP T SNT 600 W 48 V 12,5 A
		

Technical data

Input		
Rated input voltage	100...240 V AC (auto-select)	100...240 V AC (auto-select)
Input voltage range AC	85...132 V AC, 187...264 V AC	85...132 V AC, 187...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
AC current consumption	2.5 A @ 230 V AC, 5 A @ 115 V AC	5 A @ 230 V AC, 10 A @ 115 V AC
Input fuse (internal) / making current	6.3 A / < 25 A (230 V AC)	12 A / < 30 A (230 V AC)
Recommended back-up fuse	10...16 A, char. B, circuit breaker	16...25 A, char. B, circuit breaker
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	48...56 V DC (adjustable via potentiometer on front)	48...56 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{SS} @ 48 V DC, I_{Nenn}	100 mV_{SS} @ 48 V DC, I_{Nenn}
Rated (nominal) output current @ U_{Nom}	7.5 A @ 40 °C	12.5 A @ 40 °C
Continous output current @ 24 V DC	7.5 A @ 40 °C, 5 A @ 60 °C, 3.3 A @ 70 °C	12.5 A @ 40 °C, 10 A @ 60 °C, 7.5 A @ 70 °C
General data		
Degree of efficiency	typ. 89 % @ 230 V AC	typ. 91 % @ 230 V AC
AC failure bridging time @ I_{Nom}	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC	min. 20 ms @ 230 V AC, min. 10 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Height x width x depth	110 / 80 / 110 mm	125 / 165 / 125 mm
Weight	1.1 kg	2.8 kg
Approvals		
Approvals	BVATEX; CSA; cURus; GOSTME25; UL	BVATEX; CSA; cURus; GOSTME25; UL

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	7 (+ / - / Signal)	3 for L/N/PE	7 (+ / - / Signal)
Wire cross-section, rigid min/max	mm^2	0.5 / 2.5	1 / 2.5	1 / 4	1 / 2.5
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		24 / 12		18 / 10	
Note					

Ordering data

	Type	**Qty.**	**Order No.**
	CP T SNT 360W 48V 7,5A	1	**1105860000**
	CP T SNT 600W 48V 12,5A	1	**1105870000**
Note			

Accessories

Note

connectPower PRO-H	CP T SNT2 180 W 24 V 7,5 A	CP T SNT2 360 W 24 V 15 A
	 Similar to illustration	 Similar to illustration

Technical data

Input		
Rated input voltage	100...500 V AC (switchable)	100...500 V AC (switchable)
Input voltage range AC	85...132 V AC, 187...550 V AC	85...132 V AC, 187...550 V AC
Frequency range AC	50 / 60 Hz	50 / 60 Hz
AC current consumption		
Input fuse (internal) / making current	/ < 23 A @ 230 V AC	/ < 23 A @ 230 V AC
Recommended back-up fuse		
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	24...28 V DC (adjustable via potentiometer on front)	24...28 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{pp} @ 24 V DC, I_{nenn}	100 mV_{pp} @ 24 V DC, I_{nenn}
Rated (nominal) output current @ U_{Nom}	7.5 A @ 40 °C	15 A @ 40 °C
Continous output current @ 24 V DC	7.5 A @ 40 °C, 5 A @ 60 °C, 3.3 A @ 70 °C	15 A @ 40 °C, 10 A @ 60 °C, 6.7 A @ 70 °C
General data		
Degree of efficiency	typ. 88 %	typ. 88 %
AC failure bridging time @ I_{Nom}		
Parallel connection option	Yes	Yes
Height x width x depth	110 / 54 / 110 mm	125 / 80 / 125 mm
Weight	0.7 kg	1.1 kg
Approvals		
Approvals		

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE		3 for L/N/PE	
Wire cross-section, rigid min/max	mm^2	1 / 4	2 / 4	1 / 4	2 / 4
Stripping length, rated connection		7 mm		7 mm	
Wire cross-section, AWG/kcmil min/max		18 / 10	12 / 10	18 / 10	12 / 10
Note					

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	CP T SNT2 180 W 24 V 7,5 A	1	**1194480000**	CP T SNT2 360 W 24 V 15 A	1	**1194490000**
Note						

Accessories

Note		

connectPower PRO-H

CP T SNT2 600 W 24 V 25 A

Technical data

Input	
Rated input voltage	100...500 V AC (switchable)
Input voltage range AC	85...132 V AC, 187...550 V AC
Frequency range AC	50 / 60 Hz
AC current consumption	
Input fuse (internal) / making current	/ < 50 A @ 230 V AC
Recommended back-up fuse	
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	24...28 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{pp} @ 24 V DC, I_{nenn}
Rated (nominal) output current @ U_{Nom}	25 A @ 40 °C
Continous output current @ 24 V DC	25 A @ 40 °C, 20 A @ 40 °C, 13.3 A @ 70 °C
General data	
Degree of efficiency	typ. 88 %
AC failure bridging time @ I_{Nom}	min. 20 ms
Parallel connection option	Yes
Height x width x depth	125 / 190 / 125 mm
Weight	3 kg
Approvals	
Approvals	

Connection data		**Input**	**Output**
Conductor connection system		Screw connection	Screw connection
Number of terminals		3 for L/N/PE	5 (++ / –)
Wire cross-section, rigid min/max	mm^2	1 / 4	2 / 4
Stripping length, rated connection		7 mm	
Wire cross-section, AWG/kcmil min/max		18 / 10	12 / 10
Note			

Ordering data

Type	**Qty.**	**Order No.**
CP T SNT2 600 W 24 V 25 A	1	**1194310000**

Note

Accessories

Note

connectPower PRO-H	CP T RM 10	CP T RM 20
		

Technical data

Input		
Rated input voltage	24 V DC	24 V DC
Input voltage range AC		
Frequency range AC		
AC current consumption		
Input fuse (internal) / making current		
Recommended back-up fuse		
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	24...28 V DC (adjustable via potentiometer on front)	24...28 V DC (adjustable via potentiometer on front)
Residual ripple, breaking spikes	100 mV_{PP} @ 24 V DC, I_{nenn}	100 mV_{PP} @ 24 V DC, I_{nenn}
Rated (nominal) output current @ U_{Nom}	15 A @ 40 °C	25 A @ 40 °C
Continous output current @ 24 V DC		
General data		
Degree of efficiency		
AC failure bridging time @ I_{Nom}		
Parallel connection option		
Height x width x depth	110 / 35 / 110 mm	110 / 54 / 110 mm
Weight	0.4 kg	0.45 kg
Approvals		
Approvals	CSA; cURus; GOSTME25	CE; CSA; cURus; GOSTME25

Connection data		**Input**	**Output**	**Input**	**Output**
Conductor connection system					
Number of terminals		4 (++-)	4 (++ / -)	4 (++-)	4 (++ / -)
Wire cross-section, rigid min/max	mm^2	1 / 4	2 / 4	1 / 4	2 / 4
Stripping length, rated connection		mm		mm	
Wire cross-section, AWG/kcmil min/max		18 / 10	12 / 10	18 / 10	12 / 10
Note					

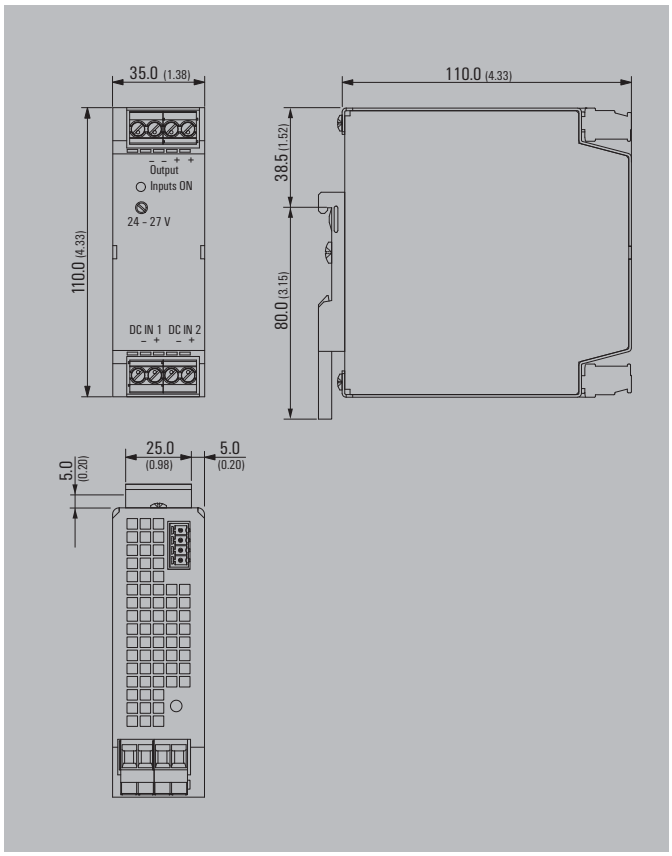
Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	CP T RM 10	1	**1105880000**	CP T RM 20	1	**1105890000**
Note						

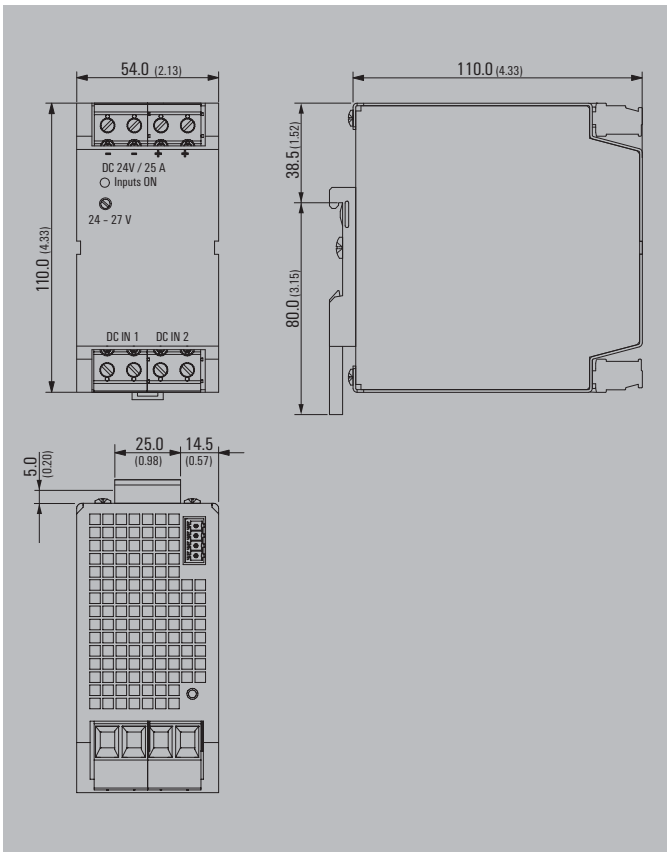
Accessories

Note		

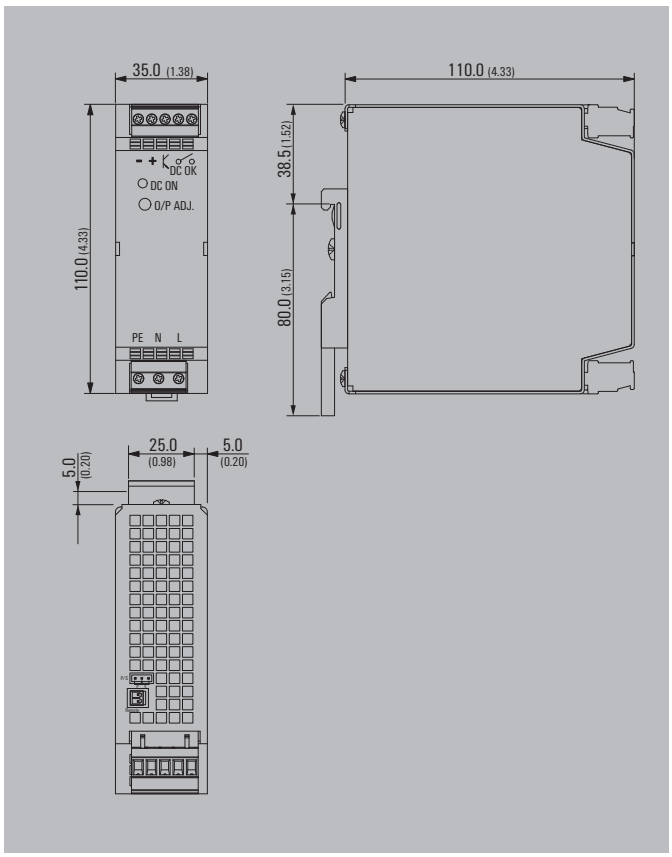
PRO-H Dimensional drawings



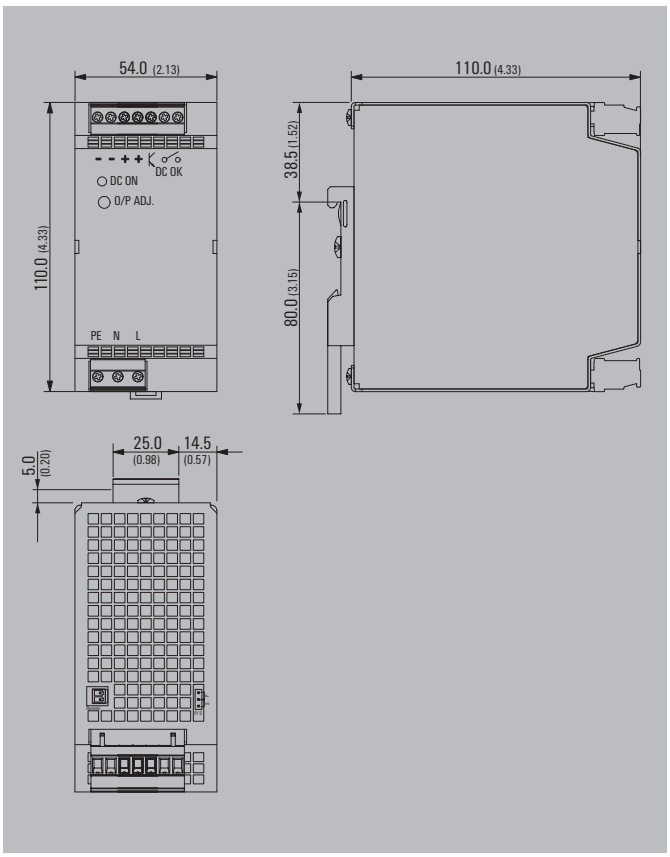
CP T RM 10



CP T RM 20

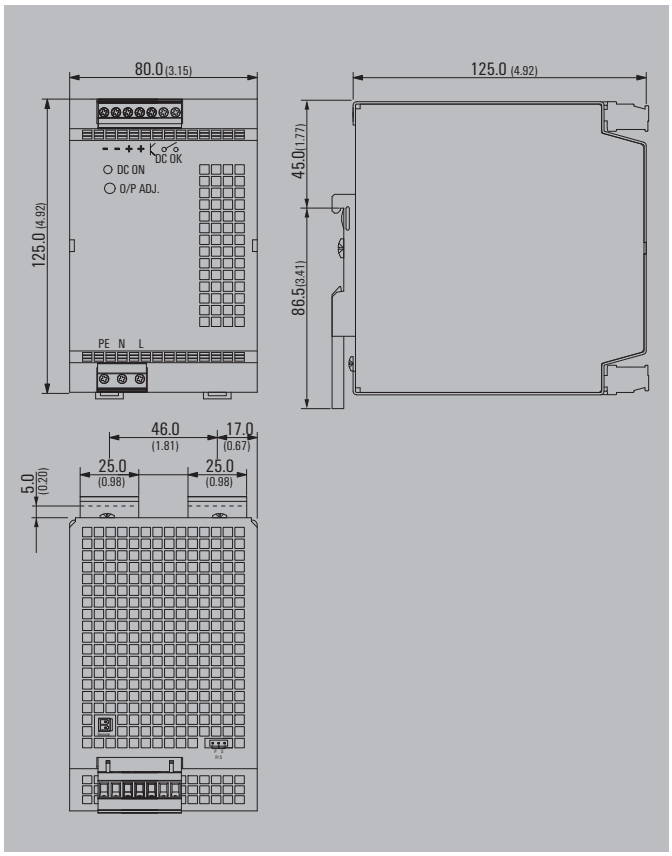


CP T SNT 70 W / 90 W

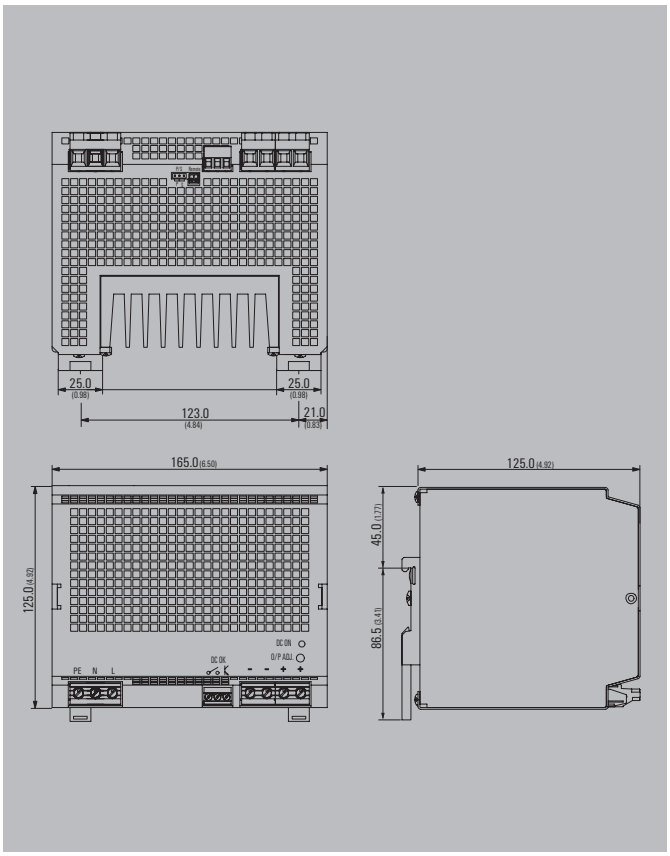


CP T SNT 180 W / 140 W

PRO-H Dimensional drawings



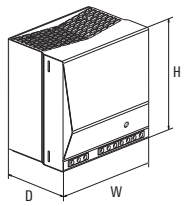
CP T SNT 360 W / 480 W

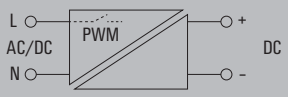


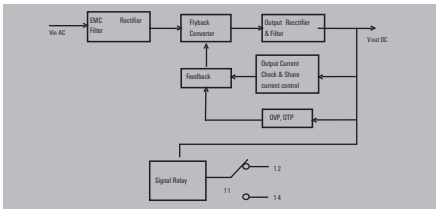
CP T SNT 600 W / 960 W

connectPower single-phase

CP SNT 70 W 24 V 3 A



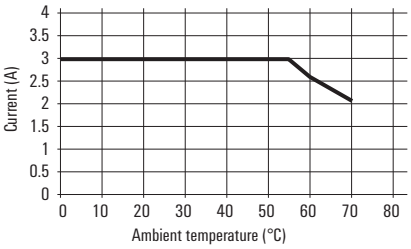




Technical data

Input	
Input voltage	85...264 V AC / 110...370 V DC
Input current	2 A @ 100...240 V AC
Input frequency	50/ 60 Hz
Input fuse	Fusible link 2.5 A (T) / 250 V
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	3 A
Output power	72 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	10 ms @ 115 V AC / 20 ms @ 230 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	80%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	0.55 kg
Approvals	CE; cULus; cURus; GL; GOSTME25

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.13 / 4
Height x width x depth		125 / 55.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with the diode module.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 70W 24V 3A	1	**8708660000**

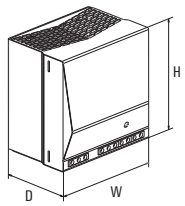
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

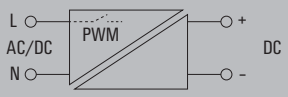
Accessories

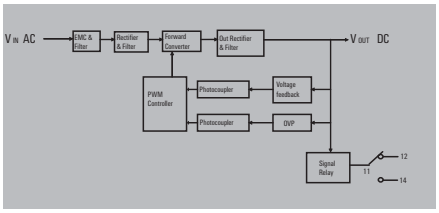
Note	

connectPower single-phase

CP SNT 120 W 24 V 5 A







Technical data

Input	
Input voltage	88...132 V AC/176...264 V AC selectable; 250...370 V DC
Input current	3 A @ 115 V AC / 2 A @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	Fusible link 4 A (T) / 250 V
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	5 A
Output power	120 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	20 ms @ 115 V AC / 20 ms @ 230 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	84%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	0.65 kg
Approvals	CE; cULus; cURus; GL; GOSTME25

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.13 / 4
Height x width x depth		125 / 65.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with the diode module.

Ordering data

		Type	Qty.	Order No.
	Screw connection	CP SNT 120W 24V 5A	1	**8708670000**

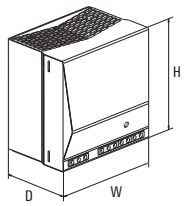
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

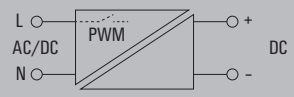
Accessories

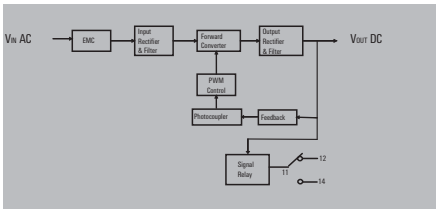
Note	

connectPower single-phase

CP SNT 250 W 24 V 10 A



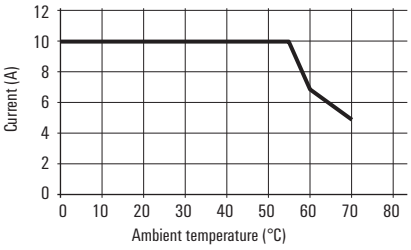




Technical data

Input	
Input voltage	88...132 V AC/176...264 V AC selectable; 250...370 V DC
Input current	3.6 A @ 115 V AC / 2 A @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	Fusible link 5 A (T) / 250 V
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	0.1...10 A
Output power	240 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	30...36 V
Mains failure bridge-over time	10 ms @ 115 V AC / 15 ms @ 230 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	84% @ 230 V AC
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	1.6 kg
Approvals	CE; cULus; cURus; GL; GOSTME25

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.13 / 6
Height x width x depth		125 / 125.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with the diode module.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 250W 24V 10A	1	**8708680000**

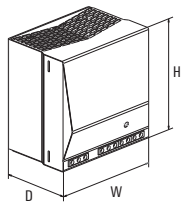
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

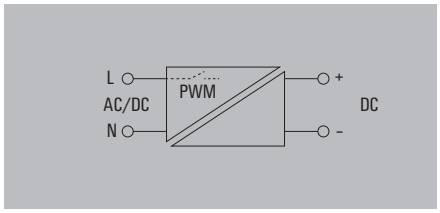
Accessories

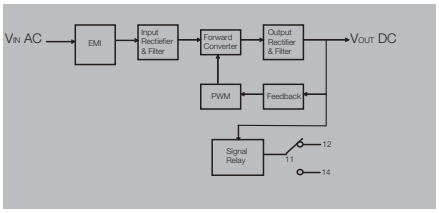
Note	

connectPower single-phase

CP SNT 500 W 24 V 20 A



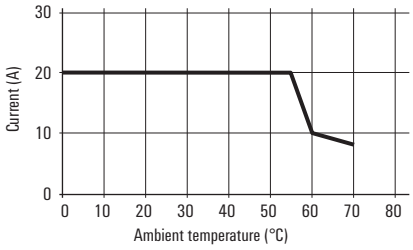




Technical data

Input	
Input voltage	88...132 V AC/176...264 V AC selectable; 250...370 V DC
Input current	9 A @ 115 V AC / 6 A @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	Fusible link 10 A (T) / 250 V
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	2...20 A @ 200...240 V AC; 2...16 A @ 100...120 V AC
Output power	480 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	30...36 V
Mains failure bridge-over time	10 ms @ 115 V AC / 15 ms @ 230 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	86%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	2 kg
Approvals	CE; cULus; cURus; GL; GOSTME25; TUEV

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.13 / 6
Height x width x depth		125 / 227.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with diode module.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 500W 24V 20A	1	8778870000

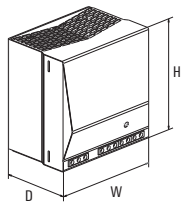
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

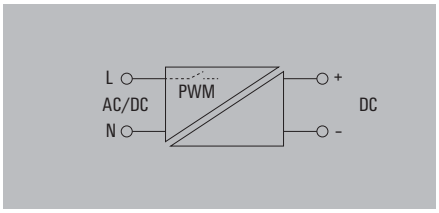
Accessories

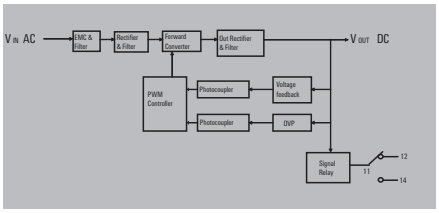
Note	

connectPower single-phase

CP SNT 1000 W 24 V 40 A



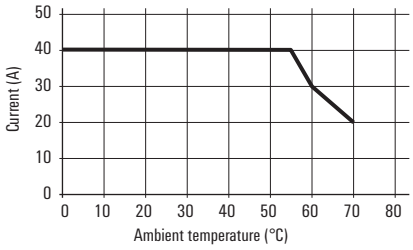




Technical data

Input	
Input voltage	85...264 V AC
Input current	12 A @ 115 V AC; 4.8 A @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	Fusible link 15 A (T) / 250 V
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	40 A
Output power	960 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %...125 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	20 ms @ 115 V AC / 20 ms @ 230 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	89%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	4.4 kg
Approvals	CE; cURus; GOSTME25

Derating curve



Dimensions	**Input/Output**
Clamping range (nominal / min. / max.) mm²	4 / 0.13 / 6
Height x width x depth	150 / 240 / 125 mm
Note	For redundancy operation or to maintain the alert function, only operate with diode module.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 1000W 24V 40A	1	**8862780000**

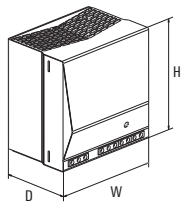
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

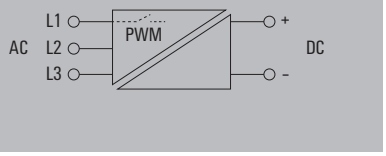
Accessories

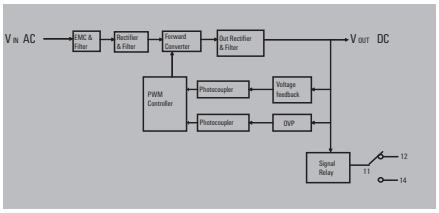
Note	

connectPower 3-phase

CP SNT3 120 W 24 V 5 A





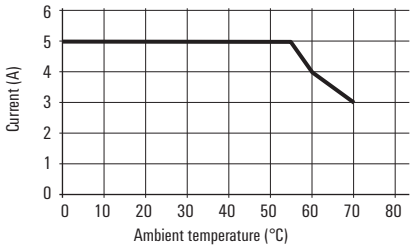


Technical data

Input	
Input voltage	3x400 V AC / 400...500 V AC ±15 %
Input current	0.8 A @ 400 V AC
Input frequency	47...63 Hz
Input fuse	External via 3 circuit-breakers up to 6...16 A, char. C
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	5 A
Output power	120 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	> 20 ms @ 400 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	85% @ 400 V AC
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	1.5 kg
Approvals	cURus; GOSTME25; UL

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.13 / 4
Height x width x depth		125 / 90 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with the diode module.

Derating curve



Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT3 120W 24V 5A	1	**8862730000**

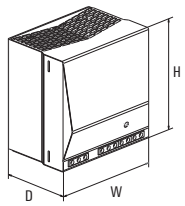
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

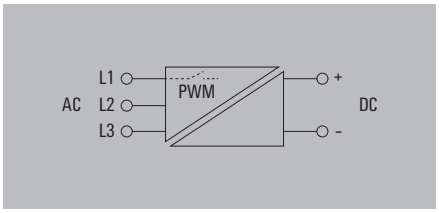
Accessories

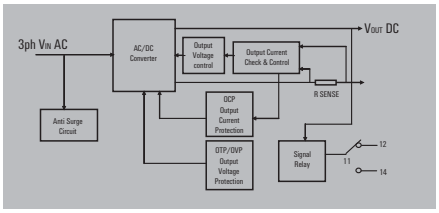
Note	

connectPower 3-phase

CP SNT3 250 W 24 V 10 A



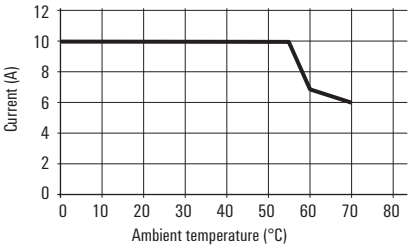




Technical data

Input	
Input voltage	3x400 V AC / 400...500 V AC ±15 %
Input current	0.95 A @ 400 V AC
Input frequency	47...63 Hz
Input fuse	External via 3 circuit-breakers up to 2...3 A, char. C
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	10 A
Output power	250 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	> 10 ms @ 400 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	88% @ 400 V AC
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	1.5 kg
Approvals	CE; cULus; cURus; GL; GOSTME25

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.13 / 6
Height x width x depth		125 / 125.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with diode module.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT3 250W 24V 10A	1	**8708700000**

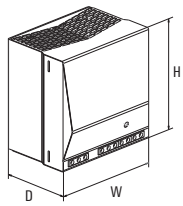
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

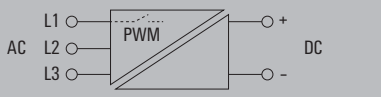
Accessories

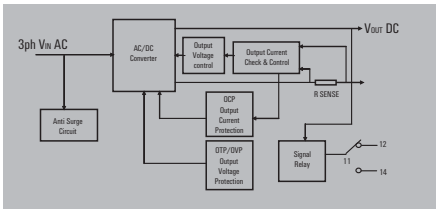
Note	

connectPower 3-phase

CP SNT3 500 W 24 V 20 A





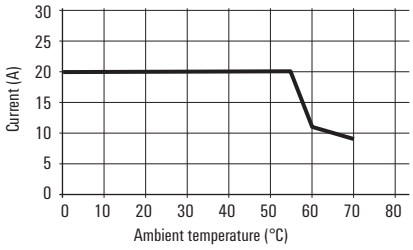


Technical data

Input	
Input voltage	3x400 V AC / 400...500 V AC ±15 %
Input current	1.7 A @ 400 V AC
Input frequency	47...63 Hz
Input fuse	External via 3 circuit-breakers up to 3...6 A, char. C
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	20 A
Output power	480 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	30...34 V
Mains failure bridge-over time	> 10 ms @ 400 V AC
Control at 10...100% load	<2%
Parallel connection option	Recommended with diode module
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	88%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	3 kg
Approvals	CE; cULus; cURus; GL; GOSTME25

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.13 / 6
Height x width x depth		125 / 227.5 / 110 mm
Note		For redundancy operation or to maintain the alert function, only operate with diode module.

Derating curve



Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT3 500W 24V 20A	1	**8708710000**

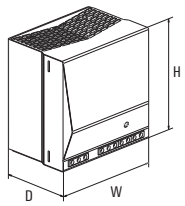
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

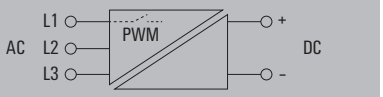
Accessories

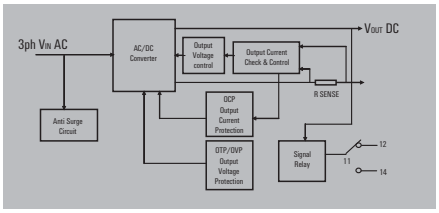
Note	

connectPower 3-phase

CP SNT3 1000 W 24 V 40 A







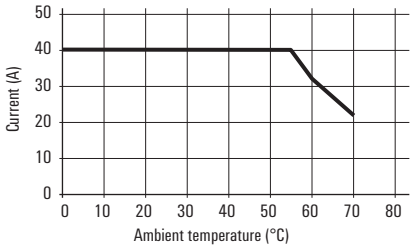
Technical data

Input	
Input voltage	3x400 V AC / 400...500 V AC ±15 %
Input current	3.4 A @ 400 V AC
Input frequency	47...63 Hz
Input fuse	External via 3 circuit-breakers up to 6...16 A, char. C
Surge protection	Varistor
Output	
Output voltage	24...28 V DC (adjustable via potentiometer)
Output current	40 A
Output power	960 W
Max. residual ripple	< 100 mV_{PP} / bandwidth 20 MHz
Overload protection	105 %..130 % I_{const} of max. output load; automatic reset
Surge protection	29...34 V
Mains failure bridge-over time	> 10 ms @ 400 V AC
Control at 10...100% load	<2%
Parallel connection option	Direct for same type
Status relay / CO contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
General data	
Ambient temperature	-10 °C+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	88%
Status indication	Green LED
Standards	DIN EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Height x width x depth	150 / 280 / 125 mm
Weight	3.5 kg
Approvals	CE; GL; GOSTME25; UL

Dimensions		**Input**	**Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 6	10 / 0.3 / 16

Note	For redundancy operation or to maintain the alert function, only operate with diode module.

Derating curve



Ordering data

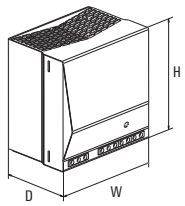
	Type	**Qty.**	**Order No.**
Screw connection	CP SNT3 1000W 24V 40A	1	**8708730000**

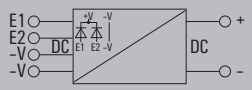
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Accessories

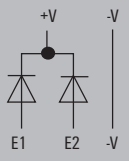
Note	

connectPower diode module

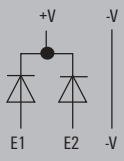




CP DM 10



CP DM 20



Technical data

Input		
Input voltage	40 V DC max.	40 V DC max.
Input current	2 x 0...10 A max.	2 x 0...20 A max.
Output		
Output voltage	U_{in} - 0.5 V typical	U_{in} - 0.5 V typical
Output current	0...20 A max. or 10 A max. for redundancy operation	0...40 A max. or 20 A max. for redundant operations
General data		
Ambient temperature	-10 °C...+55 °C	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C	-20 °C...+85 °C
Degree of efficiency at max. load	95.5%	97.5%
Mounting position, installation notice	horizontally, on terminal rail TS 35	horizontally, on terminal rail TS 35
Installation advice	Clearance: side ≥ 2 cm; above/below ≥ 10 cm	Clearance: side ≥ 2 cm; above/below ≥ 10 cm
Height x width x depth	125 / 55.5 / 110 mm	125 / 55.5 / 110 mm
Weight	0.4 kg	0.4 kg
Approvals	CE; cULus; cURus	CE; cULus; cURus

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.13 / 6	4 / 0.13 / 6	4 / 0.13 / 6	10 / 0.32 / 16
Note					

Ordering data

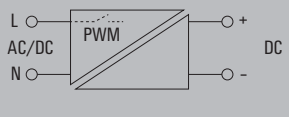
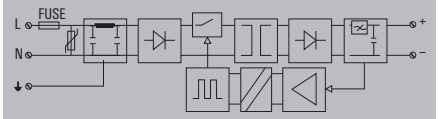
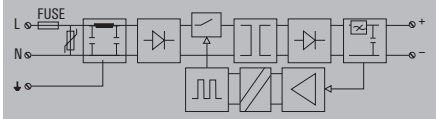
	Type	**Qty.**	**Order No.**
Screw connection	CP DM 10	1	**8710620000**
Screw connection	CP DM 20	1	**8768650000**

Note

Accessories

Note

connectPower single-phase

	CP SNT 24 W 28 V 1 A	CP SNT 24 W 24 V 1 A
		
		
		

Technical data

Input		
Input voltage	85...265 V AC, 120...300 V DC	85...265 V AC, 120...300 V DC
Input current	460 mA @ 115 V AC; 250 mA @ 230 V AC	460 mA @ 115 V AC; 250 mA @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Turn-on current limit	Thermistor	Thermistor
Input fuse	2 A time-lag fuse (internal)	2 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	28 V DC	24 V DC
Output current	1 A	1 A
Output power	28 W	24 W
Max. residual ripple	< 2 %	< 2 %
Overload protection	Surge current / thermal cut-out	Surge current / thermal cut-out
Surge protection	Varistor	Varistor
Mains failure bridge-over time	35 ms @ 115 V AC / 160 ms @ 230 V AC	35 ms @ 115 V AC / 160 ms @ 230 V AC
Control at 10...100% load	0.5%	0.5%
Max. capacitance at output	8000 µF	8000 µF
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	4 kV	4 kV
General data		
Ambient temperature (operational)	-20...+50 °C	-20...+50 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	78%	78%
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
Approvals	CE; CSA; GOSTME25	CE; CSA; CSAEX; GOSTME25
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.08 / 4	4 / 0.08 / 4
Height x width x depth		90.5 / 52 / 62.5 mm	90.5 / 52 / 62.5 mm
Note		Derating loss: 33% @ 60°C The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 33% @ 60°C The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP SNT 24W 28V 1A	1	**9928890028**	CP SNT 24W 24V 1A	1	**9928890024**

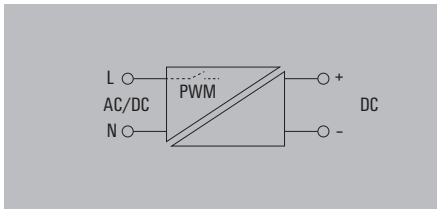
Note

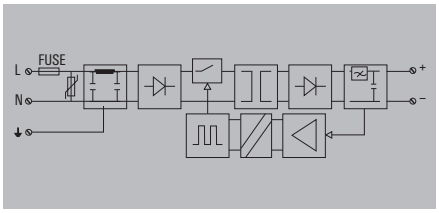
Accessories

Note

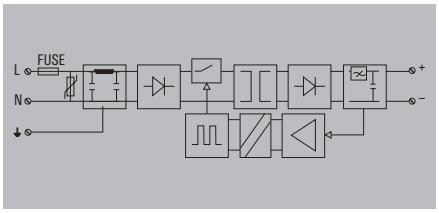
connectPower single-phase

CP SNT 24 W 15 V 1.5 A





CP SNT 24 W 12 V 1.5 A



Technical data

Input		
Input voltage	85...265 V AC, 120...300 V DC	85...265 V AC, 120...300 V DC
Input current	460 mA @ 115 V AC; 250 mA @ 230 V AC	460 mA @ 115 V AC; 250 mA @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Turn-on current limit	Thermistor	Thermistor
Input fuse	2 A time-lag fuse (internal)	2 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	15 V DC	12 V DC
Output current	1.5 A	1.5 A
Output power	22.5 W	18 W
Max. residual ripple	< 2 %	< 2 %
Overload protection	Surge current / thermal cut-out	Surge current / thermal cut-out
Surge protection	Varistor	Varistor
Mains failure bridge-over time	35 ms @ 115 V AC / 160 ms @ 230 V AC	35 ms @ 115 V AC / 160 ms @ 230 V AC
Control at 10...100% load	0.5%	0.5%
Max. capacitance at output	8000 µF	8000 µF
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	4 kV	4 kV
General data		
Ambient temperature (operational)	-20...+50 °C	-20...+50 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	78%	78%
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
Approvals	CE; CSA; GOSTME25	CE; CSA; GOSTME25
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.08 / 4	4 / 0.08 / 4
Height x width x depth		90.5 / 52 / 62.5 mm	90.5 / 52 / 62.5 mm
Note		Derating loss: 33% @ 60°C The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 33% @ 60°C The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP SNT 24W 15V 1.5A	1	**9928890015**	CP SNT 24W 12V 1.5A	1	**9928890012**

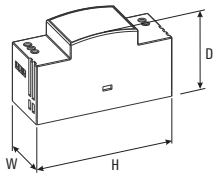
Note

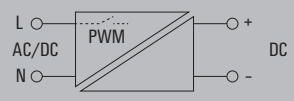
Accessories

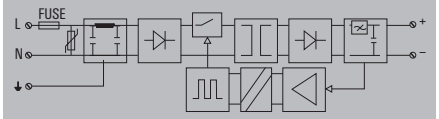
Note

connectPower single-phase

CP SNT 24 W 5 V 2 A







Technical data

Input	
Input voltage	85...265 V AC, 120...300 V DC
Input current	460 mA @ 115 V AC; 250 mA @ 230 V AC
Input frequency	50/ 60 Hz
Turn-on current limit	Thermistor
Input fuse	2 A time-lag fuse (internal)
Surge protection	Varistor
Output	
Output voltage	5 V DC
Output current	2 A
Output power	10 W
Max. residual ripple	< 2 %
Overload protection	Surge current / thermal cut-out
Surge protection	Varistor
Mains failure bridge-over time	35 ms @ 115 V AC / 160 ms @ 230 V AC
Control at 10...100% load	0.5%
Max. capacitance at output	8000 µF
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-20...+50 °C
Storage temperature	-40 °C...+85 °C
Degree of efficiency at max. load	78%
Standards	DIN EN 50178, DIN EN 60950, IEC950
Approvals	CE; CSA; GOSTME25
EMC standards	EN 61000-6 /-2, -3

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.08 / 4
Height x width x depth		90.5 / 52 / 62.5 mm
Note		Derating loss: 33% @ 60°C The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

		Type	Qty.	Order No.
	Screw connection	CP SNT 24W 5V 2A	1	9928890005

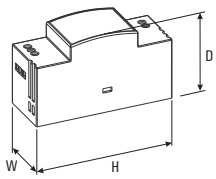
Note

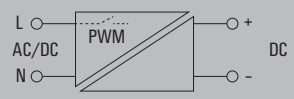
Accessories

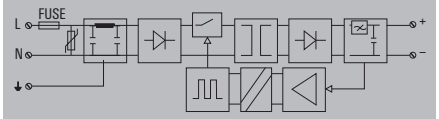
Note

connectPower single-phase

CP SNT 25 W 5 V 5 A



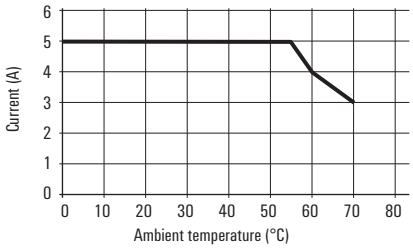




Technical data

Input	
Input voltage	85...264 V AC / 110...370 V DC
Input current	500 mA at rated load @ 230 V AC
Input frequency	50/ 60 Hz
Turn-on current limit	Yes
Input fuse	Fusible link 2.5 A (T) / 250 V
Surge protection	
Output	
Output voltage	4...8 V DC (adjustable via potentiometer)
Output current	5 A
Output power	25 W
Max. residual ripple	120 mV_{SS}
Overload protection	105 %...150 % I_{const} of max. output load; automatic reset
Surge protection	Varistor
Mains failure bridge-over time	11 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%
Max. capacitance at output	10000 µF
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-10...+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	70%
Standards	DIN EN 50178 (PELV), DIN EN 60950 (SELV)
Approvals	cCSAus; cURus; GOSTME25; UL
EMC standards	EN 55011, EN 55022, EN 61000-3-2,-3, EN 61000-6-2,-3,-4

Derating curve



Dimensions		Input/Output
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Height x width x depth		90.5 / 70 / 62.5 mm
Note		The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 25W 5V 5A	1	8754960000

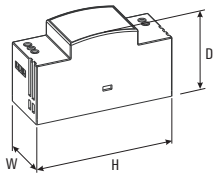
Note

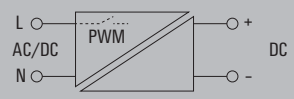
Accessories

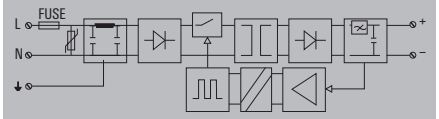
Note

connectPower single-phase

CP SNT 48 W 12 V 4 A



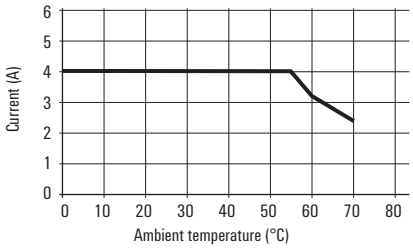




Technical data

Input	
Input voltage	85...264 V AC / 110...370 V DC
Input current	500 mA at rated load @ 230 V AC
Input frequency	50/ 60 Hz
Turn-on current limit	Yes
Input fuse	Fusible link 2.5 A (T) / 250 V
Surge protection	
Output	
Output voltage	9...15 V DC (adjustable via potentiometer)
Output current	4 A
Output power	48 W
Max. residual ripple	120 mV_{SS}
Overload protection	105 %...150 % I_{const} of max. output load; automatic reset
Surge protection	Varistor
Mains failure bridge-over time	11 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%
Max. capacitance at output	10000 µF
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-10...+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	75%
Standards	DIN EN 50178 (PELV), DIN EN 60950 (SELV)
Approvals	cCSAus; CE; cULus; cURus; GOSTME25; UL
EMC standards	EN 55011, EN 55022, EN 61000-3-2,-3, EN 61000-6-2,-3,-4

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Height x width x depth		90.5 / 70 / 62.5 mm
Note		The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

		Type	Qty.	Order No.
	Screw connection	CP SNT 48W 12V 4A	1	8754970000

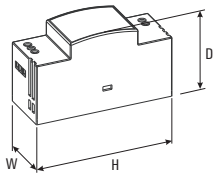
Note

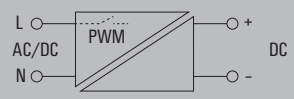
Accessories

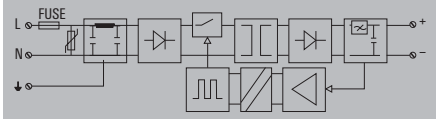
Note

connectPower single-phase

CP SNT 48 W 24 V 2 A



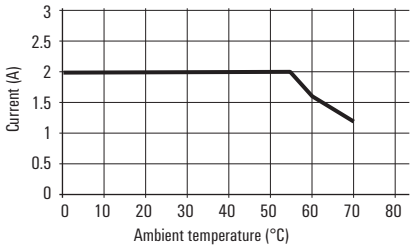




Technical data

Input	
Input voltage	85...264 V AC / 110...370 V DC
Input current	500 mA at rated load @ 230 V AC
Input frequency	50/ 60 Hz
Turn-on current limit	Yes
Input fuse	Fusible link 2.5 A (T) / 250 V
Surge protection	
Output	
Output voltage	15...28 V DC (adjustable via potentiometer)
Output current	2 A
Output power	48 W
Max. residual ripple	120 mV_{SS}
Overload protection	105 %...150 % I_{const} of max. output load; automatic reset
Surge protection	Varistor
Mains failure bridge-over time	11 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%
Max. capacitance at output	10000 µF
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-10...+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	78%
Standards	DIN EN 50178 (PELV), DIN EN 60950 (SELV)
Approvals	cCSAus; cULus; cURus; GOSTME25; UL
EMC standards	EN 55011, EN 55022, EN 61000-3-2,-3, EN 61000-6-2,-3,-4

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Height x width x depth		90.5 / 70 / 62.5 mm
Note		The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 48W 24V 2A	1	**8739140000**

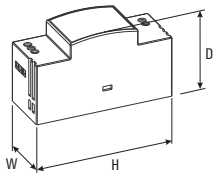
Note

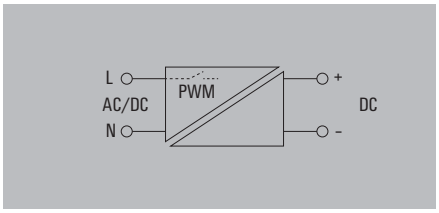
Accessories

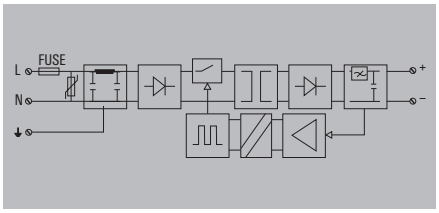
Note

connectPower single-phase

CP SNT 48 W 48 V 1 A



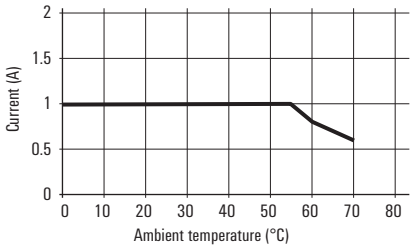




Technical data

Input	
Input voltage	85...264 V AC / 110...370 V DC
Input current	500 mA at rated load @ 230 V AC
Input frequency	50/ 60 Hz
Turn-on current limit	Yes
Input fuse	Fusible link 2.5 A (T) / 250 V
Surge protection	
Output	
Output voltage	46...55 V DC (adjustable via potentiometer)
Output current	1 A
Output power	48 W
Max. residual ripple	120 mV_{SS}
Overload protection	105 %...150 % I_{const} of max. output load; automatic reset
Surge protection	Varistor
Mains failure bridge-over time	11 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%
Max. capacitance at output	10000 µF
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-10...+70 °C (Derating ab 55 °C)
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	80%
Standards	DIN EN 50178 (PELV), DIN EN 60950 (SELV)
Approvals	cCSAus; cURus; GOSTME25; UL
EMC standards	EN 55011, EN 55022, EN 61000-3-2,-3, EN 61000-6-2,-3,-4

Derating curve



Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Height x width x depth		90.5 / 70 / 62.5 mm
Note		The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

		Type	Qty.	Order No.
	Screw connection	CP SNT 48W 48V 1A	1	8879230000

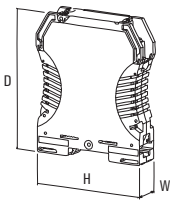
Note

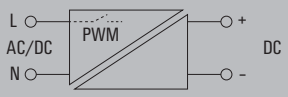
Accessories

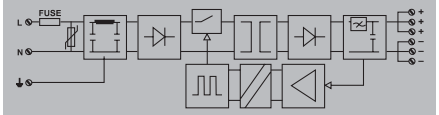
Note

connectPower single-phase

CP SNT 12 W 24 V 0.5 A







Technical data

Input	
Input voltage	85...265 V AC, 120...300 V DC
Input current	260 mA @ 115 V AC; 180 mA @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	2 A time-lag fuse (internal)
Surge protection	Varistor
Output	
Output voltage	24 V DC
Output current	0.5 A
Output power	12 W
Max. residual ripple	0.1 %
Overload protection	Surge current / thermal cut-out
Surge protection	Varistor
Mains failure bridge-over time	30 ms @ 115 V AC / 80 ms @ 230 V AC
Control at 10...100% load	0.6%
Parallel connection option	No
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-20...+50 °C
Storage temperature	-40 °C...+85 °C
Degree of efficiency at max. load	80%
Status indication	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	IEC 61000-6 /-2, -3
Power factor correction	No
Approvals	CE; CSA; GOSTME25

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5
Height x width x depth		92.4 / 22.5 / 112.4 mm
Note		

Ordering data

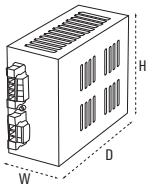
		Type	Qty.	Order No.
	Screw connection	CP SNT 12W 24V 0.5A	1	9918840024

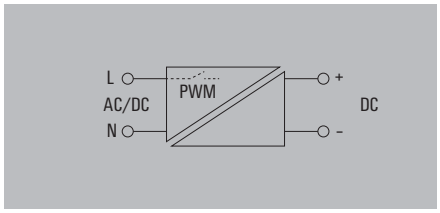
Note	

Accessories

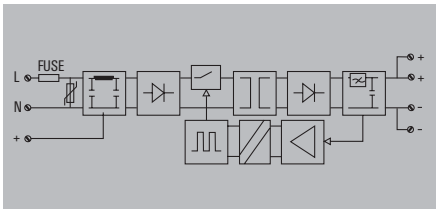
Note	Supply voltage 24V and 0V can be cross-connected with ZQV 2.5N/2

connectPower single-phase

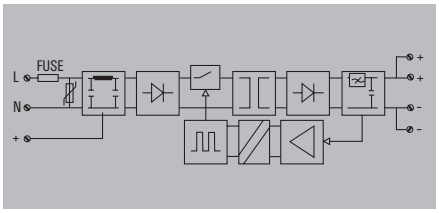




CP SNT 55 W 48 V 1.04 A



CP SNT 55 W 24-28 V 2.3 A



Technical data

Input		
Input voltage	85...265 V AC, 120...300 V DC	85...265 V AC, 120...300 V DC
Input current	1.1 A @ 115 V AC; 0.55 A @ 230 V AC	1.1 A @ 115 V AC; 0.55 A @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Input fuse	2 A time-lag fuse (internal)	2 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	48 V DC	24...28 V DC
Output current	1.04 A	2.3 A
Output power	50 W	55 W
Max. residual ripple	< 50 mV_{eff}	< 50 mV_{eff}
Overload protection	Surge current / thermal cut-out	Surge current / thermal cut-out
Surge protection	Varistor	Varistor
Mains failure bridge-over time	30 ms @ 115 V AC / 180 ms @ 230 V AC	30 ms @ 115 V AC / 180 ms @ 230 V AC
Control at 10...100% load	1%	1%
Parallel connection option	No	No
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	3 kV	3 kV
General data		
Ambient temperature (operational)	-20...+40 °C	-20...+40 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	78%	78%
Status indication	Green LED	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	IEC 61000-6 /-2, -3	IEC 61000-6 /-2, -3
Power factor correction	No	No
Approvals	CE; CSA; GOSTME25	CE; CSA; CSAEX; GOSTME25

Dimensions			
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		98 / 57 / 131 mm	98 / 57 / 131 mm
Note		Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

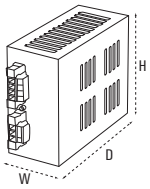
	Type	Qty.	Order No.
Screw connection	CP SNT 55W 48V 1.04A	1	**9927480048**
Screw connection	CP SNT 55W 24-28V 2.3A	1	**9927480024**

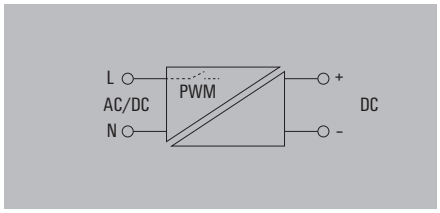
Note

Accessories

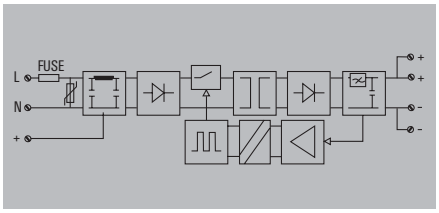
Note	
Bracket for wall mounting: 7920560000	Bracket for wall mounting: 7920560000

connectPower single-phase

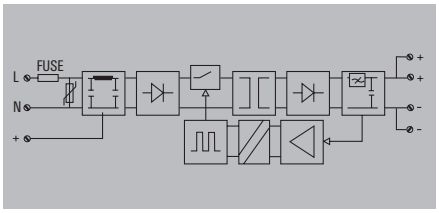




CP SNT 55 W 12-15 V 3 A



CP SNT 55 W 5 V 3 A



Technical data

Input		
Input voltage	85...265 V AC, 120...300 V DC	85...265 V AC, 120...300 V DC
Input current	1.1 A @ 115 V AC; 0.55 A @ 230 V AC	1.1 A @ 115 V AC; 0.55 A @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Input fuse	2 A time-lag fuse (internal)	2 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	12...15 V DC	5 V DC
Output current	3 A	3 A
Output power	36 W	15 W
Max. residual ripple	< 50 mV_{eff}	< 50 mV_{eff}
Overload protection	Surge current / thermal cut-out	Surge current / thermal cut-out
Surge protection	Varistor	Varistor
Mains failure bridge-over time	30 ms @ 115 V AC / 180 ms @ 230 V AC	30 ms @ 115 V AC / 180 ms @ 230 V AC
Control at 10...100% load	1%	1%
Parallel connection option	No	No
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	3 kV	3 kV
General data		
Ambient temperature (operational)	-20...+40 °C	-20...+40 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	78%	78%
Status indication	Green LED	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	IEC 61000-6 /-2, -3	IEC 61000-6 /-2, -3
Power factor correction	No	No
Approvals	CE; CSA; GOSTME25	CE; CSA; GOSTME25

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		98 / 57 / 131 mm	98 / 57 / 131 mm
Note		Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

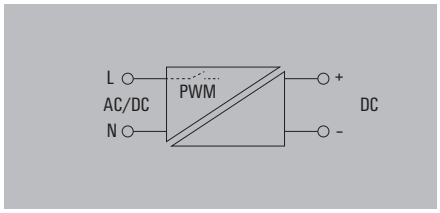
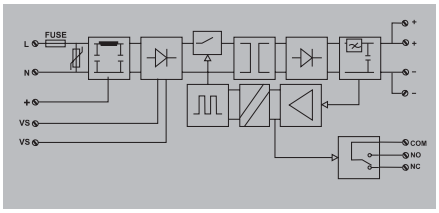
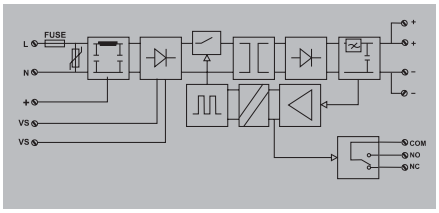
	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP SNT 55W 12-15V 3A	1	**9927480012**	CP SNT 55W 5V 3A	1	**9927480005**

Note		

Accessories

Note	Bracket for wall mounting: 7920560000	Bracket for wall mounting: 7920560000

connectPower single-phase

	CP SNT 160 W 48 V 3.5 A	CP SNT 160 W 24-28 V 6.5 A
		
		

Technical data

Input		
Input voltage	min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC	min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
Input current	2.9 A @ 115 V AC; 1.45 A @ 230 V AC	2.9 A @ 115 V AC; 1.45 A @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Input fuse	6.3 A time-lag fuse (internal)	6.3 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	48 V DC	24...28 V DC
Output current	3.5 A	6.5 A
Output power	168 W	156 W
Max. residual ripple	0.2 $\%_{eff}$	0.2 $\%_{eff}$
Overload protection	Overload current and surge protection	Overload current and surge protection
Surge protection	Varistor	Varistor
Mains failure bridge-over time	40 ms @ 115 V AC / 50 ms @ 230 V AC	40 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%	1%
Parallel connection option	No	No
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	3 kV	3 kV
General data		
Ambient temperature (operational)	0...+50 °C	0...+50 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	85%	85%
Status indication	Green LED	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Power factor correction	No	No
Approvals	CE; cULus; GOSTME25	CE; CSA; GOSTME25

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		127 / 57 / 175 mm	127 / 57 / 175 mm
Note		Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

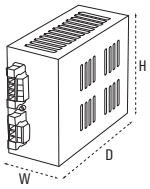
	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP SNT 160W 48V 3.5A	1	**9925340048**	CP SNT 160W 24-28V 6.5A	1	**9925340024**

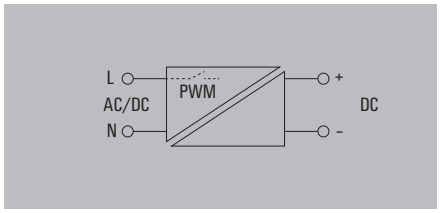
Note		

Accessories

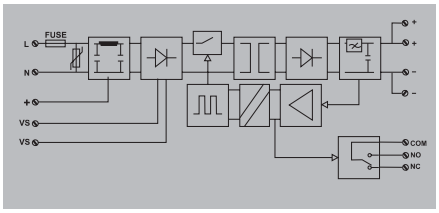
Note	Bracket for wall mounting: 7920560000	Bracket for wall mounting: 7920560000

connectPower single-phase

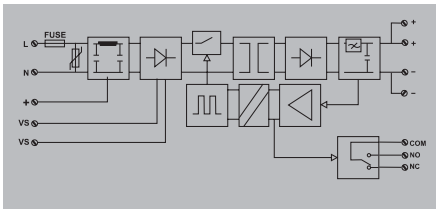




CP SNT 160 W 12-15 V 8 A



CP SNT 160 W 5 V 8 A



Technical data

Input		
Input voltage	min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC	min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
Input current	2.9 A @ 115 V AC; 1.45 A @ 230 V AC	2.9 A @ 115 V AC; 1.45 A @ 230 V AC
Input frequency	50/ 60 Hz	50/ 60 Hz
Input fuse	6.3 A time-lag fuse (internal)	6.3 A time-lag fuse (internal)
Surge protection	Varistor	Varistor
Output		
Output voltage	12...15 V DC	5 V DC
Output current	8 A	8 A
Output power	96 W	40 W
Max. residual ripple	0.2 $\%_{eff}$	0.2 $\%_{eff}$
Overload protection	Overload current and surge protection	Overload current and surge protection
Surge protection	Varistor	Varistor
Mains failure bridge-over time	40 ms @ 115 V AC / 50 ms @ 230 V AC	40 ms @ 115 V AC / 50 ms @ 230 V AC
Control at 10...100% load	1%	1%
Parallel connection option	No	No
Insulation coordination (EN 50178)		
Electrical isolation, output-earth	0.5 kV	0.5 kV
Electrical isolation, input-earth	1.5 kV	1.5 kV
Electrical isolation, input-output	3 kV	3 kV
Electrical isolation, I/O rail	3 kV	3 kV
General data		
Ambient temperature (operational)	0...+50 °C	0...+50 °C
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Degree of efficiency at max. load	85%	85%
Status indication	Green LED	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Power factor correction	No	No
Approvals	CE; cULus; GOSTME25	CE; cULus; GOSTME25

Dimensions			
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		127 / 57 / 175 mm	127 / 57 / 175 mm
Note		Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	Derating loss: 10% @ 60°CThe internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

	Type	Qty.	Order No.
Screw connection	CP SNT 160W 12-15V 8A	1	**9925340012**
Screw connection	CP SNT 160W 5V 8A	1	**9925340005**

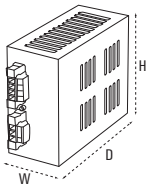
Note		

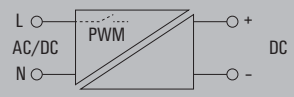
Accessories

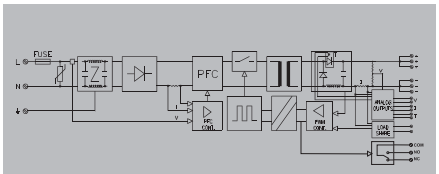
Note	Bracket for wall mounting: 7920560000	Bracket for wall mounting: 7920560000

connectPower single-phase

CP SNT 300 W 24 V 12.5 A







Technical data

Input	
Input voltage	86...265 V AC, 100...200 V DC; typ 115...230 V AC
Input current	3.3 A @ 115 V AC; 1.65 A @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	Thermistor
Surge protection	Varistor
Output	
Output voltage	22...28 V DC adjustable
Output current	12.5 A
Output power	300 W
Max. residual ripple	at 100 kHz: 2 mV_{SS}, At 120 Hz: 20 mV AC_{eff}
Overload protection	Overload current and surge protection
Surge protection	Varistor
Mains failure bridge-over time	40 ms @ 115 V AC / 40 ms @ 230 V AC
Control at 10...100% load	0.2%
Parallel connection option	Yes, max. 5 devices, active current splitting
Signalling delay	2 s
Monitoring function	Output voltage, current, temperature
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	4 kV
General data	
Ambient temperature (operational)	-15...+50 °C
Storage temperature	-40 °C...+85 °C
Degree of efficiency at max. load	80%
Status indication	Current limiting: LED yellow / Error: LED red/ On: LED green
Standards	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Power factor correction	PFC passive
Derating	Derating: 20% @ 60°C
Approvals	CE; CSA; GOSTME25

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 4
Height x width x depth		155 / 240 / 101 mm
Note		The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

		Type	Qty.	Order No.
	Screw connection	CP SNT 300W 24V 12.5A	1	**9916250024**

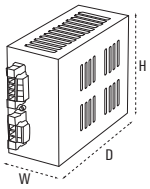
Note	

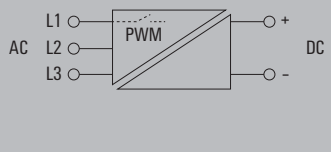
Accessories

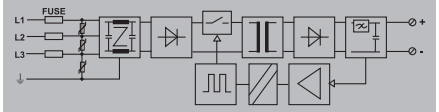
Note	Bracket for wall mounting: 7920560000

connectPower 3-phase

CP SNT 380-480 V AC / 24 V







Technical data

Input	
Input voltage	306... 550 V AC, typ.: 360...480 V AC
Input current	120 mA @ 360 V AC; 100 mA @ 230 V AC
Input frequency	50/ 60 Hz
Input fuse	3 x 1 A time-lag fuse (internal)
Surge protection	Varistor
Output	
Output voltage	24 V DC
Output current	2.3 A
Output power	55 W
Max. residual ripple	< 50 mV_{eff}
Overload protection	Surge current / thermal cut-out
Surge protection	Varistor
Mains failure bridge-over time	120 ms @ 360 V AC / 120 ms @ 480 V AC
Control at 10...100% load	1%
Parallel connection option	No
Overload protection	Surge current / thermal cut-out
Insulation coordination (EN 50178)	
Electrical isolation, output-earth	0.5 kV
Electrical isolation, input-earth	1.5 kV
Electrical isolation, input-output	3 kV
Electrical isolation, I/O rail	3 kV
General data	
Ambient temperature (operational)	0...+50 °C
Storage temperature	-40 °C...+85 °C
Degree of efficiency at max. load	85%
Status indication	Green LED
Standards	DIN EN 50178, DIN EN 60950, IEC950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Power factor correction	No
Approvals	CE; GOSTME25

Dimensions		**Input/Output**
Clamping range (nominal / min. / max.)	mm^2	4 / 0.1 / 4
Height x width x depth		108 / 60 / 168 mm
Note		Derating loss: 10% @ 85 ? The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Ordering data

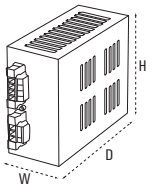
		Type	**Qty.**	**Order No.**
	Screw connection	CP-SNT 380-480VAC/24V	1	**9917790324**

Note	

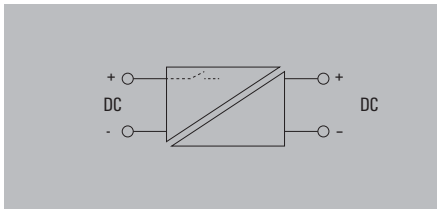
Accessories

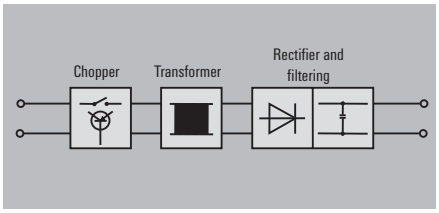
Note	Bracket for wall mounting: 7920560000

connectPower

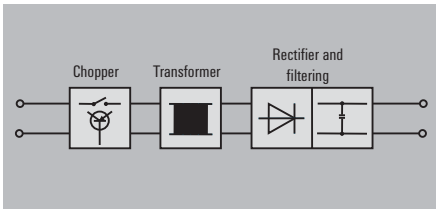


CP DCDC 50 W 22-24 V DC 2 A





CP DCDC 50 W 15 V DC 3 A



Technical data

Input		
Input voltage	18...30 V DC, typ. 24 V DC	18...30 V DC, typ. 24 V DC
Input fuse	internal	internal
Output		
Output voltage, min. / max.	22...24 V DC	15 V DC
Output current	2 A	3 A
Overload protection	Surge current cut-out with self-reset	Surge current cut-out with self-reset
General data		
Ambient temperature (operational)	-10...+60 °C (Derating ab 50 °C)	-10...+60 °C (Derating ab 50 °C)
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Status indication	Green LED	Green LED
Switching frequency	200 kHz	200 kHz
Approvals	CE; CSA; CSAEX; cULus; GOSTME25	CE; CSA; CSAEX; cULus; GOSTME25

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		98 / 57 / 131 mm	98 / 57 / 131 mm
Note			

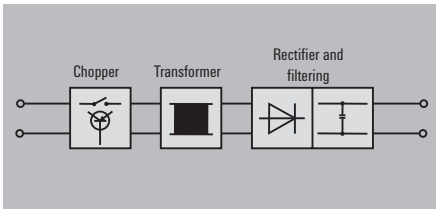
Ordering data

	Type	Qty.	Order No.
Screw connection	CP DCDC 50W 22-24V 2A	1	**9919372424**
Note			
Screw connection	CP DCDC 50W 15V 3A	1	**9919372415**
Note			

Accessories

Note	Bracket for wall mounting: 7920560000
Note	Bracket for wall mounting: 7920560000

CP DCDC 50 W 12 V DC 3 A



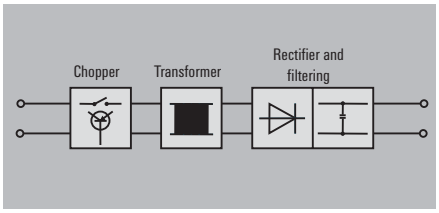
10...14 V DC, type 12V DC
internal
10.5...14.5 V DC
3 A
Surge current cut-out with self-reset
-10...+60 °C (Derating ab 50 °C)
-40 °C...+85 °C
Green LED
200 kHz
CE; CSA; CSAEX; cULus; GOSTME25

Input/Output
4 / 0.1 / 4
98 / 57 / 131 mm

Type	Qty.	Order No.
CP DCDC 50W 12V 3A	1	**9919371212**

Bracket for wall mounting: 7920560000

CP DCDC 50 W 20-24 V DC 2 A



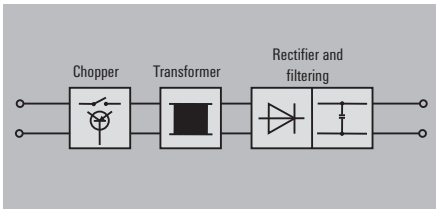
10...14 V DC, type 12V DC
internal
20.5...29.5 V DC
2 A
Surge current cut-out with self-reset
-10...+60 °C (Derating ab 50 °C)
-40 °C...+85 °C
Green LED
200 kHz
CE; CSA; CSAEX; cULus; GOSTME25

Input/Output
4 / 0.1 / 4
98 / 57 / 131 mm

Type	Qty.	Order No.
CP DCDC 50W 22-24V 2A	1	**9919371224**

Bracket for wall mounting: 7920560000

CP DCDC 50 W 15 V DC 3 A



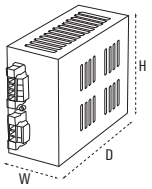
10...14 V DC, type 12V DC
internal
13...18 V DC
3 A
Surge current cut-out with self-reset
-10...+60 °C (Derating ab 50 °C)
-40 °C...+85 °C
Green LED
200 kHz
CE; CSA; CSAEX; cULus; GOSTME25

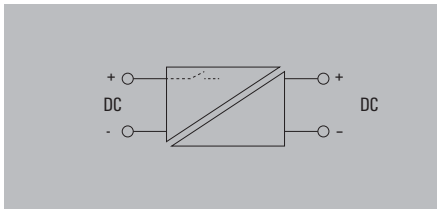
Input/Output
4 / 0.1 / 4
98 / 57 / 131 mm

Type	Qty.	Order No.
CP DCDC 50W 15V 3A	1	**9919371215**

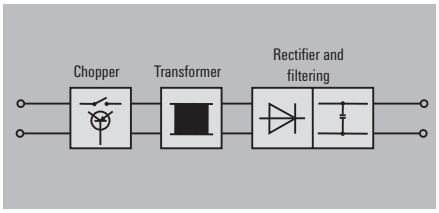
Bracket for wall mounting: 7920560000

connectPower

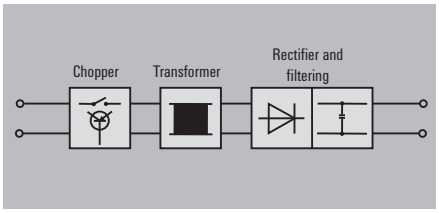




CP DCDC 50 W 12 V DC 3 A



CP DCDC 50 W 5 V DC 8 A



Technical data

Input		
Input voltage	18...30 V DC, typ. 24 V DC	18...30 V DC, typ. 24 V DC
Input fuse	internal	internal
Output		
Output voltage, max.	10.5...14.5 V DC	5 V DC
Output current	3 A	8 A
Overload protection	Surge current cut-out with self-reset	Surge current cut-out with self-reset
General data		
Ambient temperature (operational)	-10...+60 °C (Derating ab 50 °C)	-10...+60 °C (Derating ab 50 °C)
Storage temperature	-40 °C...+85 °C	-40 °C...+85 °C
Status indication	Green LED	Green LED
Switching frequency	200 kHz	200 kHz
Approvals	CE; CSA; CSAEX; cULus; GOSTME25	CE; CSA; CSAEX; cULus; GOSTME25

Dimensions		**Input/Output**	**Input/Output**
Clamping range (nominal / min. / max.)	mm²	4 / 0.1 / 4	4 / 0.1 / 4
Height x width x depth		98 / 57 / 131 mm	98 / 57 / 131 mm
Note			

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP DCDC 50W 12V 3A	1	**9919372412**	CP DCDC 50W 5V 8A	1	**9919372405**

Note

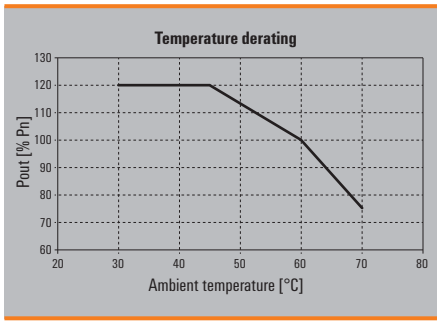
Accessories

Note	Bracket for wall mounting: 7920560000	Bracket for wall mounting: 7920560000

ConnectPower DC/DC converter

DC voltage converter for preparation and potential isolation in 24 V DC systems

- Overvoltage category III
- Class III protection
- Status of relay contact
- DC OK transistor output



Technical data

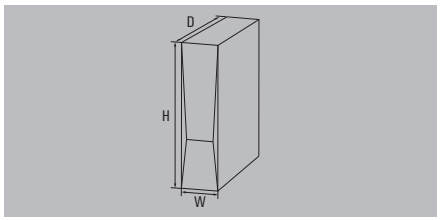
General technical specifications	
Output characteristic curve / current limit	IU / > 120 % I_N
Earth discharge current	< 0.005 mA
Ambient temp. Operating / storage temperature	–25 °C ... +70 °C / –40 °C ... +85 °C
Max. permitted humidity (operational)	5 %...95 % RH
Protection degree	IP20
Class of protection	III
Contamination degree	2
Insulation voltage	2.5 kV AC 1 min. / 1.5 kV AC 1 min. / 0.5 kV AC 1 min.
Overvoltage category	III
MTBF	> 500,000 hrs. according to IEC 1709 (SN29500)
Protection against load reverse voltages	33...34 V DC
Parallel capability (without diode module)	Yes, max. 5
Mountable side-by-side without gaps	Yes
Housing version, metal	Resistant to corrosion
Signal operations	LED green / red
Mounting position, installation notice	Horizontal on TS35 DIN rail, above and below 50 mm Clearance for air circulation, suitable for aligning without clearance gap For installation in rotating systems
Metal clip-on foot	Yes
EMC / shock / vibration	
Noise emission according to EN55022	Class B
Interference immunity tests, according to	EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Resistance against vibration and shock	According to EN50178, shock: 5 g in all directions
Electrical safety (applied standards)	
Electrical equipment of machines	According to EN60204
Safety transformers for switched-mode power units	According to EN61558-2-17
Machinery with electronic equipment	According to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN60950, PLEV according to EN60204
Protective separation / protection against electrical shock	VDE0100-410 / according to DIN57100-410
Protection against dangerous shock currents	According to VDE0106-101

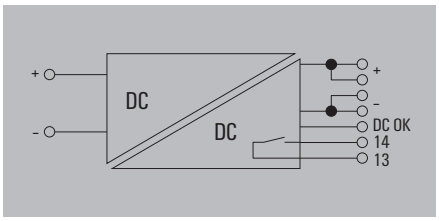
Accessories

	Type	Qty.	Order No.
Diode module (for redundant power supply)	CP M DM 20	1	1222210000
Capacity module (for pulse triggering of circuit breakers)	CP M CAP	1	1222240000

connectPower DC/DC converter

CP DCDC 250W 24V 10A





Technical data

Input data		
Rated input voltage		24 V DC
Input voltage range, DC		18...31.2 V DC
Current consumption, DC (typ.)		11 A
Current consumption, DC max.		15.5 A
Max. inrush current		< 10 A
Input fuse (internal)		Yes
Recommended back-up fuse		16 A / DI/II Fusible link 16 A, Char. B Circuit breaker 16 A, Char. C Circuit breaker
Output data		
Nominal output voltage		24 V DC ± 1%,
Adjustment range of output voltage		22.5...29.5 V DC
Ramp-up time		≤ 100 ms
Max. residual ripple		< 50 mVss
Nominal output current @ Unom		10 A @ 24 V DC
Short-circuit protection		Yes
Overload protection		Yes
Power boost @ 24 V DC, 60 °C, ED = 5 %		12 A for 1 min, ED = 5 %
General information		
Efficiency (typ.)		91%
Max. power loss (no load)		< 2 W
Max. power loss (nominal load)		< 24 W
Mains failure bridging @ Inom		> 7 ms @ 24 V DC
Length x width x height	mm	150 x 60 x 130
Weight		1.25 kg
Signal indication		
LED green (DC OK)		Output voltage ≥ 21.6 V
LED red (fault)		Output voltage ≤ 20.4 V
DC OK transistor output "1" (max. load)		Output voltage ≥ 21.6 V (max. 250 mA)
DC OK transistor output "0"		Output voltage ≤ 20.4 V
DC OK short circuit resistant		Yes
Floating contact		Yes
Contact load (NO contact)		max. 30V DC/0.5 A
Relay on/off		Output voltage > 21.6 V / < 20.4 V
Connection data	**Input**	**Output**
Screw connection	Screw connection	Screw connection
Number of terminals	2 für (+-)	7 für (DCOK,13,14,++ --)
Wire cross-section, rigid min/max	0.5 / 6 mm²	0.5 / 6 mm²
Wire cross-section, flexible min/max	0.5 / 2.5 mm²	0.5 / 2.5 mm²
Wire cross-section, AWG/kcmil min/max	26 / 12	26 / 12
Tightening torque	0.5 ... 0.6 Nm	
Reverse polarity protection	Yes	
Approvals		
Approvals	CE, cURus, TÜV(IEC 60950-1), cULus, GL	

Ordering data

Type	Qty.	Order No.
CP DCDC 250W 24V 10A	1	1313320010

Uninterruptible power supplies (UPS)

Uninterruptible power supplies

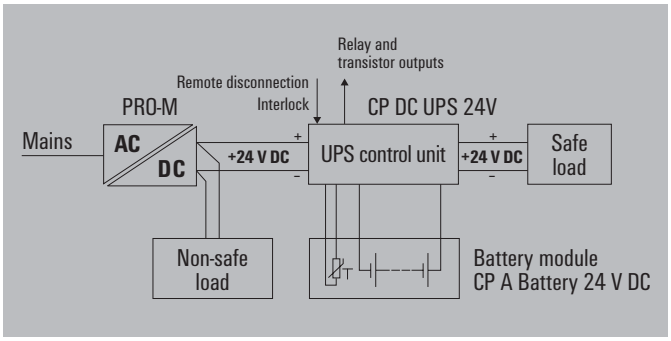
Weidmüller's uninterruptible power supplies reliably protect 24 V DC consumers from voltage drop-outs and dips, such as those that could occur as a result of mains faults. These products therefore play a key role in increasing systems availability.

The buffer module is the perfect solution for bridging short-term power supply failures or dips of up to 100 ms. The capacitor-based technology enables maintenance-free operation, depending on the application, of up to 10 years.

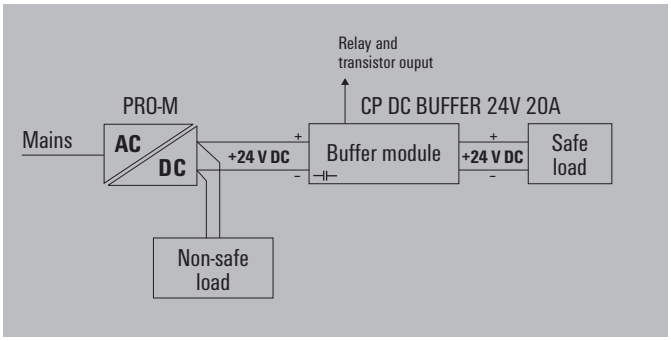
The UPS control unit, together with the accompanying battery module and the power supply, form a complete DC UPS system with support times in minutes or hours. The modular construction allows for the overall load to be distributed into non-safe and safe load circuits, such that often a smaller UPS can be designed.

A huge variety of operating types are available to suit the particular application precisely. A remote input to block battery operation, as well as multiple signal outputs, enable remote operation of the UPS.

UPS with battery module

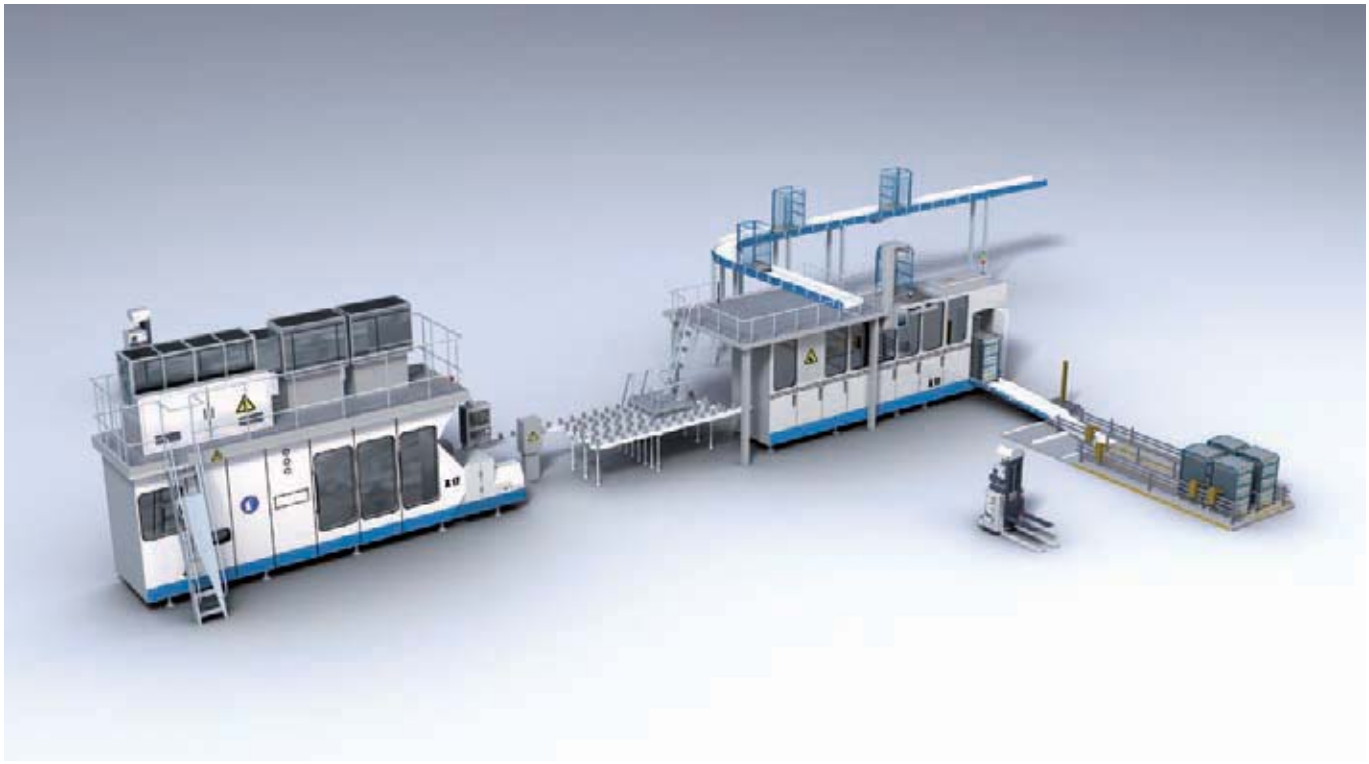


UPS with buffer module



Can your facility afford to experience a power failure? Allow us to connect you so that you are safe from failure and downtime.

Let's connect.



It is critical to safeguard a facility's power supply in the event of an outage. You cannot do without the important signals from the field, which serve to control the entire process. In addition, you also need to monitor a whole range of functions and performance parameters for your facility. Our highly modular power supply concept will support you in the practical fulfilment of all your requirements. At the same time, we will also familiarise ourselves with your future requirements and provide you with an individual, tailor-made solution, with components that are precisely aligned to work with one another.

For a continual, lasting power supply and clean control voltage, we use redundant circuits, selective short-circuit solutions, battery reservoirs and DC/DC converters. And because lightning and power surges can put an uninterrupted power supply in a production facility at risk, we also provide lightning and overvoltage protection. The VPU series provides unrestricted operation of power supplies and automation devices such as sensors, actuators and control units. The subsequent availability of the power supply means that all devices will restart in a controlled manner. Let's connect.

PRO-M

- Used to save space in automation technology
- Individual modulation of the output power
- Up to 5 devices can be switched directly, in parallel
- Optional diode modules with fault signalling
- Expanded temperature range –25 °C to 70 °C

UPS control unit

- Different status relays for status monitoring
- Direct switchover to battery operation in the event of malfunction
- Automatic reconnection to load when power recovers
- Long battery life due to integrated deep discharge protection
- Optimised charging feature

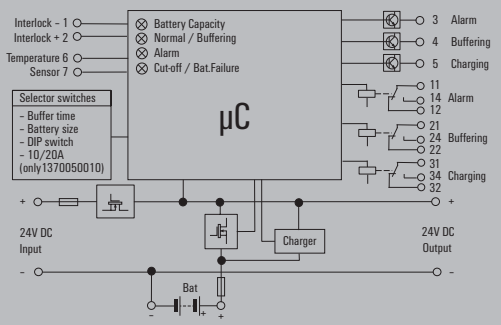
UPS control unit

- Two 24 V models in 10 A/20 A and 40 A
- Temperature-compensated charging feature for long battery life
- Integrated battery diagnostics including continuous availability test
- Status relay and additional transistor outputs for remote monitoring
- Convenient LED displays for easy error analysis

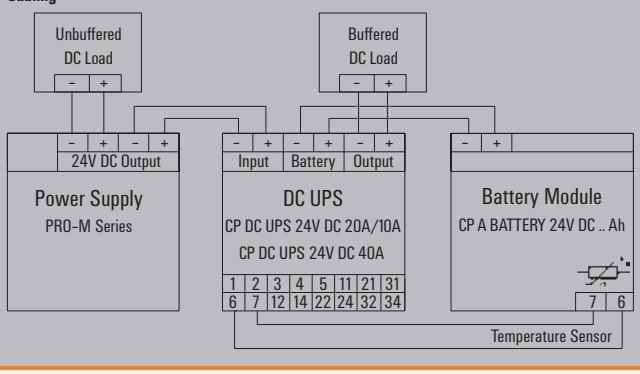
Technical data

Indication	
Status relay (max.load 30 V AC/DC 0.1 A)	Fault (alarm), battery operation (buff.), charging (charg.)
Transistor outputs (24 to 27 V DC max. load 150 mA)	Fault (alarm), battery operation (buff.), charging (charg.)
LED status indicator	Three-colour LED: battery capacities > 85 % green, > 40 % yellow, > 20 % red, < 20 % red (flashing) Green/yellow LED: normal / buffering Yellow/red LED: temperature alarm / alarm Yellow/red LED: switch-off / battery fault
General technical data	
Ambient temperature (operational)	–25 °C...+70 °C
Storage temperature	–40 °C...+85 °C
Max. perm. air humidity	5...95 %
Protection degree	IP 20
Class of protection	3
Pollution severity level	2
Overvoltage category	III
Insulation voltage input/output to housing/ground	1300 V DC 1 min (typetest)
MTBF	> 500,000 hours acc. to IEC 1709
Protection against reverse voltages from the load	32...34 V DC
Parallel connection option	Yes, only with diode module for redundancy
Housing version	Metal, corrosion resistant
Mounting position, installation notice	Horizontal on mounting rail TS35, 50 mm above and below Space for free movement of air
Overload protection	Yes
Short-circuit protection	Yes
EMC / shock / vibration	
Interference emission	Acc. to EN55022 Class B
Interference immunity tests	Acc.to EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (fields), EN61000-4-4 (burst), EN61000-4-5 (surge), EN610004-6 (conducted), EN61000-4-11 (dips)
Resistance against vibration and shock	Acc.to IEC60954 Vibration: 2.3 g, Acc.to IEC60068-2-31 shock: 30 g in all directions
Electrical safety (applied standards)	
Electrical equipment of machines	Acc. to EN60204
Safety transformers for switch-mode power supplies	Acc. to EN61558-2-17
Machinery with electronic equipment	Acc. to EN50178 / VDE0160
Extra-low voltage protection	SELV acc. to EN60950, PLEV acc. to EN60204

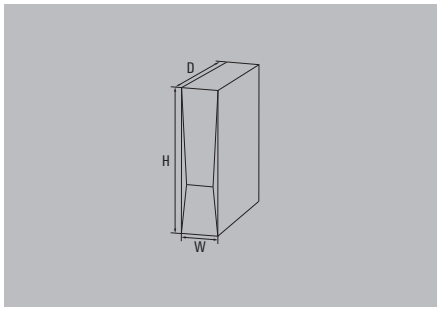
Block diagram



Cabling



UPS control unit



CP DC UPS 24V 20A/10A

CP DC UPS 24V 40A

Technical data

Input		
Rated input voltage	24 V DC	24 V DC
Input voltage range	20...30 V DC	20...30 V DC
Rated input voltage (up to 60 °C)	≤ 13 A (for 10 A) | ≤ 23 A (for 20 A)	≤ 43 A
Input current, max. (to 45 °C)	≤ 15 A (for 10 A) | ≤ 27 A (for 20 A)	≤ 51 A
Input fuse	Yes, 30 A	Yes, 60 A
Standby current (without battery)	max. 200 mA	max. 200 mA
Standby current (with fully charged battery)	max. 0,5 A	max. 0,5 A
Reverse polarity protection	Yes	Yes
Output		
Rated output voltage	24 V DC	24 V DC
Output voltage, normal operation (Imax)	Vo = Vin – 0,2 V	Vo = Vin – 0,2 V
Output voltage, battery operation (Imax)	Vo = Vin – 0,3 V	Vo = Vin – 0,3 V
Rated output current (up to 60 °C)	10 A / 20 A	40 A
Continuous output current (up to 70 °C), derating from 60 °C	7,5 A / 15 A	24 A
Continuous output current (up to 45 °C)	12 A / 24 A	48 A
Power Boost@24 V DC, 60 °C	12 A / 24 A for 1 min, ED = 5 %	48 A for 1 min, ED = 5 %
Integrated battery charger		
Charging feature	IU characteristic curve	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20 °C	27, 48 V @ 20 °C
Temperature coefficient	- 48 mV / °C	- 48 mV / °C
Charging current	0,15 CA	0,15 CA
Battery availability test	Yes, each minute	Yes, each minute
Battery module		
Rated voltage	24 V DC	24 V DC
Storage medium (AGM battery)	1,3 Ah, 3,4 Ah, 7,2 Ah, 12 Ah, 17 Ah (selectable, with rotary switch)	3,4 Ah, 7,2 Ah, 12 Ah, 17 Ah (selectable, with rotary switch)
Parallel connection option	Yes, max. 2	Yes, max. 2
Operating elements and control inputs		
Output current selector switch	10A / 20A	No
Battery in Ah selector switch	1,3 / 3,4 / 7,2 / 12 / 17 / No Battery / Service	3,4 / 7,2 / 12 / 17 / No Battery / Service
Buffer times in minutes selector switch	0,5 / 1 / 3 / 5 / 10 / 20 / 30 / 45 / ∞ / ∞ w/0	0,5 / 1 / 3 / 5 / 10 / 20 / 30 / 45 / ∞ / ∞ w/0
DIP switch	Inversion of the transistor outputs; operation without temperature sensor	Inversion of the transistor outputs; operation without temperature sensor
Remote disconnection (Interlock)	Yes	Yes
Temperature sensor connection	Yes, for NTC 10 KΩ	Yes, for NTC 10 KΩ
General data		
Buffer times	Depending on the connected battery (adjustable)	Depending on the connected battery (adjustable)
Efficiency	≥ 98 % Normal operation, battery charged ≥ 96 % Normal operation, battery charging ≥ 98 % Battery operation	≥ 98 % Normal operation, battery charged ≥ 96 % Normal operation, battery charging ≥ 98 % Battery operation
Power loss	<10 W	<10 W
Height x width x depth	130 / 66 / 150 mm	130 / 66 / 150 mm
Weight	0,98 kg	1,0 kg
Approvals		
	CE, TÜV; Pending: cURus, cULus, GL	CE, TÜV; Pending: cURus, cULus, GL

Connection data	**Input/output/battery**	**Signal**	**Input/output/battery**	**Signal**
Conductor connection system	Screw connection		Screw connection	
Wire cross-section, rigid mm² (min./max.)	0,5/16	0,5/6	0,5/16	0,5/6
Wire cross-section, flexible mm² (min./max.)	0,5/16	0,5/4	0,5/16	0,5/4
Wire cross-section, AWG/kcmil (min./max.)	26/6	26/12	26/6	26/12
Stripping length (mm)	10	8	10	8
Tightening torque range (NM)	1,2 ... 1,5	0,5...0,6	1,2 ... 1,5	0,5...0,6

Ordering data

Type	Qty.	Order No.
CP DC UPS 24 V 20 A/10 A	1	**1370050010**

Type	Qty.	Order No.
CP DC UPS 24 V 40 A	1	**1370040010**

Battery modules

- Maintenence-free lead-acid batteries from 3.4 Ah to 17 Ah
- Integrated temperature sensor for optimal battery charging
- Integrated fuse for reliable activation
- Capacity up to 40 A / 30 min or 1 A / 30 hrs
- Robust metal housing for wall mounting

CP A BATTERY 24V DC 3,4 Ah

CP A BATTERY 24V DC 7,2 Ah

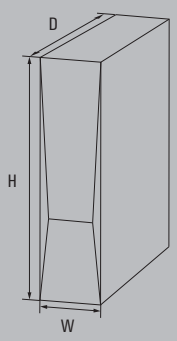
Technical data

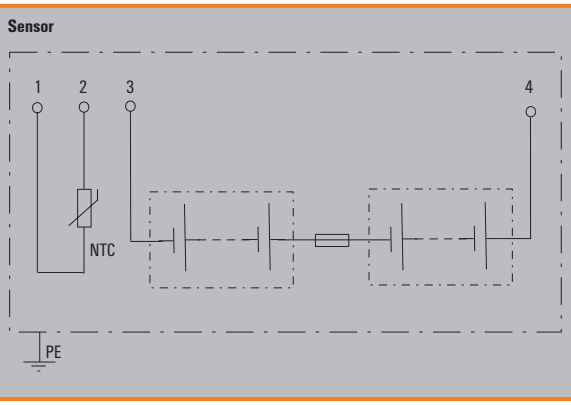
	CP A BATTERY 24V DC 3,4 Ah	CP A BATTERY 24V DC 7,2 Ah
Rated voltage	24 V DC	24 V DC
Nominal capacity	3,4 Ah	7,2 Ah
Max. charging current at 0.15 CA	0,51 A	1,8 A
Fuse (ATO flat blade fuse max. 80 V DC)	25 A	2 x 25 A
Buffer time	11,3 min @ 10 A 5 min @ 20 A	26,5 min @ 10 A 11,5 min @ 20 A 5 min @ 30 A
Max. output current	25 A	50 A
Parallel connection option	Yes, max. 2	Yes, max. 2
Series switching capability	No	No
Temperature sensor	NTC 8 kΩ	NTC 8 kΩ
General data		
Battery type (maintenance-free battery)	Valve Regulated Lead Acid (VRLA)- Absorbed Glass Mat (AGM)	Valve Regulated Lead Acid (VRLA)- Absorbed Glass Mat (AGM)
Battery type Panasonic	UP-RW1220P	LC-R127R2PG
Lifetime in years (application-dependent)	6...9 @ 20 °C	6...9 @ 20 °C
Ambient temperature	0 °C...+40 °C	0 °C...+40 °C
Storage temperature	–15 °C...+40 °C	–15 °C...+40 °C
Latest commissioning in months	9	9
Max. perm. air humidity	5...95 %	5...95 %
Class of protection	III	III
Protection degree	IP 20	IP 20
Vibration mounting rail assembly/wall mounting acc. to IEC 68-2-6	0.7 g / 0.7 g	– / 0.7 g
Shock mounting rail assembly/wall mounting acc. to IEC 68-2-27	30 g	30 g
Height x width x depth	144 / 108 / 126 mm	155 / 162 / 126 mm
Weight	3,6 kg	5,9 kg
Approvals	CE, TÜV	CE, TÜV
Connection data (input/output, signal)	**Input/output/battery** **Signal**	**Input/output/battery** **Signal**
Screw connection	Pluggable	Pluggable
Wire cross-section, rigid mm² (min./max.)	0,2/6 0,2/1,5	0,2/6 0,2/1,5
Wire cross-section, flexible mm² (min./max.)	0,25/6 0,2/1,5	0,25/6 0,2/1,5
Wire cross-section, AWG/kcmil (min./max.)	24/10 28/16	24/10 28/16
Tightening torque range (Nm)	0,5...0,6 0,2...0,25	0,5...0,6 0,2...0,25

Ordering data

Type	Qty.	Order No.
CP A BATTERY 24V DC 3,4 Ah	1	1251070000

Type	Qty.	Order No.
CP A BATTERY 24V DC 7,2 Ah	1	1251080000





CP A BATTERY 24V DC 12 Ah

CP A BATTERY 24V DC 17 Ah

Technical data

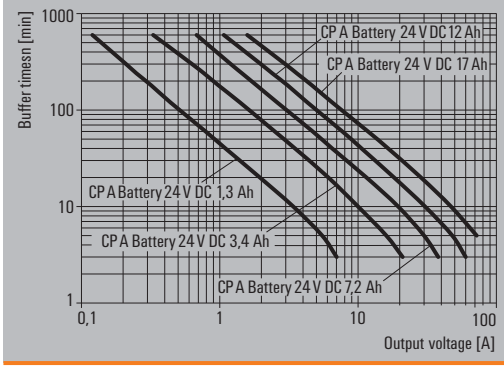
Rated voltage	24 V DC	24 V DC
Nominal capacity	12 Ah	17 Ah
Max. charging current at 0.15 CA	1,8 A	2,55 A
Fuse (ATO flat blade fuse max. 80 V DC)	2 x 25 A	2 x 25 A
Buffer time	51 min @ 10 A	81 min @ 10 A
	22,7 min @ 20 A	34,2 min @ 20 A
	9,2 min @ 30 A	13,5 min @ 30 A
Max. output current	50 A	50 A
Parallel connection option	Yes, max. 2	Yes, max. 2
Series switching capability	No	No
Temperature sensor	NTC 8 kΩ	NTC 8 kΩ
General data		
Battery type (maintenance-free battery)	Valve Regulated Lead Acid (VRLA)- Absorbed Glass Mat (AGM)	Valve Regulated Lead Acid (VRLA)- Absorbed Glass Mat (AGM)
Battery type Panasonic	LC-RA1212PG	LC-XD1217APG
Lifetime in years (application-dependent)	6...9 @ 20 °C	10...12 @ 20 °C
Ambient temperature	0 °C...+40 °C	0 °C...+40 °C
Storage temperature	–15 °C...+40 °C	–15 °C...+40 °C
Latest commissioning in months	9	9
Max. perm. air humidity	5...95 %	5...95 %
Class of protection	III	III
Protection degree	IP 20	IP 20
Vibration mounting rail assembly/wall mounting acc. to IEC 68-2-6	– / 0.7 g	– / 0.7 g
Shock mounting rail assembly/wall mounting acc. to IEC 68-2-27	30 g	30 g
Height x width x depth	155 / 229 / 126 mm	178 / 232 / 160 mm
Weight	9,2 kg	13,4 kg
Approvals	CE, TÜV	CE, TÜV
Connection data (input/output, signal)	**Input/output/battery** **Signal**	**Input/output/battery** **Signal**
Screw connection	Pluggable	Pluggable
Wire cross-section, rigid mm² (min./max.)	0,2/6 0,2/1,5	0,2/6 0,2/1,5
Wire cross-section, flexible mm² (min./max.)	0,25/6 0,2/1,5	0,25/6 0,2/1,5
Wire cross-section, AWG/kcmil (min./max.)	24/10 28/16	24/10 28/16
Tightening torque range (Nm)	0,5...0,6 0,2...0,25	0,5...0,6 0,2...0,25

Ordering data

Type	Qty.	Order No.
CP A BATTERY 24V DC 12 Ah	1	1251090000

Type	Qty.	Order No.
CP A BATTERY 24V DC 17 Ah	1	1251110000

Buffer times-output voltage curve



Buffer modules

- Maintenance-free UPS on capacitor basis with a capacity to support 20 A / 260 ms
- Parallel switching to increase the output current or support time
- Status notification via LED and relay contact

CP DC Buffer 24V 20A

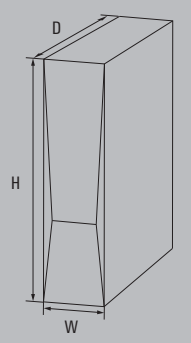
Technical data

Input		
Input voltage		24 V DC (22,5...30 V DC)
Input current		0...22 A
Max. approved input current		Max. 22 A
Surge protection		35 V DC suppressor diode
Output		
Output voltage		24 V DC
Output current		20 A, max. 22 A
Parallel connection option		Yes, without diode module
Overload protection		≥ 22 A (Only at discharge)
Surge protection		31...34 V (Only at discharge)
Status relay (max. load)		Input voltage OK (30 V AC/DC 2 A) Operational (24 V AC/DC 300 mA)
Display		
Operational		LED green: ready
General data		
Efficiency		95 %
Insulation voltage input/output		1 kV
Storage medium		Internal condenser
Buffer times		260 ms bei 20 A, 6 s at 1 A
MTBF		> 500,000 hours acc. to IEC 1709
Ambient temperature		–25 °C...+70 °C
Storage temperature		–40 °C...+85 °C
Max. perm. air humidity		5...95 %
Height x width x depth	mm	130 / 66 / 150
Standards applied		EN50178, EN60950
EMC		EN55011, EN55022, EN55024, EN61000-6-2,-3,-4
Weight		1,15 kg
Approvals		CE, TÜV, cURus, cULus

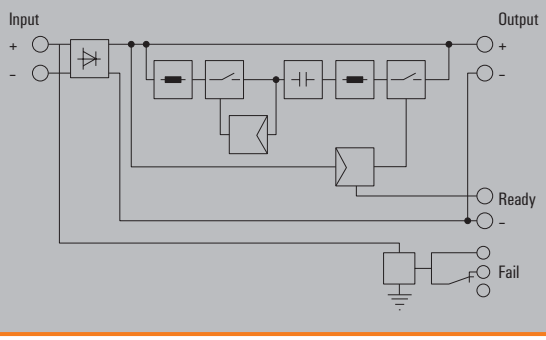
Connection data	**Input**	**Output**	**Signal**
Conductor connection system		Screw connection	
Wire cross-section mm² (nominal/min./max.)	10/0,3/16	10/0,3/16	4/0,13/6

Ordering data

Type	Qty.	Order No.
CP DC Buffer 24V 20A	1	1251220000



Block diagram



Fuse protection for 24 V DC circuits

Fuse protection

A 24-V DC control voltage has become the standard in the automation industry. Selective fuse protection is often used when the power is being supplied by PLC-guided controllers. It divides the total load into separate, logically connected safety circuits. For example, the CPU, actuators and sensors can be separated in the load circuits. This selective load protection helps to decrease facility downtime and also to simplify troubleshooting. When a disruption (short circuit) occurs on a standard protective system, the entire power supply is interrupted. In a system using selective fuse protection, only the fuse in the one disrupted load circuit is triggered. If the fuse is triggered quick enough so that other loads (and particularly the CPU) can continue functioning properly, then various control algorithms can be used to deal with the disruption. It is then possible to shut down the facility in an orderly and controlled fashion.

A fundamental problem when using ordinary fuses is that they take a relatively long time to trigger. Usually, a switched-mode power supply is already well over the surge-current limit (typically 120 % of I_{nom}) before its fuse triggers. Ordinary fuses are therefore not suitable for constructing a selective fuse protective system. Such systems present DC fuses with special challenges. They must be able to switch off quickly enough but they must also be able to tolerate the start-up surge currents from consumer loads. Weidmüller's electronic fuses, from our established WAVEGUARD line, are the answer to both of these challenges: they are quick acting but can also tolerate start-up currents. You can easily implement selective load protection using our WAVEGUARD models.

In addition, Weidmüller's electronic fuses feature a floating alarm contact and a reset input. This allows a PLC controller to query the status of the fuse or to perform an automated reset after troubleshooting. This provides you with a convenient method for remotely maintaining a complex facility. As a result, you save both time and money.

Resetting

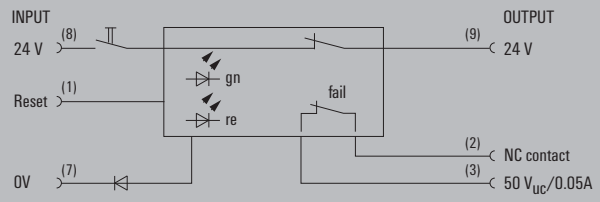
The WAVEGUARD family can be reset manually or by using an external signal. They can be reset remotely by simply applying a 24 V signal pulse on the reset input. The reset occurs on the falling edge of the signal.

Note: A cyclical automatic reset is not permitted and can lead to a malfunction.

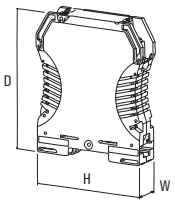
Signalling

A red LED displays when the electronic fuse has been triggered. An alert is also sent out over a floating alarm contact. A green LED signals that the unit is switched on. The alarm contact uses an NC contact.

Block diagram WAVEGUARD

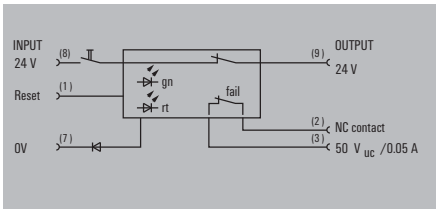


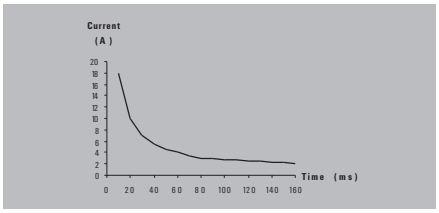
WAVEGUARD

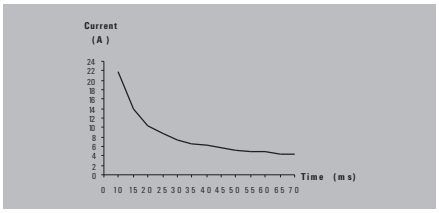


24 V DC 1.6 A

24 V DC 3.15 A







Technical data

Input		
Rated control voltage	24 V DC	24 V DC
Rated current	1.6 A	3.15 A
Reset	Impulse > 100 ms +24 V, falling edge ON	Impulse > 100 ms +24 V, falling edge ON
Output		
Status relay / CO contact	NC contact, max. 50 V / 0.05 A; for low voltage only!	NC contact, max. 50 V / 0.05 A; for low voltage only!
Signalling delay	3.5 ms typ.	3.5 ms typ.
General data		
Ambient temperature	0...+55 °C	0...+55 °C
Storage temperature	-20 °C...+85 °C	-20 °C...+85 °C
Status indication	LED green: OK, LED red: tripped	LED green: OK, LED red: tripped
Standards	DIN EN 50178	DIN EN 50178
EMC standards	EN 55011, EN 61000-6-1, 2, 4	EN 55011, EN 61000-6-1, 2, 4
Sliding switch	OFF - wait 10 s - ON; on / off	OFF - wait 10 s - ON; on / off
Approvals	cCSAus; CE; cURus; GOSTME25	cCSAus; CE; cURus; GOSTME25

Dimensions				
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Height x width x depth		92.4 / 22.5 / 72	92.4 / 22.5 / 72	92.4 / 22.5 / 72	92.4 / 22.5 / 72
Note		Periodic auto-reset not permitted; Tu=23 °C, single module		Periodic auto-reset not permitted; Tu=23 °C, single module	

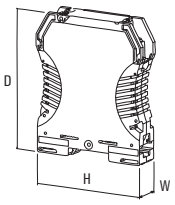
Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	WGS 24Vdc 1,6A	1	**8618890000**	WGS 24Vdc 3,15A	1	**8618910000**
Tension-clamp connection	WGZ 24Vdc 1,6A	1	**8621040000**	WGZ 24Vdc 3,15A	1	**8621030000**

Note

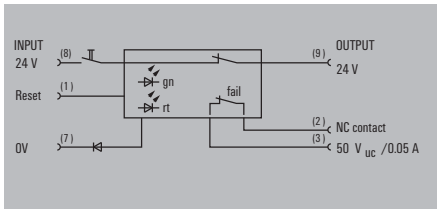
Accessories

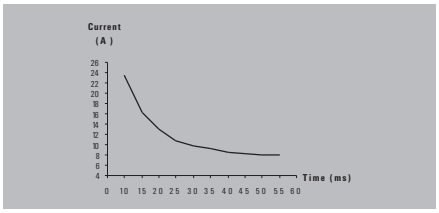
Note	Supply voltage +24 V and 0 V can be cross-connected with ZQV 2.5N/2	Supply voltage +24 V and 0 V can be cross-connected with ZQV 2.5N/2

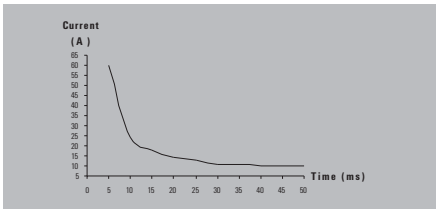


24 V DC 6.3 A

24 V DC 8 A







Technical data

Input		
Rated control voltage	24 V DC	24 V DC
Rated current	6.3 A	8 A
Reset	Impulse > 100 ms +24 V, falling edge ON	Impulse > 100 ms +24 V, falling edge ON
Output		
Status relay / CO contact	NC contact, max. 50 V / 0.05 A; for low voltage only!	NC contact, max. 50 V / 0.05 A; for low voltage only!
Signalling delay	3.5 ms typ.	3.5 ms typ.
General data		
Ambient temperature	0...+55 °C	0...+55 °C
Storage temperature	-20 °C...+85 °C	-20 °C...+85 °C
Status indication	LED green: OK, LED red: tripped	LED green: OK, LED red: tripped
Standards	DIN EN 50178	DIN EN 50178
EMC standards	EN 55011, EN 61000-6-1, 2, 4	EN 55011, EN 61000-6-1, 2, 4
Sliding switch	OFF - wait 10 s - ON; on / off	OFF - wait 10 s - ON; on / off
Approvals	cCSAus; CE; cURus; GOSTME25	cCSAus; CE; cURus; GOSTME25

Dimensions				
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Height x width x depth		92.4 / 22.5 / 72	92.4 / 22.5 / 72	92.4 / 22.5 / 72	92.4 / 22.5 / 72
Note		Periodic auto-reset not permitted; Tu=23 °C, single module		Periodic auto-reset not permitted; Tu=23 °C, single module	

Ordering data

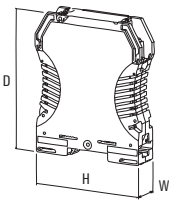
	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	WGS 24Vdc 6,3A	1	**8618930000**	WGS 24Vdc 8,0A	1	**8618940000**
Tension-clamp connection	WGZ 24Vdc 6,3A	1	**8621020000**	WGZ 24VDC 8,0A	1	**8621010000**

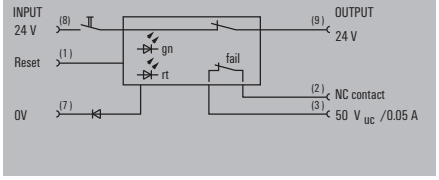
Note

Accessories

Note	Supply voltage +24 V and 0 V can be cross-connected with ZQV 2.5N/2	Supply voltage +24 V and 0 V can be cross-connected with ZQV 2.5N/2

24 V DC 0.5...5 A





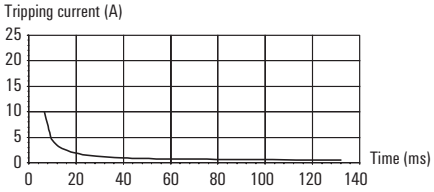
Technical data

Input	
Rated control voltage	24 V DC
Rated current	0.5...5 A adjustable
Reset	Impulse > 100 ms +24 V, falling edge ON
Output	
Status relay / CO contact	NC contact, max. 50 V / 0.05 A; for low voltage only!
Signalling delay	3.5 ms typ.
General data	
Ambient temperature	0...+55 °C
Storage temperature	-20 °C...+85 °C
Status indication	LED green: OK, LED red: tripped
Standards	DIN EN 50178
EMC standards	EN 55011, EN 61000-6-1, 2, 4
Sliding switch	OFF - wait 10 s - ON; on / off
Approvals	cCSAus; CE; cURus; GOSTME25

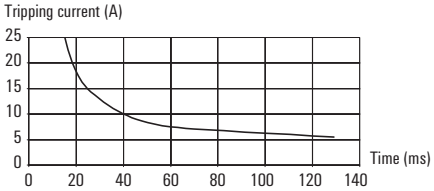
Derating curve

Dynamic tripping characteristic

Tripping current: 0.5 A



Tripping current: 5.0 A



Dimensions			
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Height x width x depth		92.4 / 22.5 / 72	92.4 / 22.5 / 72
Note		Periodic auto-reset not permitted; Tu=23 °C, single module	

Ordering data

	Type	Qty.	Order No.
Screw connection	WGS 24Vdc 0.5...5A	1	**8710270000**
Tension-clamp connection	WGZ 24Vdc 0.5...5A	1	**8727630000**

Note

Accessories

Note	Supply voltage +24 V and 0 V can be cross-connected with ZQV 2.5N/2

Unregulated power supplies

compactPower
POWER FOR AUTOMATION

Unregulated power supplies – compactPower

Compact power supply units are important links in the power supplies for controllers. They are used where processes or control voltages are required that vary from the mains voltage. Transformers provide the electrical isolation between the input circuit and the output circuit.
The minimum requirement (to VDE 0550) is 2,000 V. Screw terminals secure the input-side connection to the mains. The single-phase devices are rated for a nominal voltage of ~230 ± ~15 V, or ~400 V ± ~15 V, 50/60 Hz, the 3-phase devices for 3 x 400 V ± 5 %. The secondary DC voltage from the transformer is conducted to a bridge rectifier where it is rectified.

The pulsating DC voltage is then fed from the rectifier and filtered to a low residual ripple by means of an electrolytic capacitor.
This DC voltage is then fed to the output terminal. These are designed as pluggable screw terminals. A varistor is integrated in the output circuitry to attenuate voltage peaks. The operating status is indicated by means of a green LED via the output circuit. Devices with 600 W and higher are equipped with a fan.

Single-phase unregulated power supplies

Three-phase unregulated power supplies

Well-balanced spectrum for optimum economy

The output currents of these practical products are defined by way of two ambient temperatures.
Size selection is based on the maximum effectiveness of the components.

Adapted to standard voltages in accordance with IEC 38

By choosing the appropriate terminals, the ± 15 V tapping capability allows the single-phase devices to be connected to six different nominal AC voltages: 215, 230, 245, 385, 400, 415 V.
The ± 5 % tapping capability allows the 3-phase devices to be connected to three different nominal voltages: 380, 400, 415 V.

Reliable short-circuit and overload protection

Integrated on the secondary side in device sizes up to CP NT 192 W, the FKS fuse protects against overloads and shortcircuits. For the devices CP NT 264 W and CP NT 432 W, this protection is achieved by means of a thermostatic switch built into the transformer.

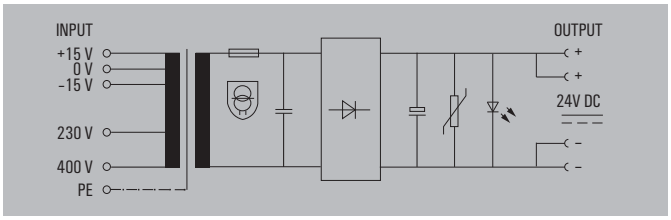
Easy mounting

Keyhole assembly simplifies mounting and saves time. A snap-on fixing attachment for 35 mm DIN rails is available as an accessory for single-phase devices up to 144 W. Simply plugged into the device and secured with two screws, it ensures easiest possible mounting!

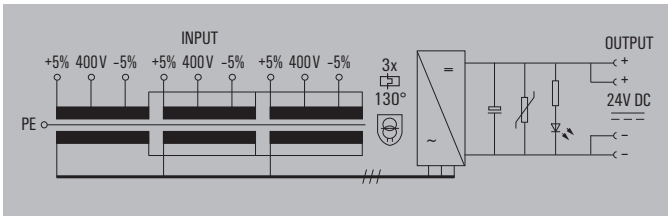
Transformers, vacuum-impregnated, painted black

- No humming
- Moisture cannot ingress into the windings
- Windings mechanically secured
- Improved heat dissipation from the windings
- Good heat dissipation

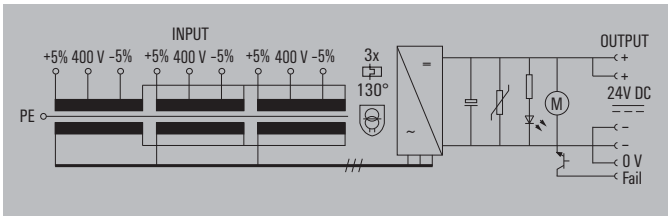
Block diagram for single-phase devices CP NT



Block diagram for 3-phase devices CP NT3 250 / 400 / 500 W



Block diagram for 3-phase devices CP NT3 600 / 750 / 1.000 W



Unregulated power supplies
single-phase

Unregulated power supplies
3-phase

compactPower single-phase

	CP NT 36	CP NT 72
		
		

Technical data

Input		
Input voltage	230 V/ 400 V ±15 V	230 V/ 400 V ±15 V
Input current	0.35 A/ 0.2 A	0.56 A/ 0.32 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.1 A / 0.06 A	0.13 A / 0.08 A
Ext. Back-up fuse	0.63 A / 0.315 A time-lag	0.1 A / 0.63 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C	1.5 A	3 A
Output current at 55°C	1 A	2.5 A
Output power	36 W	72 W
Max. residual ripple	< 5 %	< 5 %
Fusing	3 A time-lag flat cable-lug fuse	7.5 A time-lag flat cable-lug fuse
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+55 °C	-20...+55 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	80%	83%
Mounting position, installation notice	Arbitrary, horizontally, on terminal rail TS 35	Arbitrary, horizontally, on terminal rail TS 35
Installation advice	Direct mounting, TS 35 with clip-on plate	Direct mounting, TS 35 with clip-on plate
Status indication	Green LED	Green LED
Height x width x depth	123 / 78 / 68 mm	125 / 84 / 85 mm
Weight	1.5 kg	2.1 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	CE; cULus; GOSTME25	CE; cULus; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4

Note

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
Screw connection	CP NT 36W 24V 1.5A	1	**8575260000**	CP NT 72W 24V 3A	1	**8575270000**

Note

Accessories

Note	Clip-in plate for TS35: 8588900000	Clip-in plate for TS35: 8588910000

compactPower single-phase

	CP NT 144	CP NT 192
		
		

Technical data

Input		
Input voltage	230 V/ 400 V ±15 V	230 V/ 400 V ±15 V
Input current	0.95 A/ 0.55 A	1.3 A/ 0.7 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.33 A / 0.19 A	0.3 A / 0.16 A
Ext. Back-up fuse	1.6 A / 1.0 A time-lag	2.0 A / 1.25 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C	6 A	8 A
Output current at 55°C	5 A	7 A
Output power	144 W	192 W
Max. residual ripple	< 5 %	< 5 %
Fusing	10 A time-lag flat cable-lug fuse	15 A time-lag flat cable-lug fuse
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+55 °C	-20...+55 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	88%	90%
Mounting position, installation notice	Arbitrary, horizontally, on terminal rail TS 35	
Installation advice	Direct mounting, TS 35 with clip-on plate	Direct mounting
Status indication	Green LED	Green LED
Height x width x depth	135 / 96 / 92 mm	145 / 105 / 105 mm
Weight	3.1 kg	4.3 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	CE; cULus; GOSTME25	CE; cULus; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4

Note		

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Screw connection	CP NT 144W 24V 6A	1	**8575280000**	CP NT 192W 24V 8A	1	**8575300000**

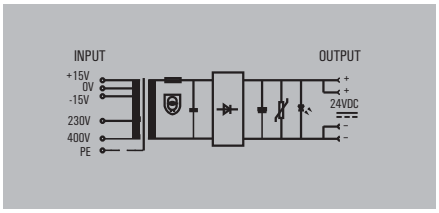
Note		

Accessories

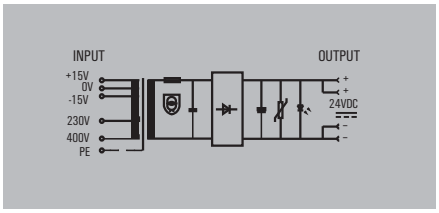
Note	Clip-in plate for TS35: 8588920000	

compactPower single-phase

CP NT 264



CP NT 432



Technical data

Input		
Input voltage	230 V/ 400 V ±15 V	230 V/ 400 V ±15 V
Input current	1.8 A/ 1 A	2.5 A/ 1.3 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.5 A / 0.28 A	0.54 A / 0.31 A
Ext. Back-up fuse	3.15 A / 1.6 A time-lag	4.0 A / 2.0 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C	11 A	18 A
Output current at 55°C	10 A	15 A
Output power	264 W	432 W
Max. residual ripple	< 5 %	< 5 %
Fusing	Thermostatic switch	Thermostatic switch
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+55 °C	-20...+55 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	93%	95%
Installation advice	Direct mounting	Direct mounting
Status indication	Green LED	Green LED
Height x width x depth	165 / 120 / 113 mm	185 / 135 / 135 mm
Weight	6.1 kg	9.1 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	CE; cULus; GOSTME25	CE; cULus; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4	2.5 / 0.13 / 2.5	2.5 / 0.5 / 4

Note

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	CP NT 264W 24V 11A	1	**8575310000**

	Type	**Qty.**	**Order No.**
Screw connection	CP NT 432W 24V 18A	1	**8575320000**

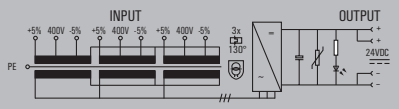
Note

Accessories

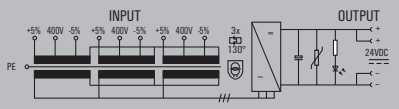
Note

compactPower 3-phase

CP NT3 250



CP NT3 400



Technical data

Input		
Input voltage	3 x 400 V ±5 %	3 x 400 V ±5 %
Input current	0.5 A	0.75 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.1 A	0.11 A
Input fuse	3 x primary thermostatic switch	3 x primary thermostatic switch
Ext. Back-up fuse	3 x 1.0 A time-lag	3 x 1.2 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C / 60°C	11 A / 10 A	18 A / 16 A
Output power	250 W	400 W
Max. residual ripple	< 2 %	< 2 %
Fusing	External 10 A time-lag	External 16 / 18 A slo-blow
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+60 °C	-20...+60 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	76%	77%
Installation advice	Direct mounting	Direct mounting
Fan signal	No integrated fan	No integrated fan
Height x width x depth	192 / 84 / 185 mm	213 / 88 / 220 mm
Status indication	Green LED	Green LED
Weight	4.7 kg	6.9 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	cCSAus; CE; GOSTME25	cCSAus; CE; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	6 / 0.5 / 6	2.5 / 0.5 / 2.5	6 / 0.5 / 6
Note		Condensation not allowed		Condensation not allowed	

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	CP NT3 250W 24V 10A	1	**8628620000**
Screw connection	CP NT3 400W 24V 15A	1	**8628630000**

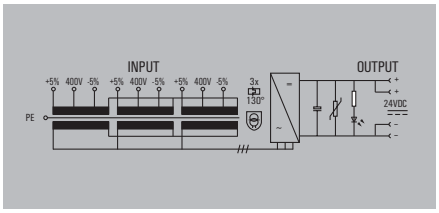
Note

Accessories

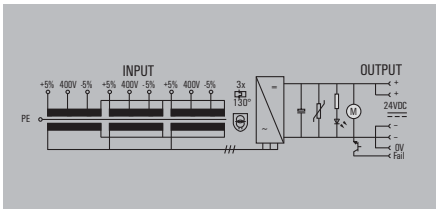
Note

compactPower 3-phase

CP NT3 500



CP NT3 600



Technical data

Input		
Input voltage	3 x 400 V ±5 %	3 x 400 V ±5 %
Input current	0.9 A	1.2 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.13 A	0.15 A
Input fuse	3 x primary thermostatic switch	3 x primary thermostatic switch
Ext. Back-up fuse	3 x 1.6 A time-lag	3 x 2 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C / 60°C	22 A / 20 A	26 A / 25 A
Output power	500 W	600 W
Max. residual ripple	< 2 %	< 2 %
Fusing	External 20 / 22 A slo-blow	External 25 / 26 A slo-blow
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+60 °C	-20...+60 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	78%	78%
Installation advice	Direct mounting	Direct mounting
Fan signal	No integrated fan	Open collector <30 V/ <5 mA during interference
Height x width x depth	215 / 108 / 220 mm	212 / 108 / 230 mm
Status indication	Green LED	Green LED
Weight	10 kg	11 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	cCSAus; CE; cULus; GOSTME25	cCSAus; CE; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	6 / 0.5 / 6	2.5 / 0.5 / 2.5	6 / 0.5 / 6
Note		Condensation not allowed		Condensation not allowed	

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Screw connection	CP NT3 500W 24V 20A	1	**8628650000**	CP NT3 600W 24V 25A	1	**8628660000**

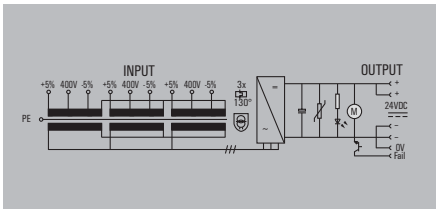
Note

Accessories

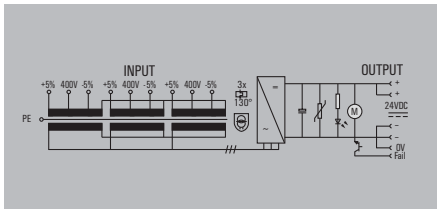
Note

compactPower 3-phase

CP NT3 750



CP NT3 1000



Technical data

Input		
Input voltage	3 x 400 V ±5 %	3 x 400 V ±5 %
Input current	1.4 A	1.8 A
Input frequency	50/ 60 Hz	50/ 60 Hz
No-load input current	0.16 A	0.14 A
Input fuse	3 x primary thermostatic switch	3 x primary thermostatic switch
Ext. Back-up fuse	3 x 2.5 A time-lag	3 x 3.15 A time-lag
Output		
Output voltage	24 V DC SELV	24 V DC SELV
Output current at 40°C / 60°C	32 A / 30 A	42 A / 40 A
Output power	750 W	1000 W
Max. residual ripple	< 2 %	< 2 %
Fusing	External 30 / 32 A slo-blow	External 40 / 42 A slo-blow
Protective circuit, load side	Varistor	Varistor
Insulation coordination (EN 50178)		
Electric shock protection	acc. to BGV A3	acc. to BGV A3
Insulation strength	4 kV	4 kV
Insulation class	B	B
Protection degree	IP 20	IP 20
Class of protection	I	I
General data		
Ambient temperature (operational)	-20...+60 °C	-20...+60 °C
Storage temperature	-20 °C...+80 °C	-20 °C...+80 °C
Degree of efficiency at max. load	77%	77%
Installation advice	Direct mounting	Direct mounting
Fan signal	Open collector <30 V/ <5 mA during interference	Open collector <30 V/ <5 mA during interference
Height x width x depth	255 / 121 / 270 mm	275 / 122 / 280 mm
Status indication	Green LED	Green LED
Weight	14 kg	18 kg
Standards	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG	DIN EN 60950, DIN EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3	EN 61000-6 /-2, -3
Approvals	cCSAus; CE; GOSTME25	cCSAus; CE; GOSTME25

Dimensions		**Input**	**Output**	**Input**	**Output**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	6 / 0.5 / 6	2.5 / 0.5 / 2.5	10 / 0.5 / 10
Note		Condensation not allowed		Condensation not allowed	

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Screw connection	CP NT3 750W 24V 30A	1	**8628670000**	CP NT3 1000W 24V 40A	1	**8628680000**

Note

Accessories

Note

IP 65 switched-mode power supply / Electrical cabinet socket outlet

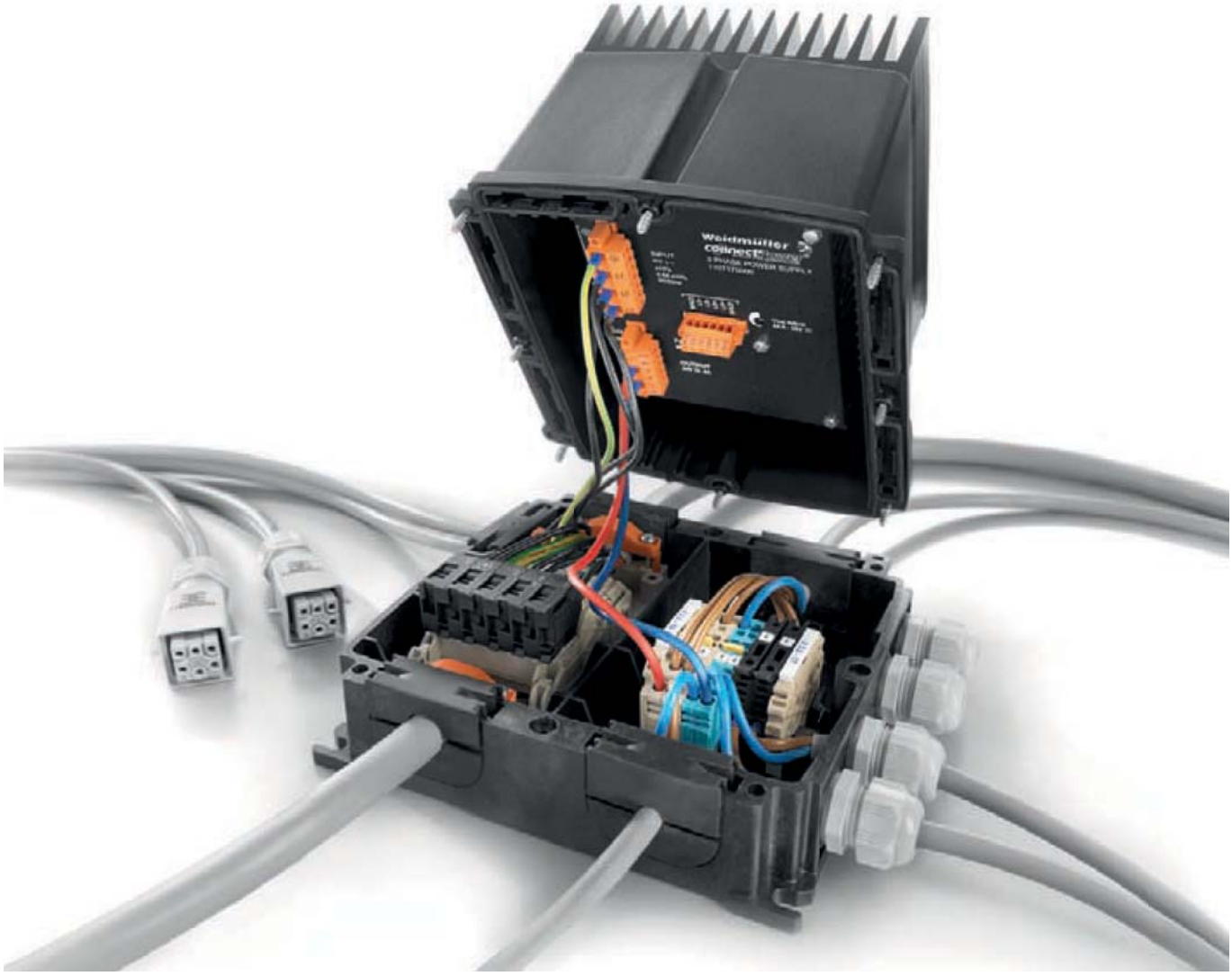
FieldPower® DC network

With decentralised fuse protection for spur lines

The demand for 24-V current in facilities has grown as productivity increases. Modular and decentralised topologies have long been firmly established. Yet the auxiliary power is still often being generated in the electrical cabinet and transmitted with significant power loss to the field using long cables. Standard compliant fuse protection for these lines is thus repeatedly ignored since such protection is difficult to implement on such long stretches.

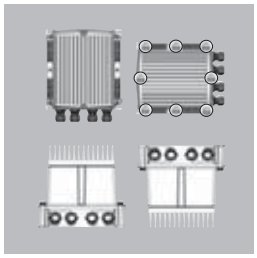
The new FieldPower® switch-mode power supply creates and protects the current supply directly at the consumer site. Its many features make it possible to operate highly dependable and energy efficient DC power networks.

The full line of FieldPower® products is listed in our product information.
(Order No.1355570000)



More than just a power supply

This power-bus-compatible power supply unit does not trigger the 400-V group protective device when reacting to load current peaks. In addition to the power supply unit, the FieldPower® Terminal can also be used for quick and error-free supply to other 400-V consumer loads.



Extended application range

The FieldPower® switch-mode power supply can be operated in practically any installed position in temperatures ranging from –30 to 50 °C. It can even be used in refrigerated warehouses.

Power boost for branch fuse protection

Rail-mounted fuse protection for branches (spurs) can be installed into the FieldPower® power supply housing. The power boost from one or more power supplies can selectively trip the fuse after a short circuit.

Highly reliable power supply

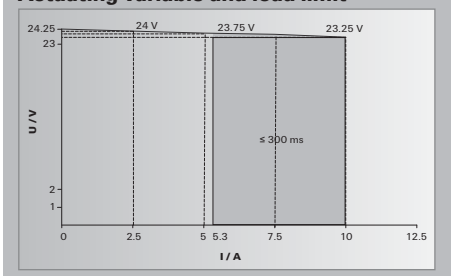
The power supply unit functions even if there is a phase outage. A power boost (2x IN for 300 ms) is available for start-up and load currents. A high voltage stability can be achieved especially when implementing multiple feeds with a load balancing mechanism.

Simple

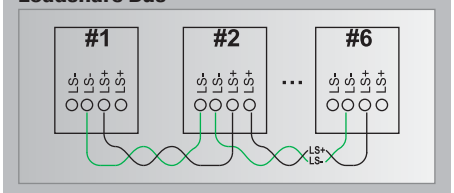
AC and DC are handled identically. The wire is positioned and contact is established with a simple turning movement. The 5-pin DC contact module has two 24 V plus GND for a permanent and safety-compliant power supply, or for minimising voltage drops with two parallel 6-mm² wire each.

Voltage stability and supply reliability

Actuating variable and load limit



Loadshare Bus



When using multiple power feeds in decentralised 24-V DC structures, different loads are placed on the individual power supply units. Overloads or even outages can occur as a result. The FieldPower® switch-mode power supplies feature passive and active load balancing mechanisms. An actuating variable is used to reduce the voltage as the load increases, so that the neighbouring components are supported more strongly. If a power supply unit exceeds its rated current, the voltage on the load limit is reduced until the other power supplies assume this load. Even when in this operational state, the voltage remains at a high level. Complete load balancing is achieved with the point-to-point connections of all load share bus ports.

DC-power system with FieldPower® switched-mode power supply units

DC power is distributed in parallel with the 400 V power bus. A uniform voltage level in the DC distribution (even when using wires with reduced cross-sections) is made possible by multiple parallel-fed power supply units with high IP protection.

FieldPower® Control

Decentralised functional box on the power bus

FieldPower® Control features decentralised and modular functional components with high IP protection, using the ideal wire connection technology for AC and DC power supplies. The FieldPower® power distributor (with IP 54/65) can function as a decentralised switch box by adding terminals, electronics housings and switching and protective units. Many parts of factory automation can thus be decentralised using an arrangement of application specific modules. Simple project planning, quick installation, speedy assembly and good extensibility: these are just some of the advantages that FieldPower® Control provides for users.

For further information, please visit
www.weidmueller.com/int/Fieldpower_control

Modular components

FieldPower® terminals or a mounting rail can be placed as needed in the lower section in order to fit the needs of the individual application. Retractable seals allow pluggable cables to be inserted quickly.

Add-on to lid

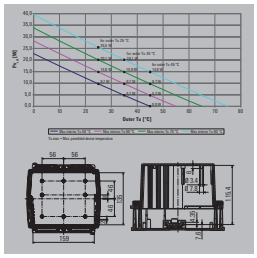
Support pegs in the lid help when attaching mounting plates or rails. The lids also provide plenty of space for attaching add-on devices or electronic circuit boards.

Variable fastening mechanisms

The mounting rail provides 54 mm of installation width and can be used at two heights. This creates space for wires under the mounting rail.

Expanded voltage and current ranges

A variety of applications can be implemented with the help of the FieldPower® Terminals in the AC and DC versions up to 800 V/41 A.



Help with project planning

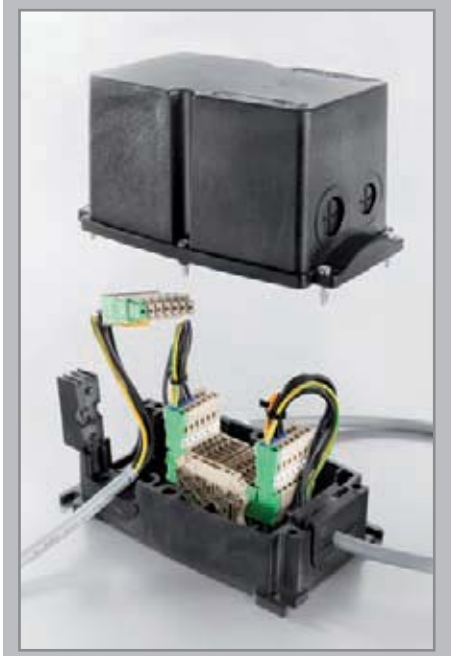
Simple thermal layout using dimensioned drawings is possible (see page E.20) and by specifying the built-in power loss and optimal exploitation of available space.

Application specific solutions

Weidmüller offers not only individual components but also complete, custom-fit functional units.

Such units include switching devices, electronic components, terminal strips, connecting plugs, hinged lids and heat sinks.

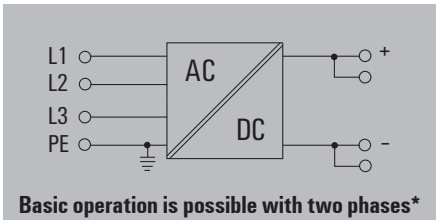
Weidmüller can also customise the internal wiring and the assembly of the connecting cables to fit customer needs.



Please send requests to KSL@weidmueller.de

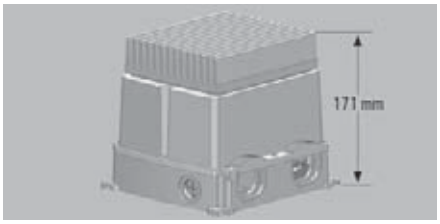
FieldPower®Box with decentralised switch-mode power supply

- FieldPower®Box with three-phase 24 V / 5 A switch-mode power supply.
- Close-to-load 24 V power generation and distribution for decentralised DC-systems
- Reduced voltage drops for copper-optimised installations
- More reliable power supply with constant voltage
- Improved energy efficiency with minimal transmission-related losses



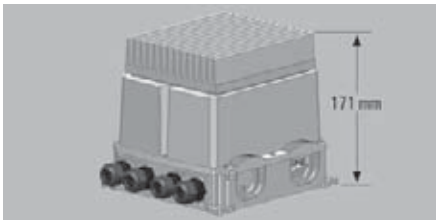
Basic operation is possible with two phases*

FieldPower® Box 10P SNT



FieldPower® Box 10P SNT 4XVG

With 4 additional M20 cable glands



Technical data FieldPower® Box

Bemmessungsdaten		
Rated cross-section	6 mm²	6 mm²
Rated voltage / Rated current	800 V / 41 A	800 V / 41 A
Rated impulse voltage	8 kV	8 kV
General data		
UL 94 flammability class	5VA	5VA
Protection degree	IP 65	IP 65
Assembly temperature range, min. - max.	10 °C...40 °C	10 °C...40 °C
Ambient temperature (operational)	-30 °C...50 °C	-30 °C...50 °C
IDC connection clamping capacity - power cable		
Clamping range, min.-max.	2.5 mm²...6 mm²	2.5 mm²...6 mm²
Blade size	0.6 x 3.5 mm	0.6 x 3.5 mm
PUSH IN connection clamping capacity - distribution		
Clamping range, min.-max.	0.75 mm²...6 mm²	0.75 mm²...6 mm²
Stripping length/Blade size	14 mm / 0.6 x 3.5 mm	14 mm / 0.6 x 3.5 mm
Note	Refer to PT6 DC 1126840000 for additional technical clamping specifications.	Refer to PT6 DC 1126840000 for additional technical clamping specifications.

Technical data power supply

Input data		
Rated input voltage	400...480 V AC** -15 % / +5 % (3~, PE)	400...480 V AC** -15 % / +5 % (3~, PE)
Input fuse (internal)	Yes	Yes
Output data		
Rated output voltage	24.25 V DC ± 50 mV (23.5...28.0 V DC)	24.25 V DC ± 50 mV (23.5...28.0 V DC)
Rated output current @ U_{nom}	5 A @ 24 V DC	5 A @ 24 V DC
Power boost @ 24 V DC, 0..5A, ED = 10 %, three-phase	10 A, t ≤ 300 ms	10 A, t ≤ 300 ms
Short-circuit-proof	Yes	Yes
Output power @ 24 V DC	120 W	120 W
Connection data	**Input / Output**	**Input / Output**
Type of connection	Plug-in connector / Plug-in connector	Plug-in connector / Plug-in connector
Number of terminals	L1, L2, L3, PE / +, +, -, - , COM ,NO	L1, L2, L3, PE / +, +, -, - , COM ,NO
conductor cross-section, min.-max.	0.5 mm²...4 mm² / 0.5 mm²...4 mm²	0.5 mm²...4 mm² / 0.5 mm²...4 mm²
Note	* No power boost in two-phase mode or in current-limiting mode. ** UL approval is pending. Refer to BG SNT PT6 1101940000 for additional technical specifications on the power supply.	* No power boost in two-phase mode or in current-limiting mode. ** UL approval is pending. Refer to BG SNT PT6 1101940000 for additional technical specifications on the power supply.

Ordering data

Type	Qty.	Order No.
FP Box 10P SNT	1	**1132320000**
Note	Enclosure seals can be ordered separately.	

Type	Qty.	Order No.
FP Box 10P SNT 4XVG	1	**1076510000**
Note	Enclosure seals (3xD0, 2xD11, 2xD13, 2xD15) and PTDS 4 connector are included in delivery.	

Accessories

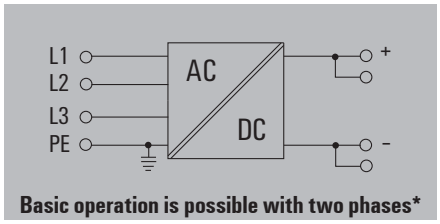
Note	PT6 DC 1126840000 Contact element

PT6 DC 1126840000 Contact element

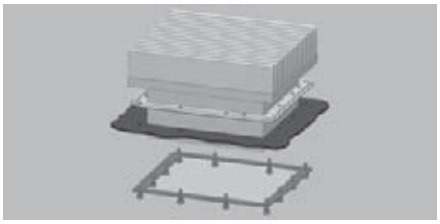
Switch-mode power supply 24 V / 5 A

- Three-phase built-in 24 V / 5 A power supply with high degree of efficiency.
- External heat sink reduces warming within electrical cabinet.
- Resistant to vibration – in compliance with EN 61373 Cat. 1b for decentralised machine switchboxes.
- Wide temperature range for versatile use (such as in refrigerated storage areas)

BG SNT PT6



Basic operation is possible with two phases*



Technical data

Input data	
Rated input voltage	400...480 V AC** -15 % / +5 % (3~, PE)
AC frequency range	47 Hz - 63 Hz
AC current consumption	~ 0.4 A @ 400 V AC
Start-up surge current / start-up time	< 10A @ 400 V AC / < 2 s
Input fuse (internal)	Yes
Output data	
Rated output voltage	24.25 V DC ± 50 mV (23.5...28.0 V DC)
Max. residual ripple, inrush peaks	< 50 mV_{ss} @ 24 V DC / 5 A
Output deviation	500 mV @ 0...5 A
Rated output current @ U_{nenn}	5 A @ 24 V DC
Power boost @ 24 V DC, 0..5 A, ED = 10%, three-phase	10 A, t ≤ 300 ms
Output characteristic curve / current limit	IU, 5.3 A ± 0.2 A
Short-circuit-proof	Yes
Output power @ 24 V DC	120 W
Mains buffering @ I_{nenn}	20 ms @ 400 V AC
Efficiency	~ 86 % @ 400 V AC
Protection against reverse voltages from the load	≤ 34 V
General data	
Ambient temperature (operational)	-30 °C...55 °C*
Protection class, with PE connection	I
Surge category / Pollution severity	III / 2
MTBF according to IEC 1709 (SN29500)	> 500.000 h @ 25 °C
EMC / shock / vibration	
Noise emission acc. to EN 55022 (class)	A
Noise immunity tests	according to EN 61000-6-2
Resistance against vibration and shock	according to EN 61373 Kat. 1b
Electrical safety	
Electrical machine equipment	according to EN 60204
For use with electronic equipment	according to EN 50178 / VDE 0160
Safety extra-low voltage	according to SELV: EN 60950 / PELV: EN 60204

Connection data	**Input**	**Output**
Type of connection	Plug-in connector	Plug-in connector
Number of terminals	L1, L2, L3, PE	+, +, -, -, COM ,NO
conductor cross-section, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²

Note

* No power boost in two-phase mode or in current-limiting mode.
** UL approval is pending.

Ordering data

Type	Qty.	Order No.
BG SNT PT6	1	**1101940000**

Note

Assembly accessories are included in delivery.

Accessories

Note

* Please refer to the derating curve on page 66 for more details.

FieldPower® Control: The modular base

Standard components

Lid and functions

Flat lid
1068890000

High lid
1276220000

NEW

Lid with maintenance switch
111312000

Housing and seals

Bottom housing
1070140000

Bottom housing with wall feed-through
1272210000

NEW

Plug

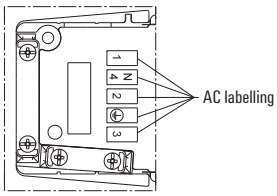
Single plug
L1, N, L2, PE, L3
1952120000

Double plug
L1, N, L2, PE, L3
1952130000

Fuse plug
L1, N, L2, PE, L3
1961770000

Contacts

Contact module
L1, N, L2, PE, L3
1957620000



Flat lid
1122200000

High lid
1121950000

Lid with maintenance switch
8000005211

LED lid lighting
1272220000

NEW

Lid for DIN-rail-mounted devices
8000007627

NEW

Bottom housing
1121980000

Bottom housing with 4 glands
1121990000

Cable seals
various

Blank seal
4323240000

Single plug
+1, -1, FE, +2, -2
1131730000

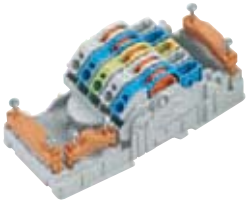
Double plug
+1, -1, FE, +2, -2
1009990000

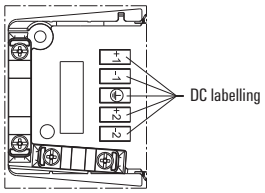
Fuse plug
+1, -1, FE, +2, -2
1252210000

NEW

Locking element
1816130000

Contact module
+1, -1, FE, +2, -2
1126840000





Snap on DIN rail, 54 mm
1170690000

Housings

The housings can be assembled during the mechanical work.
The PT6 contact unit is simply snapped on with or without a power bus.
The TS 35 PT6 DIN-rail module can be used optionally.

GH 10P PT6

BG GH 10P 4XVG PT6

With 4 additional M20 cable glands

Technical data

Insulating material	PC GF 10	PC GF 10
Material colour	black	black
UL 94 flammability class	5VA	5VA
Halogen free / Silicone free	Yes / Yes	Yes / Yes
Degree of protection when closed	IP 65	IP 65
Temperature range / storage	-40 °C...55 °C / -40 °C...85 °C	-40 °C...55 °C / -40 °C...85 °C
Lid attachment	Screws	Screws
Housing attachment	Mounting tabs	Mounting tabs

Note		Clamping range of the cable glands 6–12 mm

Ordering data

Type	Qty.	Order No.
GH 10P PT6	10	**1121980000**

Note
Housing lid BG GHDE 10P PT6 1122200000 Housing lid BG GHDE 10P HO PT6 1121950000

Type	Qty.	Order No.
BG GH 10P 4XVG PT6	10	**1121990000**

Note
Housing lid BG GHDE 10P PT6 1122200000 Housing lid BG GHDE 10P HO PT6 1121950000

Accessories

Type	Qty.	Order No.
TS 35 PT6	10	**1170690000**

Note
Usable width 54 mm Can be installed in 1070140000, 1121980000, 1121990000

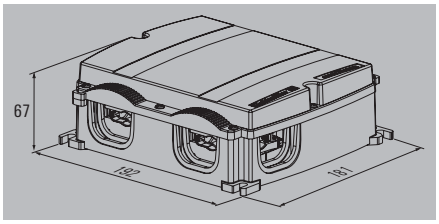
Type	Qty.	Order No.
TS 35 PT6	10	**1170690000**

Note
Usable width 54 mm Can be installed in 1070140000, 1121980000, 1121990000

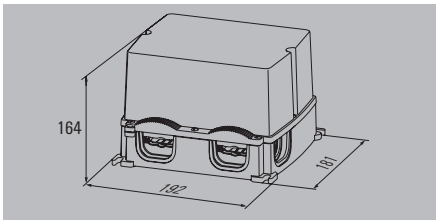
Lid

FieldPower® lids are very sturdy and meet the highest UL flammability rating 5VA. The large number of varieties means you can install the devices on DIN mounting rails or mounting plates.

BG GHDE 10P PT6



BG GHDE 10P HO PT6



Technical data

Insulating material	PC GF 10	PC GF 10
Material colour	black	black
UL 94 flammability class	5VA	5VA
Halogen free / Silicone free	Yes / Yes	Yes / Yes
Degree of protection when closed	IP 65	IP 65
Temperature range / storage	-40 °C...55 °C / -40 °C...85 °C	-40 °C...55 °C / -40 °C...85 °C
Lid attachment	Screws	Screws

Note	Housing height: 67 mm	Housing height: 164 mm Refer to the project planning documentation for the detailed dimensions

Ordering data

	Type	Qty.	Order No.	Type	Qty.	Order No.
	BG GHDE 10P PT6	10	**1122200000**	BG GHDE 10P HO PT6	10	**1121950000**
Note	Housing base section GH 10P PT6 1121980000 Housing base section BG GH 10P 4XVG PT6 1121990000			Housing base section GH 10P PT6 1121980000 Housing base section BG GH 10P 4XVG PT6 1121990000		

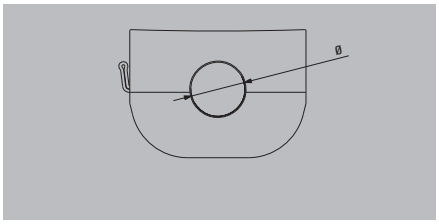
Accessories

Note		

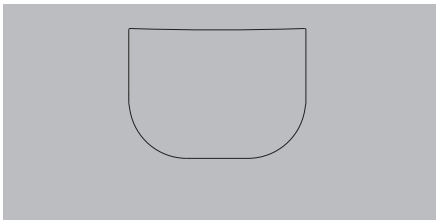
Seals for FieldPower® Box

IP 65 enclosure seals for the FieldPower® Box modules: made from silicone-free, halogen-free material. The seals are slit in the middle to allow for simple installation with uncut power cables.

Seal for round cable



Blanking seal



Technical data

General data		
Material	EPDM	EPDM
UL 94 flammability class	HB	HB
Colour	black	black
Thickness	18 mm	18 mm
Line type	round	
Free from halogens	Yes	Yes
Silicone-free	Yes	Yes
Ingress protection class	IP 65	IP 65

Note

Ordering data

Clamping range Ø	Type	Qty.	Order No.	Type	Qty.	Order No.
7.5 - 9 mm	RKDG D9 PT6	10	**4329610000**			
9 - 11 mm	RKDG D11 PT6	10	**4323210000**	DG D0 PT6	10	**4323240000**
11 - 13 mm	RKDG D13 PT6	10	**4323230000**			
13 - 15 mm	RKDG D15 PT6	10	**4323220000**			
15 - 17 mm	RKDG D17 PT6	10	**4324010000**			

Note

Accessories

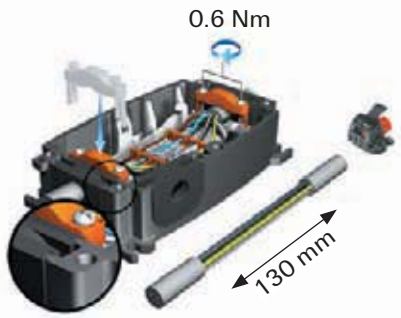
Note

FieldPower® – The method of connection

1

2

3



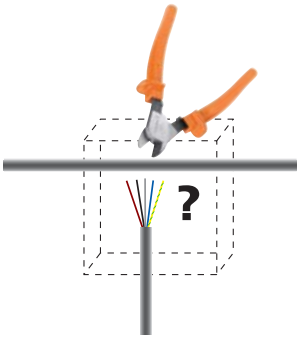
4

5

6

7

8



A practical tip
FieldPower® is the best solution when the cable is too short.
The cable need only be stripped and not cut through. No mix-ups or wrong connections are possible. This is also a perfect solution for retrofit installations.

An installation video can be seen at
www.weidmueller.com/de/FieldPower_Video

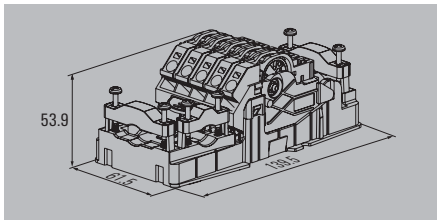
PowerTerminal for AC/DC applications

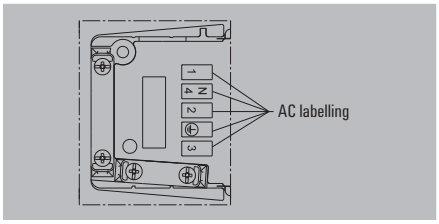
A contact element for power distribution using uncut wires with cross-sections from 1.5 to 6 mm². Feed-in / T-branch tap via PUSH IN connection (0.5 to 10 mm²) and/or plug-in connection (0.5 to 4 mm²).
Clear and precise wire assignments: with coding on the PE connection.

- Power supply
- Power distribution
- Power branching

PT6

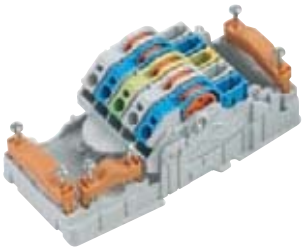
for AC applications

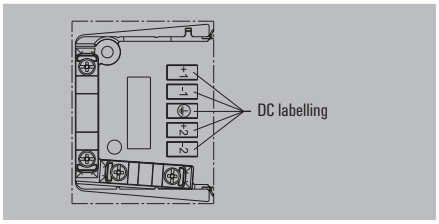




PT6 DC

for DC applications





Technical data

Rated data according to IEC 60947-7-1		
Rated cross-section	6 mm²	6 mm²
Rated voltage/Rated current	800 V / 41 A	800 V / 41 A
Rated impulse voltage	8 kV	8 kV
General data		
Insulation material/material colour	PA/grey	PA/grey
UL 94 flammability class	V0	V0
Free from halogens/Silicone-free	Yes/Yes	Yes/Yes
Protection degree	IP 20	IP 20
Assembly temperature range, min.-max.	10 °C...40 °C	10 °C...40 °C
Operating temperature, min.-max.	-40 °C...55 °C	-40 °C...55 °C
Can be coded	Yes/Coded on PE	Yes/Coded on PE
IDC connection clamping capacity - power cable		
Solid, min.-max.	1.5 mm²...6 mm²	1.5 mm²...6 mm²
Stranded, min.-max.	2.5 mm²...6 mm²	2.5 mm²...6 mm²
Flexible, min.-max.	2.5 mm²...6 mm²	2.5 mm²...6 mm²
Flexible, min.-max.	2.5 mm²...6 mm²	2.5 mm²...6 mm²
Blade size	0.6 x 3.5 mm	0.6 x 3.5 mm
PUSH IN connection clamping capacity - distribution		
Solid, min.-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Stranded, min.-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Flexible, min.-max.	0.5 mm²...10 mm²	0.5 mm²...10 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/4, min-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Flexible, min.-max.	0.5 mm²...6 mm²	0.5 mm²...6 mm²
Stripping length/Blade size	14 mm / 0.6 x 3.5 mm	14 mm / 0.6 x 3.5 mm
Rated data according to UL		UL approval is pending.
Standard	UL 1059	UL 1059
Rated voltage/Rated current	600 V/30 A	600 V/30 A
AWG conductor (field wiring) min./max.	14 /10	14 /10
Note	For use with UL-listed TC-ER cables	For use with UL-listed TC-ER cables

Note	Tip: Pipe Ölflex Classic 100, 110, 100 H or comparable	Tip: Pipe Ölflex Classic 100, 110, 100 H or comparable

Ordering data

	Type	Qty.	Order No.
	PT6	1	**1957620000**
Note			

	Type	Qty.	Order No.
	PT6 DC	1	**1126840000**
Note			

Accessories

Note	Plug-in connector PTS 4 1952120000 Plug-in connector PTDS 4 1952130000	Plug-in connector PTS 4 DC 1131730000 Plug-in connector PTDS 4 DC 1009990000

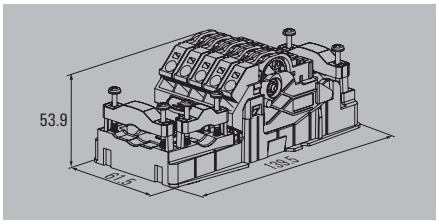
PowerTerminal for AC/DC applications

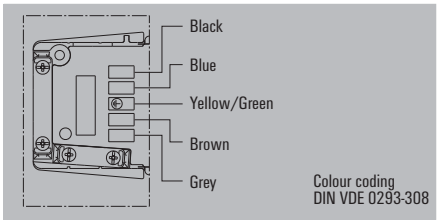
A contact element for power distribution using uncut wires with cross-sections from 1.5 to 6 mm². Feed-in / T-branch tap via PUSH IN connection (0.5 to 10 mm²) and/or plug-in connection (0.5 to 4 mm²).
Coloured markings for unambiguous wire assignments according to DIN VDE 0293-308.

- Power supply
- Power distribution
- Power branching

PT6 230/...

For mixed applications





Technical data

Rated data according to IEC 60947-7-1	
Rated cross-section	6 mm²
Rated voltage/Rated current	800 V / 41 A
Rated impulse voltage	8 kV
General data	
Insulation material/material colour	PA/grey
UL 94 flammability class	V0
free from halogens/Silicone-free	Yes/Yes
Protection degree	IP 20
Assembly temperature range, min.-max.	10 °C...40 °C
Operating temperature, min.-max.	-40 °C...55 °C
Can be coded	Yes
IDC connection clamping capacity - power cable	
Solid, min.-max.	1.5 mm²...6 mm²
Stranded, min.-max.	2.5 mm²...6 mm²
Flexible, min.-max.	2.5 mm²...6 mm²
Flexible, min.-max.	2.5 mm²...6 mm²
Blade size	0.6 x 3.5 mm
PUSH IN connection clamping capacity - distribution	
Solid, min.-max.	0.5 mm²...6 mm²
Stranded, min.-max.	0.5 mm²...6 mm²
Flexible, min.-max.	0.5 mm²...10 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min-max.	0.5 mm²...6 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min-max.	0.5 mm²...6 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min-max.	0.5 mm²...6 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/4, min-max.	0.5 mm²...6 mm²
Flexible, min.-max.	0.5 mm²...6 mm²
Stripping length/Blade size	14 mm / 0.6 x 3.5 mm
Rated data according to UL	UL approval is pending.
Standard	UL 1059
Rated voltage/Rated current	600 V/30 A
AWG conductor (field wiring) min./max.	14 /10
Note	For use with UL-listed TC-ER cables

Note	Tip: Pipe Ölflex Classic 100, 110, 100 H or comparable

Ordering data

Type	Qty.	Order No.
PT6 230/BUS	1	**1269960000**

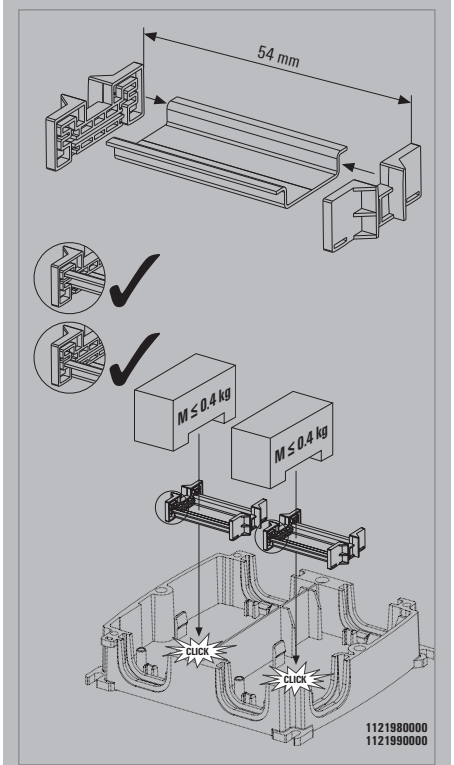
Note	

Accessories

Note	Plug-in connector PTS 4 MBP 1010190000

Snap-on mounting rail

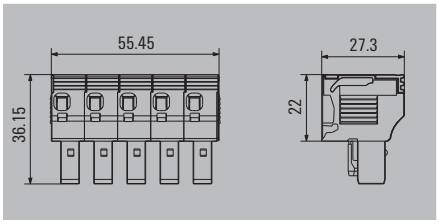
The mounting rail TS 35 PT6 provides 54 mm of installation width and can be used at two heights. This creates space for wires under the mounting rail.



Plug-in connectors for AC applications

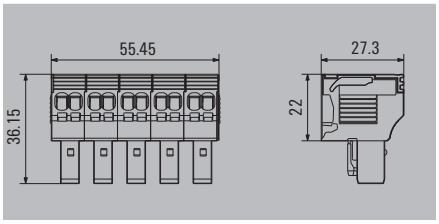
Plug-in connectors for use by the pluggable output of the contact elements. Individual wires can be connected with PUSH IN method: for cross-sections from 0.5 to 4 mm². Can be coded and locked, with printing for trouble-free wiring.
Clear wire mapping with coding for PE connections.

PTS 4



PTDS 4

2 connections per pole



Technical data

Rated data according to IEC 60947-7-1		
Rated cross-section	4 mm²	4 mm²
Rated voltage/Rated current	690 V / 32 A	690 V / 32 A
Rated impulse voltage	8 kV	8 kV
General data		
Type of mounting	Plugged	Plugged
Insulation material/material colour	PA GF/ black	PA GF/ black
UL 94 flammability class	V0	V0
Continuous operating temp., min.-max.	-50 °C...120 °C	-50 °C...120 °C
Outgoing direction of conductor	90°	90°
Test point	2 mm	2 mm
Can be coded	Yes/Coded on PE	Yes/Coded on PE
Conductor connection system	PUSH IN	PUSH IN
No. of poles	5	5
Number of connections / pole	1	2
Clamping capacity, PUSH IN connection		
Clamping range, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Solid, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stranded, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stripping length/Blade size	12 mm / 3.0 x 0.5 mm	12 mm / 3.0 x 0.5 mm
Rated data according to UL		
Standard	UL 1059	UL 1059
Rated voltage/Rated current	600 V/20 A	600 V/20 A
AWG conductor (field wiring) min./max.	16 /12	16 /12

Note

Ordering data

Type	Qty.	Order No.
PTS 4	10	**1952120000**

Note

Type	Qty.	Order No.
PTDS 4	10	**1952130000**

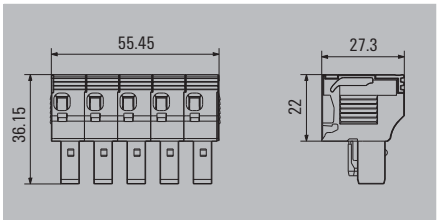
Accessories

Note	
	ZVR ZP2.5 locking element 1816130000
	ZVR ZP2.5 locking element 1816130000

Plug-in connectors for DC applications

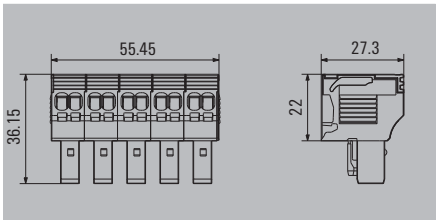
Plug-in connectors for use with the pluggable outlet of the PT6 contact elements. Single-wire PUSH IN connection for wire cross-sections ranging from 0.5 to 4 mm².
Can be coded and latched down.
Clear wire mapping with DC labelling and coding for PE connections.

PTS 4 DC



PTDS 4 DC

2 connections per pole



Technical data

Rated data according to IEC 60947-7-1		
Rated cross-section	4 mm²	4 mm²
Rated voltage/Rated current	690 V / 32 A	690 V / 32 A
Rated impulse voltage	8 kV	8 kV
General data		
Type of mounting	Plugged	Plugged
Insulation material/material colour	PA GF/ black	PA GF/ black
UL 94 flammability class	V0	V0
Continuous operating temp., min.-max.	-50 °C...120 °C	-50 °C...120 °C
Outgoing direction of conductor	90°	90°
Test point	2 mm	2 mm
Can be coded	Yes/Coded on PE	Yes/Coded on PE
Conductor connection system	PUSH IN	PUSH IN
No. of poles	5	5
Number of connections / pole	1	2
Clamping capacity, PUSH IN connection		
Clamping range, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Solid, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stranded, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Fexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stripping length/Blade size	12 mm / 3.0 x 0.5 mm	12 mm / 3.0 x 0.5 mm
Rated data according to UL		
Standard	UL 1059	UL 1059
Rated voltage/Rated current	600 V/20 A	600 V/20 A
AWG conductor (field wiring) min./max.	16 /12	16 /12

Note	UL approval is pending.	UL approval is pending.

Ordering data

Type	Qty.	Order No.
PTS 4 DC	10	**1131730000**

Type	Qty.	Order No.
PTDS 4 DC	10	**1009990000**

Note		

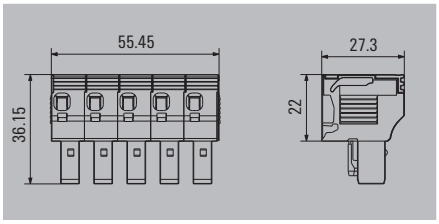
Accessories

Note	ZVR ZP2.5 locking element 1816130000	ZVR ZP2.5 locking element 1816130000

Plug-in connectors for mixed applications

Plug-in connector for use by the pluggable output of the contact elements. Individual wires can be connected with PUSH IN method: for cross-sections from 0.5 to 4 mm². Can be coded and locked.

PTS 4 blank



Technical data

Rated data according to IEC 60947-7-1	
Rated cross-section	4 mm²
Rated voltage/Rated current	690 V / 32 A
Rated impulse voltage	8 kV
General data	
Type of mounting	Plugged
Insulation material/material colour	PA GF/ black
UL 94 flammability class	V0
Continuous operating temp., min.-max.	-50 °C...120 °C
Outgoing direction of conductor	90°
Test point	2 mm
Can be coded	YES / Not coded
Conductor connection system	PUSH IN
No. of poles	5
Number of connections / pole	1
Clamping capacity, PUSH IN connection	
Clamping range, min.-max.	0.5 mm²...4 mm²
Solid, min.-max.	0.5 mm²...4 mm²
Sstranded, min.-max.	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²
Fflexible, wire end ferrule 12 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²
Stripping length/Blade size	12 mm / 3.0 x 0.5 mm
Rated data according to UL	
Standard	UL 1059
Rated voltage/Rated current	600 V/20 A
AWG conductor (field wiring) min./max.	16 /12

Note

Ordering data

Type	Qty.	Order No.
PTS 4 MPB	10	**1010910000**

Note

Accessories

Note	ZVR ZP2.5 locking element 1816130000

Fuse plug-in connector

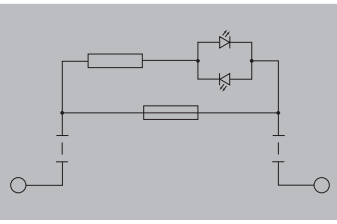
Max. power loss for G fuse terminals
in accordance with IEC 60947-7-3:
- Overload protection: 1.6 W (at 1.5 x IN)
- Short-circuit protection: 4 W (at 1.5 x IN)

Max. power loss per fuse at 23 °C Tu.

Do not exceed the max. power loss when selecting fuse cartridges. When a fuse is defective, the subsequent circuit is not voltage free.

PTSI 4 / PTSI 4/ LD

for AC applications | for DC applications



Technical data

	PTSI 4...AC	PTSI 4...DC
Rated data according to IEC 60947-7-3		
Rated cross-section	4 mm²	4 mm²
Rated voltage/Rated current (as disconnect terminal)	500 V / 12 A	36 V / 12 A
Rated impulse voltage	6 kV	6 kV
General data		
Cartridge fuse	6.3 x 32 mm (1/4 x 1 1/4")	6.3 x 32 mm (1/4 x 1 1/4")
Outage display	LED red	LED red
Type of mounting	Plugged	Plugged
Insulation material/material colour	PA GF/ black	PA GF/ black
UL 94 flammability class	V0	V0
Continuous operating temp., min.-max.	-50 °C...120 °C	-50 °C...120 °C
Outgoing direction of conductor	90°	90°
Test point	2 mm	2 mm
Can be coded	Yes/Coded on PE	Yes/Coded on PE
Conductor connection system	PUSH IN	PUSH IN
No. of poles	5	5
Number of connections / pole	1	1
Clamping capacity, PUSH IN connection		
Clamping range, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Solid, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stranded, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 8 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/1, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Flexible, wire end ferrule 12 mm, DIN 46228/4, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Fexible, min.-max.	0.5 mm²...4 mm²	0.5 mm²...4 mm²
Stripping length/Blade size	12 mm / 3.0 x 0.5 mm	12 mm / 3.0 x 0.5 mm
Rated data according to UL		
Standard	UL 1059	-
Rated voltage/Rated current	600 V/20 A	-
AWG conductor (field wiring) min./max.	16 /12	-

Note	
	Safety fuse not included in delivery. Rated voltage and rated current with fuse are determined by the G-fuse cartridge in use.

Ordering data

Type	Qty.	Order No.
PTSI 4/LD 400V AC	1	**1961770000**
PTSI 4/LD 36V AC/DC	1	**1252210000**

Note	

Accessories

Note	
	ZVR ZP2.5 locking element 1816130000

A practical tip:

Space for spare fuses

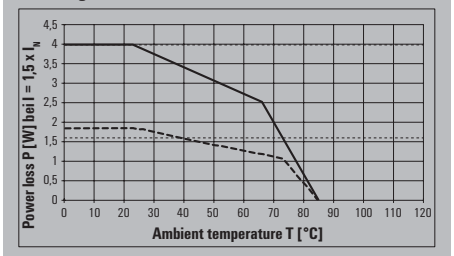
Protection degree	Only short-circuit protection		Overload and short-circuit protection	
	T_A max.	Nominal values	T_A max.	Nominal values
IP 20	46 °C	4.0 W / 10 A	28 °C	2.5 W / 2.5 A
IP 65	23 °C	4.0 W / 10 A	39 °C	1.6 W / 1.0 A

Fuses and power loss:

Examples	Current	1.0 A	1.6 A	2.0 A	4 A	6.3 A	8 A	10 A	12.5 A
SIBA, 189140 500 V, 440 V, 250 V T	1.0 x I_N	0.35 W	0.32 W	0.36 W	0.56 W	0.69 W	0.88 W	1 W	1.25 W
	1.5 x I_N	0.9 W	1.1 W	1.2 W	1.5 W	2.2 W	2.6 W	3.0 W	3.5 W
SIBA, 7006584 400 V gRL	1.0 x I_N	-	-	-	-	1.2 W	1.5 W	1.8 W	1.9 W
	1.25 x I_N	-	-	-	-	2.5 W	3.2 W	3.7 W	3.9 W

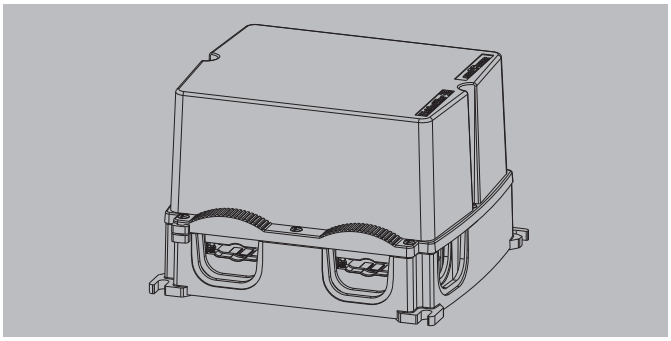
No responsibility is taken for the accuracy of this information.
Further details can be obtained from the fuse manufacturers.

Derating curve for IP 65 use:



Only short-circuit protection
Overload and short-circuit protection

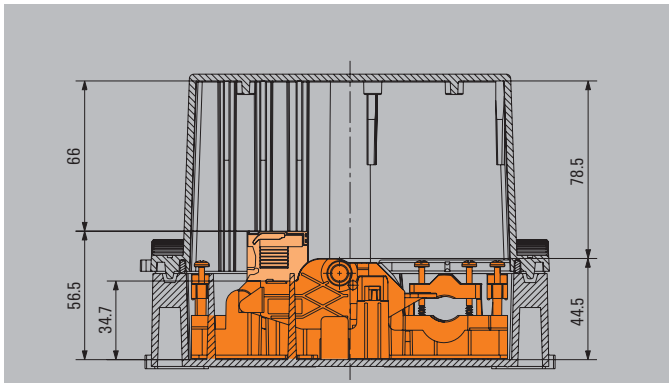
Help with project planning FieldPower® Control

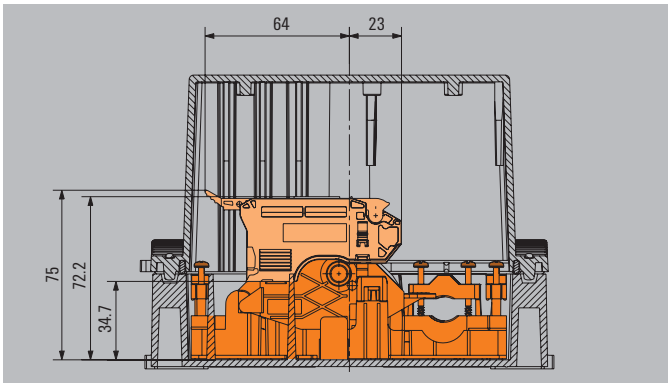


CAD models can be found in our online catalogue at
http://catalog.weidmueller.com

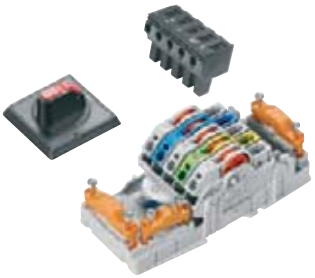
BG GHDE HO PT6
BG GHDE 10P HO PT6
PTS 4...
PT6...
GH PT6
GH 10P PT6

BG GHDE HO PT6
BG GHDE 10P HO PT6
PTS 4...
PT6...
GH PT6
GH 10P PT6

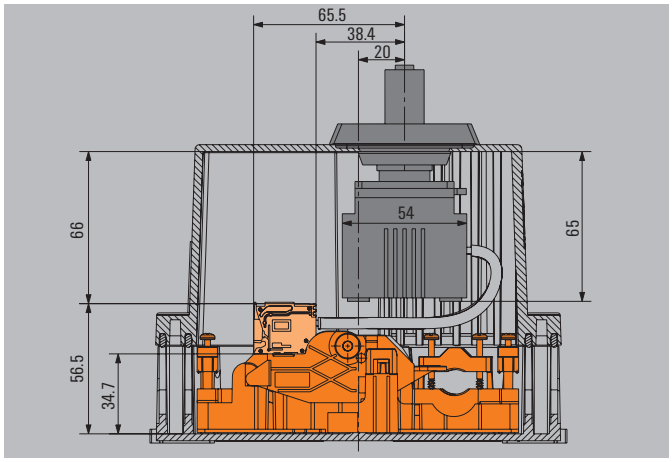


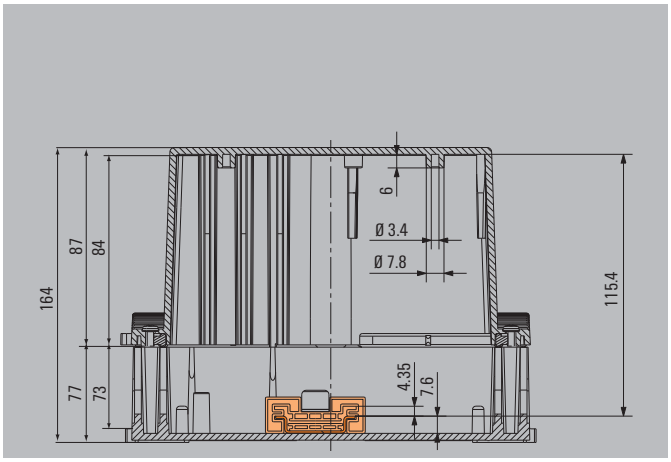


GHDE 10P HO ON/OFF PTS4
BG GHDE HO SA UL PT6
PT6...
GH PT6
GH 10P PT6

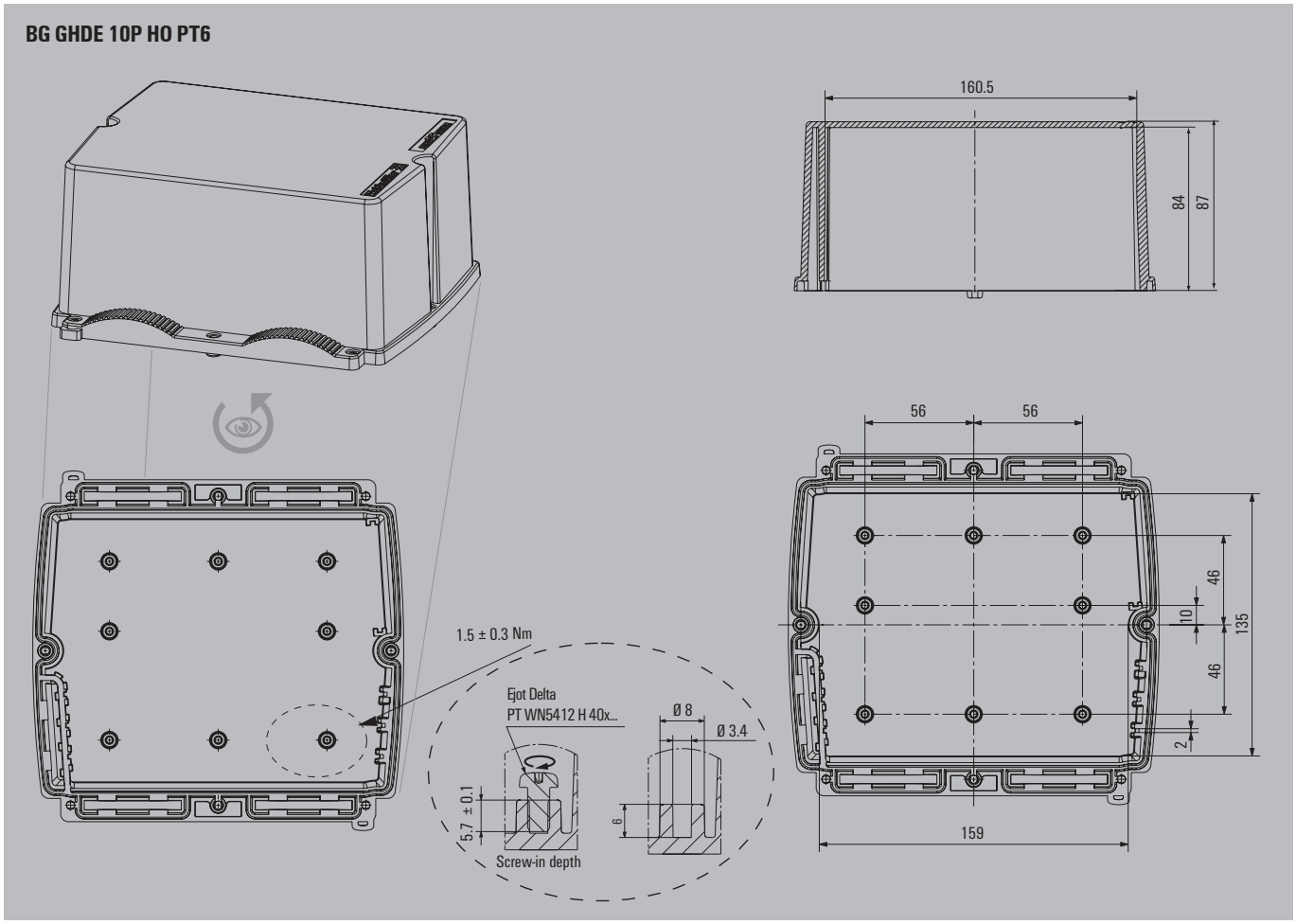


BG GHDE HO PT6
BG GHDE 10P HO PT6
TS 35 PT6
GH PT6
GH 10P PT6

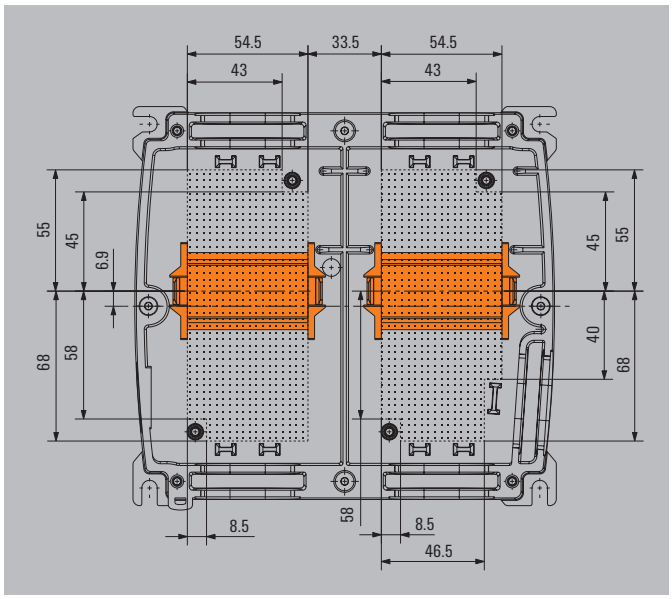




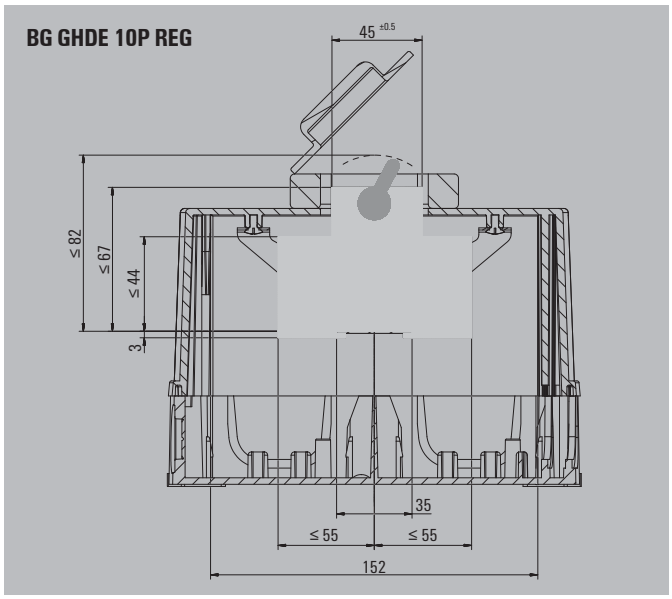
BG GHDE 10P HO PT6



TS 35 PT6
GH 10P PT6

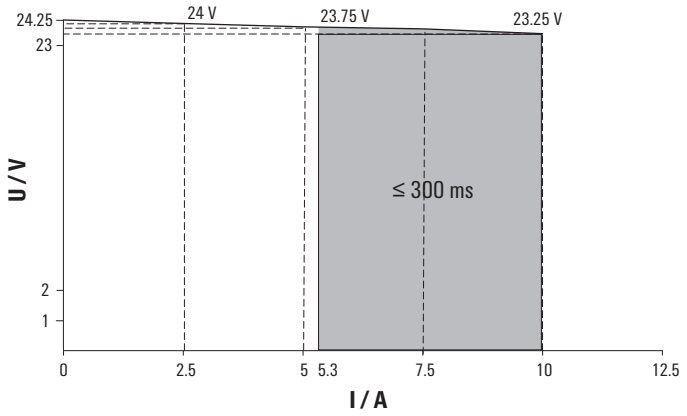


BG GHDE 10P REG



Help with project planning FieldPower® DC-Network

Actuating variable and load limit

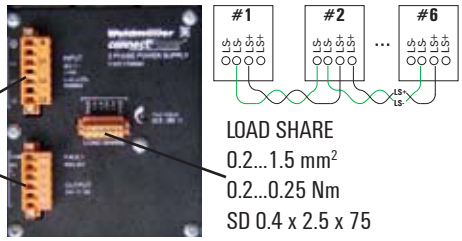


Loadshare Bus

Input 400 V ~
L1, L2, L3, h

0.5...4 mm²
0.4...0.5 Nm
SD 0.6 x 3.5 x 100

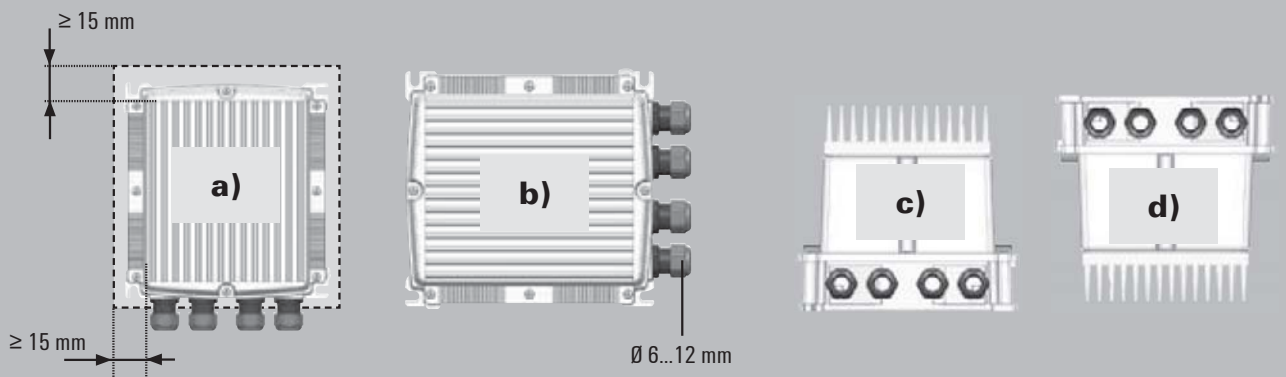
Fault Relay ≤ 1 A / 24 V
COM, NO
Output 24 V DC 5 A
+, +, -, -

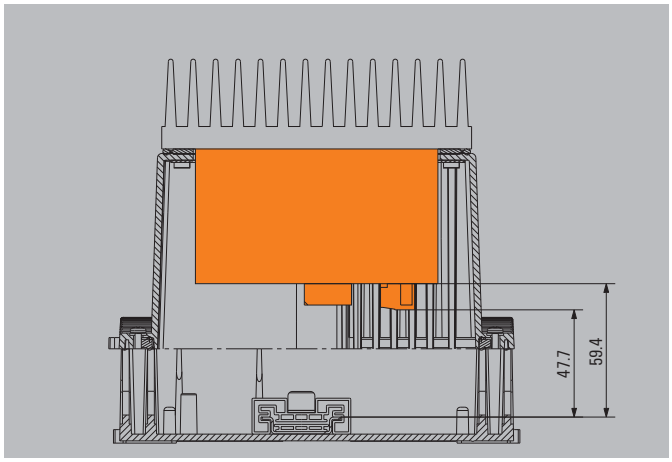


LOAD SHARE
0.2...1.5 mm²
0.2...0.25 Nm
SD 0.4 x 2.5 x 75

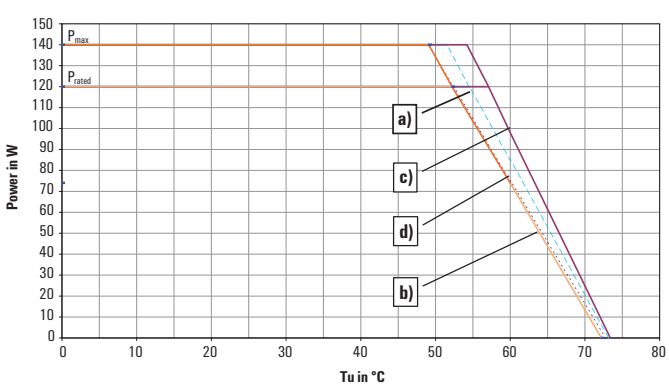
LOAD SHARE bus connection:
twisted pair cable
(for example, Ölflex)

Installed position

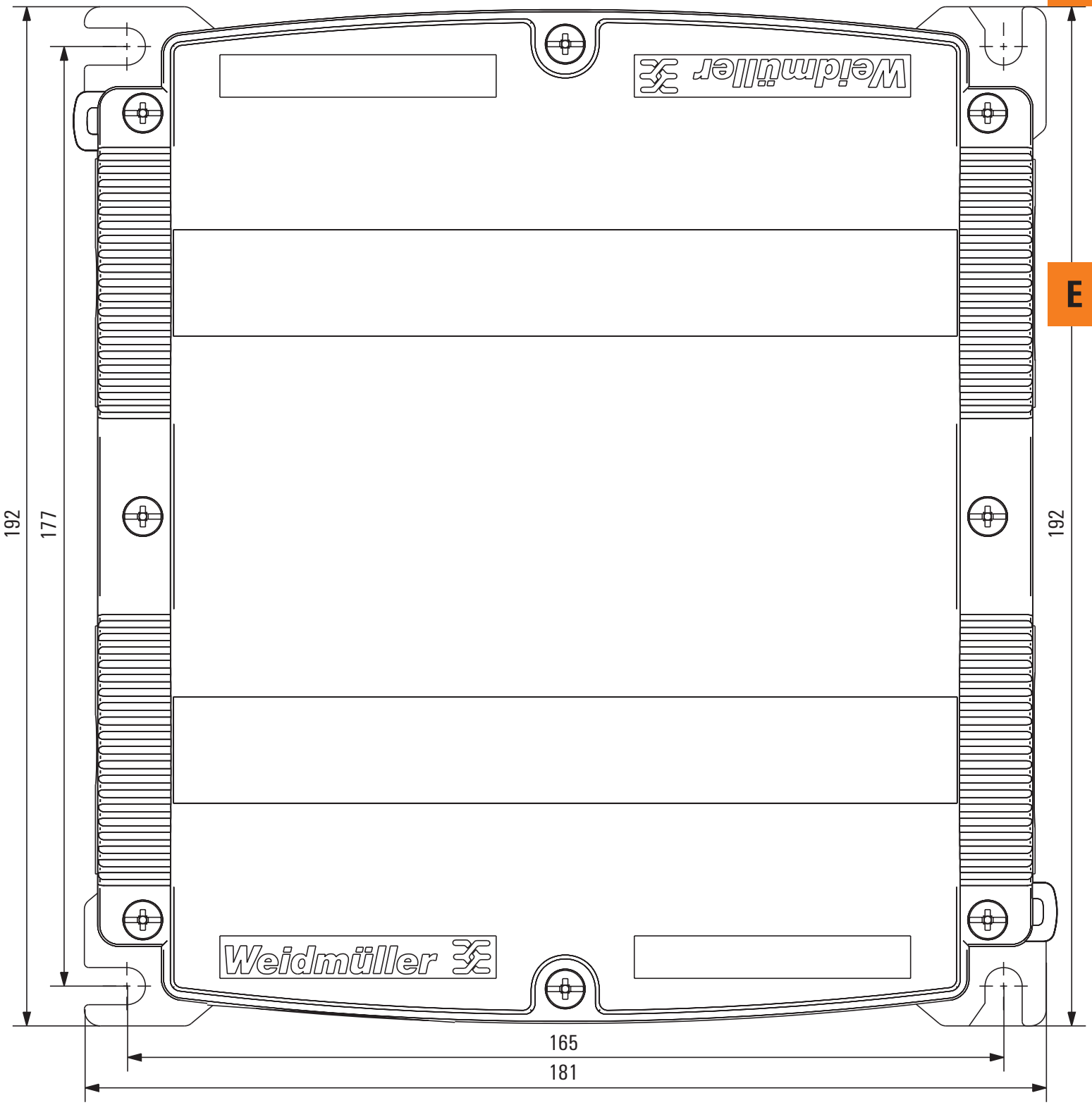




Derating curve



FieldPower® Box 10P



Electrical cabinet socket outlet

Schuko TS35

- Simple installation in electrical cabinet
- TS35 module can be mounted on rail
- VDE mark of conformity
- Two-pole with earthing contact

Technical data

Rated voltage	230 V
Rated voltage, max.	250 V
Rated current	16 A
Clamping range, nom.	1 mm² - 1,5 mm²
Tightening torque	1.3 Nm
Ambient temperature (operational)	-20...+40 °C
Surge voltage category	II
Pollution severity	2
Protection degree	IP 20
Approvals	CE; VDE

Dimensions		
Clamping range (nominal / min. / max.)	mm²	1.5 / 1 / 1.5
Height x width x depth		45 / 76 / mm

Note

Ordering data

Type	Qty.	Order No.
Schuko TS35	10	**8734580000**

Note

Accessories

Note

Weidmüller Solutions & Service

Application specific solutions – Your requirements are our motivation

Each industry has its own requirements calling for more and more individual solutions aside from standard products. Your new product might have to contend with severe conditions. In addition, many applications are subjected to high mechanical strains – through vibration or directly applied forces. Extreme temperature conditions or an application in hazardous areas are further factors you will need to take into account, and your product must comply with the appropriate standards for these conditions. We can offer you highly competent expertise to support you in the selection of ideal products, whatever your application. Feel free to contact us!

From custom product development, customer-specific assembly or application-specific products that are ready for use - we can help you to optimise your working processes and ensure your company's sustained efficiency, today, as well as for the future.

Individual product development
Working closely with you, we can develop individual and future-proof products using the latest technologies and which are specifically tailored to your application.

Customer-specific assembly
Our highly-skilled production expertise and broad product portfolio means that we can deliver superior solutions to meet and exceed your specification requirements.

Application-specific products
Our cross-industrial solutions set standards: Set up for your application, instantly ready for use and available from stock.





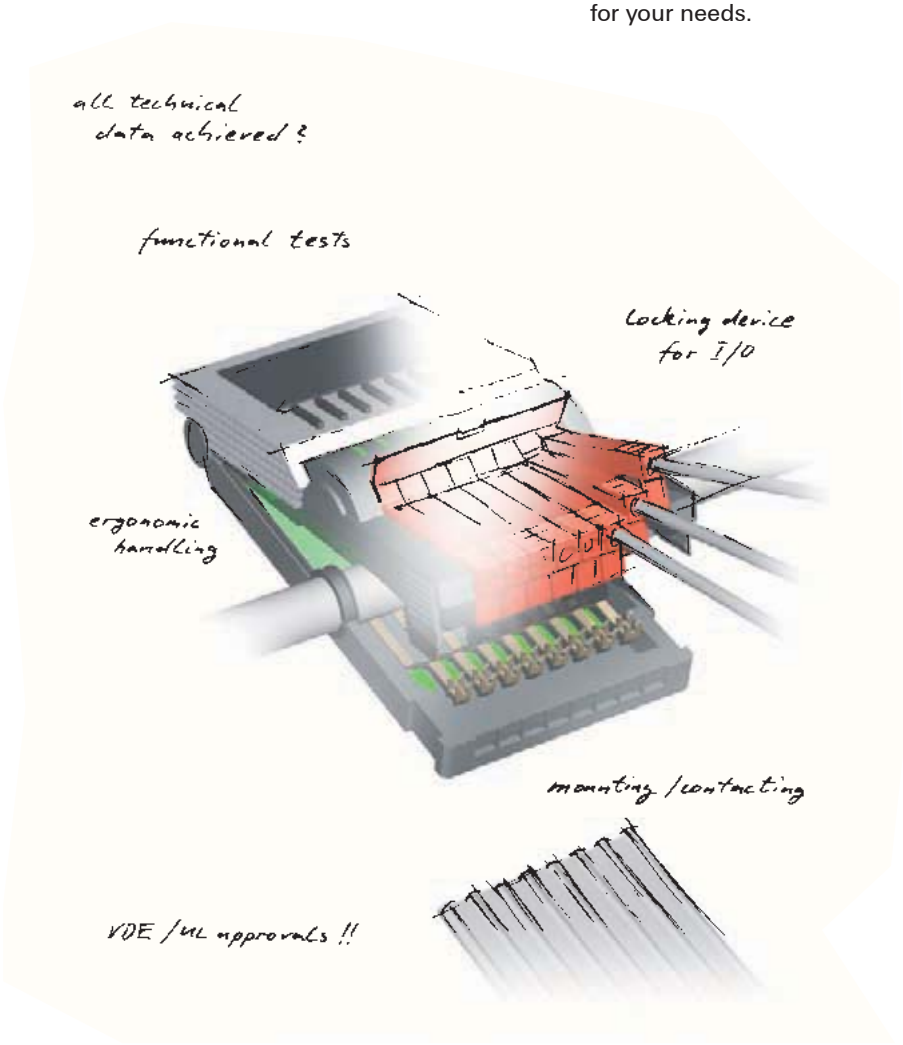

Individual product development for your success

We have a passion for simple, innovative solutions
Working with you, we can develop innovative and future-oriented products tailored to your application. Our philosophy is „one customer - one product". It is not the product that is the starting point, but you, your technical specifications and your requirements.

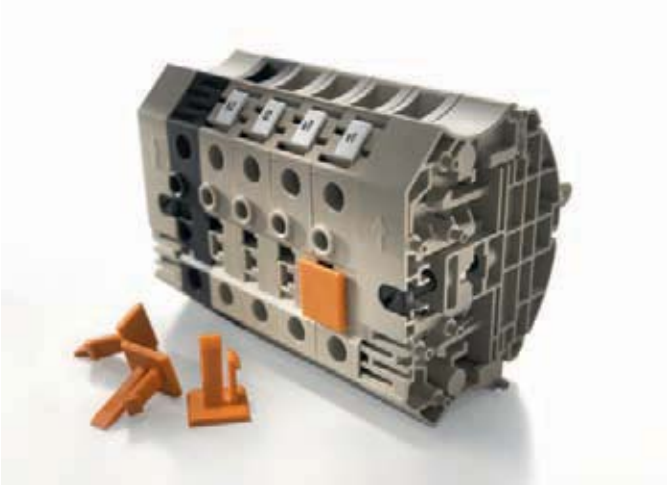
A connecting partnership
The development of individual products means making the most of the experience and competencies available in the partnership. Our project management provides a professional and quality approach - from concept and design through to development, implementation and production. Our extensive knowledge of electrical connectivity, enclosure and sealing technology, as well as signal conditioning, are all at your disposal.

Benefit from a reliable partner:

- **Increase the efficiency of your development and production processes**
  Outsourcing the development and production of your components will shorten your time-to-market. In addition, you have more time to concentrate on your core competencies.
- **Take advantage of our applications and production expeience and expertise**
  You can draw on the accumulated knowledge of our applications engineers and our specialists in the fields of connection technology, enclosure and surface technology, as well as metal and plastic processing, which is second to none.
- **Feel safe with the professional approach of our project management**
  Through innovation workshops, feasability studies and profitability analyses we define a requirement profile forming the basis for the further development process. In this way, you can be sure of the best possible products for your needs.



Application specific products – solutions for industries and markets



Industries and applications often have similar or even identical requirements for products or product assemblies. Application specific products that are based on earlier realised solutions are now directly available from stock.

Your advantage: You quickly get a suitable and cost-efficient solution.

Cross industrial solutions as standard
It is our aim to develop solutions that offer the additional advantage of a truly flexible design. Although this may mean an application-specific product may have an additional input or terminal you don't need, it can still be much cheaper than having a custom-made solution. Therefore, you not only save time, but money!

Reap multiple benefits:

- **High availability**
  Application specific products are available from stock without delay. So you can rely on the delivery of your products when you need them.
- **Advice from application engineers**
  Using the expertise of our applications engineers means that you can develop solutions that are not only right, but which deliver added value to your applications.
- **Supportive software**
  Project planning and evaluation is made easy with our software solutions such as NetCalc®, RailDesigner® or Softclinic.
- **Worldwide application centres**
  We stay in constant dialogue with our worldwide application centres, ensuring that our own application knowledge is shared, kept up to date and at your disposal anywhere you need us.

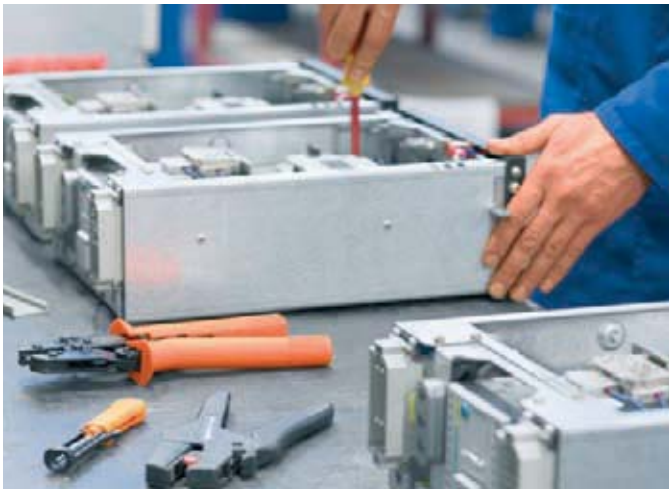
Customer specific assembly, tailored configuration

You may be looking to bring costs down and increase your efficiency. It may be that you would like more time to focus on your core competencies. You could be looking for a partner who will set up intelligent solutions for you, and who you can trust to deliver your specific requirements. Here at Weidmüller, we have a wealth of expertise, capability, and capacity to deliver custom solutions that are flexible, economically advantageous and on time.

We offer to work closely with you, providing support and advice, and in putting together the job specification. Furthermore, our broad product portfolio means that we can jointly work together on the selection of the best components to make up your custom solution.

Highest levels of professional production
You have complete access to our highly-skilled project management team and our production expertise, for example, in the ATEX area. We can offer you a comprehensive portfolio of customer-specific assemblies, from simple assembly to the modification of existing electronics products.

Our services include:
- Adaptation and assembly of enclosures for all IP protection classes
- ATEX solutions for hazardous areas
- Assembly of heavy duty connectors
- Assembly of terminal strips
- Customer specific electronics solutions
- Cable assembly



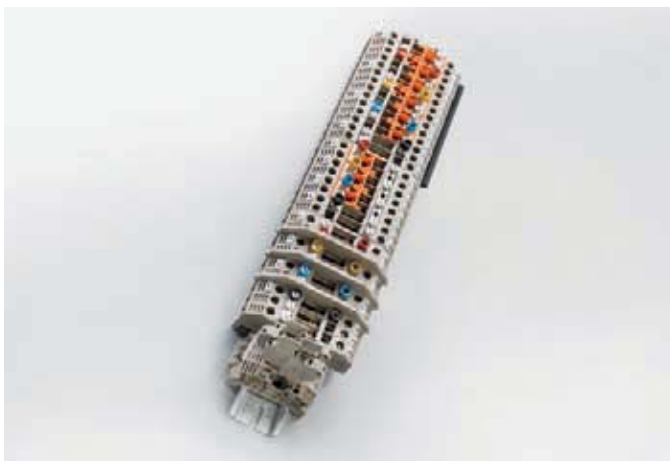
Take advantage of:
- **Simple ordering and stockholding information**
  One solution – one item number! It will no longer be necessary to order single components. Article variety and stockholding will be reduced.
- **Professional assembly**
  All individual components will be pre-assembled, reducing your own assembly time and costs.
- **Less costs for documentation**
  Our RailDesigner® software will facilitate the generation of parts lists or drawings.
- **Modern processing of enclosures**
  Our CNC processing centres can adapt the enclosures to suit your tailored solution.

Customer specific assembly – consultation, product, development and production – all from a single source

Our application and manufacturing expertise influences decisions on all areas of modern connection technology. They therefore play an integral part of every solution.

Enclosures
Perfect protection and safety
- Enclosures for all IP protection classes
- ATEX enclosures for hazardous areas
- Placement of inspection glasses, drill holes and threads
- Elaborate machining operations like the milling of contours
- Class C5 welding, according to DIN 6700, for stainless steel and sheet steel enclosures
- Surface coating as and when required
- Individual device and system markers

Heavy duty connectors
Perfect connection with system
- Placement of drill holes and cable glands
- Equipped with plug-and-play components
- Wiring of sub-assemblies
- Cable assembly
- All housings are available with individual laser marking



Terminal strips
Configuration made to measure
- Machining of mounting rails
- Snapping components onto terminal rails
- Placement of cross connections
- Mounting of standard conductors
- Marking of terminals, devices, conductors and cables

Electronics

Individual solution from the beginning

- Modular terminal blocks, component plugs, snap on bases, enclosures for electronics: integration of relevant electronic components
- Snap-on base: Component carrier design or simple wiring of the modules
- Interface units
- Modification of existing electronic products: modification of the circuitry or specific calibration
- Combination of components: relays or optocouplers in combination with other components

Cable assembly

Our special service

- Pre-cutting of cables and conductors
- Installation of
  - Heavy duty connectors
  - PCB connectors or DIN connectors
- Conditioning of wire ends
- Mounting of wire end ferrules and cable lugs
- Connection of conductors to terminal rails

RailDesigner®
A faster way to configure and order terminal strips

These days, time and cost efficiency are of the essence when it comes to working in planning and production. RailDesigner®, our free configuration and purchasing software, uses its virtual assembly of mounting rails (assembled or unassembled) to help you with the design of your own, completely personal solution.

RailDesigner® brings you substantial benefits:

Less time required
It speeds up the process of acquiring quotations and placing orders because, for example, all processes can be initiated directly from the software. You configure your projects and the rest virtually takes care of itself!

User friendly operation
Any potential errors are prevented by automatic installation tips and clear project processing and management. So that you can plan your project realistically, RailDesigner® offers both 2D and 3D displays.

Wide selection from the current product portfolio
You can easily download software updates for RailDesigner® from the internet. This means that you will always have access to the latest version of our product database.

Project planning that is compatible with your software
Plan and design your projects easily using your usual CAE software. With the integrated interface, transferring data from your CAE system has never been so simple. You can export component lists and terminal strip designs in various formats. Marking data is automatically transferred to the M-Print® Pro labelling software.

Simple purchasing of terminal strips
Once you have completed the planning stages of your projects in RailDesigner®, you can choose to send all of your data to us by email. Then we take over the assembly and deliver the required configuration to you, along with anything else that you still require for your project.

Download the software for free and discover the advantages to using RailDesigner® at **www.raildesigner.de**

Product assistant for distribution boxes and assemblies – The perfect solution, in the shortest time

You can easily and quickly select, combine and purchase the required components, all with the help of the Weidmüller product assistant for distribution boxes and assemblies. This means that you can rapidly obtain your individual enclosure solutions which may include the following components:

Empty enclosures without holes
Empty enclosures in various sizes of the Klippon® K and Klippon® POK series (aluminium and plastic) with matching mounting rails.

Empty enclosures with pre-threaded holes
Empty enclosures in different sizes from the Klippon® K and Klippon® POK series (aluminium and plastic), that are already equipped with metric threaded holes.

Mounting rails
Exactly tailored mounting rails for the enclosure sizes on offer.

Terminal strips
Mounting rails, which also perfectly match the offered enclosure sizes and are pre-fitted with terminals, optionally with screw or tension clamp connection.

Distribution boxes with Ex-protection
Enclosures that are already assembled with a terminal strip and already equipped with metric threaded holes.

Numerous possible combinations
Enclosures with Ex-protection are supplied exclusively with terminal strips that are already fitted. The product assistant offers you various approaches for industry variants so that you can create the right enclosure variant.

You can start off with any of the listed components and then add further components to the combination. This means that, for example, you can select the required terminal strip and the product assistant will then offer the matching enclosure variants.
Or, you can start with the enclosure, and matching terminal strips or mounting rails will then be chosen. The selected products can then be directly included in the query list.

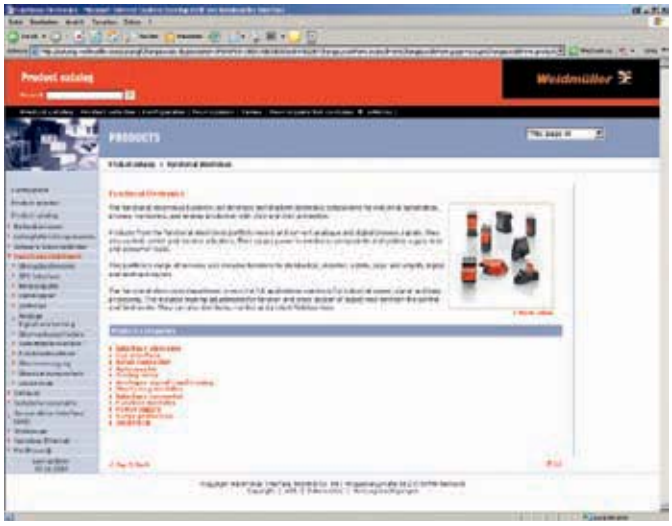
Provision of all relevant data
During the selection, you can choose filters for the terminal strips, such as length, connection technology or dimensional cross-section and, for the enclosure, you can choose material, size, holes etc. If a product is then selected and combined, the user can view all of the relevant data, including drawings and pictures. This means that you can extensively plan how the enclosure will be integrated into the customer's application.
The product assistant is available at
http://galaxy.weidmueller.com

Online product catalogue

If you have questions about the specifications and details of our products, even outside normal business hours, then our online catalogue at
http://catalog.weidmueller.com
is opened 24 hours a day, 365 days a year and is the perfect source for information. Besides product features and part numbers, it contains extensive additional information on all product groups.

For further information, offers and your personal contact, simply consult the Weidmüller website at

www.weidmueller.com

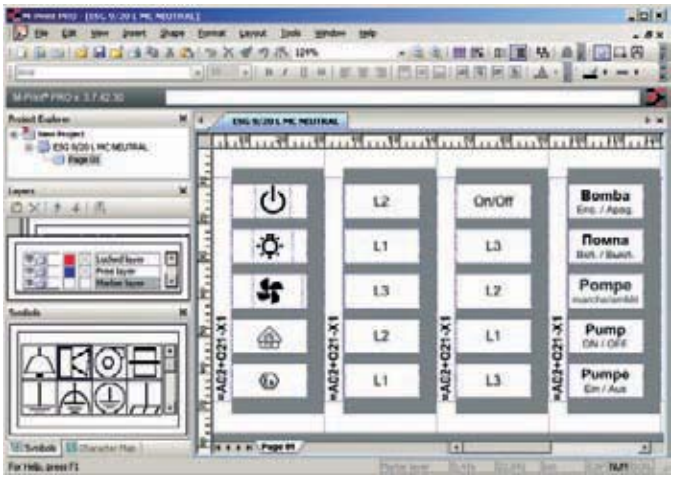


With one click selection for the product data sheet of your choice.

M-Print® PRO label designer

Our comprehensive range of Weidmüller services includes the M-Print® PRO software. This is a professional standard, Windows®-based program for printing and ordering labels and markers that is coordinated with our current printing systems and marking materials.

M-Print® PRO enables you to design your labelling materials professionally and quickly. Texts, borders, lines, graphics, barcodes, serial numbers and photographs are all possible. The interface to RailDesigner® or your CAE system enables the transfer of all your configured data.



Glossary/Technical appendix

Power Supplies – Overview

Power supplies are important links in the energy supply chain of automation systems. Unregulated power supplies or regulated switched-mode power supplies are at the heart of every electrical cabinet. 24 V DC has emerged as the standard control voltage for the supply of electrical sub-assemblies and systems. But other control voltages are also required. The correct power supply is a critical factor for the reliable operation of the supplied components. Thus it must be chosen with particular attention.

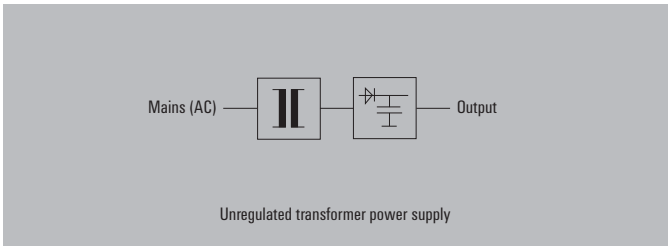
Power supplies from Weidmüller, whether regulated or unregulated, have proven themselves reliable over many years in the supply of electrical sub-assemblies and systems. They perform reliably and safely – even under harsh industrial conditions – in all sectors of machine construction, industrial automation, and the power and process industries.

Weidmüller offers custom-fit solutions for practically all of your requirements:

- Unregulated transformer power supplies
- Primary switch-mode power supplies
- DC/DC converters
- Diode modules
- UPS control modules
- Electronic fusing

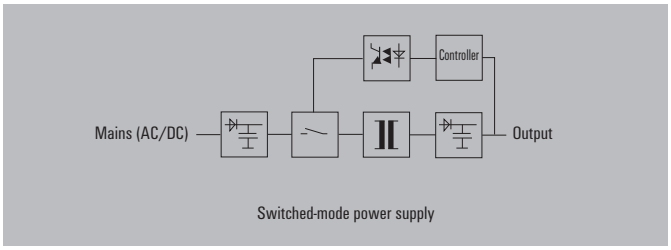
How they work

Unregulated power supply units consist of a mains power transformer that transforms the input voltage into a different AC voltage. The units then make use of a rectifier and a filter circuit to smooth out the DC output voltage.



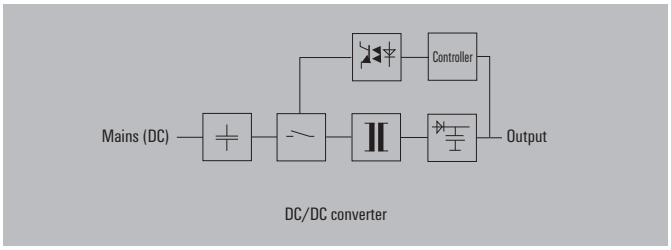
Unregulated transformer power supply

Regulated power supply units in the range up to 1,000 W are usually designed as primary switched-mode power units. The mains AC voltage is then rectified and transformed in high frequency to the secondary side using switching transistors and power transformers. This is followed by the rectifier and filter circuit in order to generate the DC output voltage. A control circuit compares the current and voltage on the output side to the specified target values and then generates a control signal for the switching transistors. This permits compensation for load changes and mains voltage fluctuations. As a result, the output voltage remains stable. These power supply units are increasingly being operated with DC input voltages (for example, Weidmüller's PRO-M line of switched-mode power supplies).



Switched-mode power supply

A DC/DC converter is a variation of the classic switched mode power supply. The switching strategy is similar but there is no input rectifier. Starting with a specified DC input voltage, DC/DC converters generate a different DC voltage at a similar or different level. They are used to adapt different voltage levels and also for isolating potentials.



DC/DC converter

In use around the globe

Weidmüller's power supply units have been designed for use around the world. They can be used in practically all applications throughout the world because of their CE label and many other national and international approvals. Their wide input voltage ranges and compatibility with various mains power connections increases their global appeal.

Temperature range

During operation, power supply units generate power losses. In Weidmüller's switched-mode power supplies, the resulting heat is dispersed using natural air currents only. The design, which does not make use of a ventilation fan, is an example of our uncompromised durability standard. Weidmüller's power supply units, depending on the model, can be used in temperatures ranging from -25 °C to +70 °C.

Compact and efficient design

Weidmüller's switched-mode power supplies are extra small because they take advantage of the above-average degree of efficiency offered by the latest technologies. The power supplies from Weidmüller – whether they are book-shaped with minimised base surface, or variants with reduced height for use in distributor boxes – always provide the proper cost-saving solution.

Standards and approvals

Standard/Approval	Description
DIN EN 50178 (VDE 0160)	Electronic equipment for use in power installations
DIN EN 60950-1 (VDE 0805-1)	IT Equipment – Safety – Part 1: General requirements
DIN EN 61558-1 (VDE 0570-1)	Safety of transformers, power supply units, throttles and similar devices Part 1: General requirements and tests
DIN EN 61558-2-17 (VDE 0570 Part 2-17)	Safety of transformers, power supply units and similar devices Part 2-17: Special requirements for switch-mode power supply transformers
DIN EN 60204-1 (VDE 0113-1)	Safety of machinery – Electrical equipment of machinery – Part 1: General requirements
DIN VDE 0100-410	Construction of power installations with rated voltages up to 1,000 V Part 4: Protective measures Chapter 41: Protection against electrical shock
DIN EN 61204-1	Power supply units for low voltages, with direct-current-output – properties
DIN EN 60947-1	Low-voltage switching devices – Part 1: General definitions
DIN EN 61140	Protection against electrical shock - common requirements for facilities and operating equipment
IEC 38	Supplementary notes relating to status of international standards and European harmonisation of mains voltages 230/400 V
73/23 EWG	Electrical equipment for use within specific voltage limits (Low Voltage Directive)
2004/108/EG (89/336 EWG)	Electromagnetic compatibility (EMC Directive)
2006/42/EG (98/37 EG)	Safety of machines (directive covering mechanical equipment)
UL	Safety approval for the United States market
CSA	Safety approval for the Canadian market
GL	Test specifications for electrical/electronic devices and systems for use in marine technology
UL1310	Class 2 power supplies (limited energy)
UL1604	Electrical equipment for use in dangerous surroundings

Standard/Approval	Description
SEMI F47	Resistance of electronic devices against voltage drops
2006/95/EG (72/23/EWG)	Low Voltage Directive
EN 60721-3-2	Classification of surrounding conditions
EN 60664-1 (VDE0110-1)	Insulation coordination for electrical equipment
C22.2 No. 107.1	General standards for power supplies (Canadian standard)
EN 61000-3-2	Limiting of mains voltage harmonic currents
EN 61000-4-x	Interference immunity tests

Glossary

A

AC/DC converter	Conventional switched-mode power supplies generate a DC voltage from an AC voltage. For this reason they are sometimes also called AC/DC converters. Such devices are increasingly compatible for use with DC input voltages. The primary and secondary sides are typically electrically isolated.
Ambient temperature (operational)	The ambient operating temperature (the min. and max. values) together with the output current and voltage ratings can be used to describe the power capabilities of a power supply unit.

B

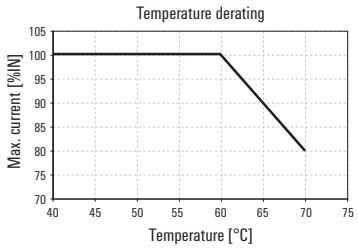
Burst	A burst is a quick low-power burst pulse which can, for example, simulate welding equipment phenomena. Similar phenomena can also result from switching operations on the mains supply. This test can be used to demonstrate immunity against quick transients.

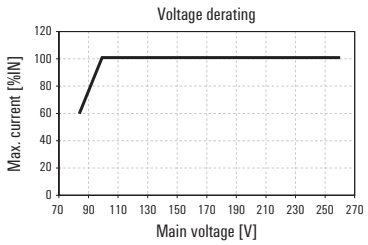
C

Class of protection	Electrical equipment is classified according to varying classes of protection. These classes define the particular safety measures that are required to avoid an electrical shock. The most widely used power supplies correspond with protection class I. The basic requirement of protection class I is for a basic insulation and for the earthing of all conductive housing parts. If the basic insulation fails, then the earthed conductive housing serves to prevent an electrical shock. For this reason, devices in protection class I are equipped with an earth (PE) connection.
Connecting power supply units in parallel	Power supplies can only be connected in parallel when this is clearly permitted by the manufacturer. Parallel connections are then normally tied to certain conditions. This is a typical way to increase the output power (for example, when extending a facility). Power supplies are also wired in parallel in order to design redundant power supply systems. The parallel circuit is not wired straight though but connects using decoupling diodes. → Redundancy
Cooling	Cooling is used by components or devices to prevent them from overheating. A variety of cooling strategies are available – two of the most common are natural and forced-air cooling. Natural (convection-based) cooling takes advantage of the natural air currents. Manufacturers must then ensure that there is sufficient air flow by specifying the clearance gaps and mounting positions that are required above and below the ventilation openings. Forced-air cooling normally uses a fan to dissipate any heat that has been generated. When fans are used in a device, they have the effect of increasing the likelihood of device outages. For this reason, a power supply with natural cooling methods is generally preferred.

D

DC/DC converter	DC/DC converters are switched-mode power supplies that convert a specific DC voltage into another voltage. They are a variant of the AC/DC converter. DC/DC converters, in their simplest implementation, do not isolate voltage potentials. They are used only for adapting voltages. Improved DC/DC converters have isolated voltages. A safety isolating transformer in the power element ensures the required electrical isolation. Besides the voltage adaptation, the isolation of the voltage potentials is an important factor.
Derating	For power supply devices, derating generally refers to the reduction in power as influenced by the surrounding temperature and the input voltage. A temperature derating often occurs starting at a surrounding temperature of 50 °C. The rated power is guaranteed up to this temperature. The available power continually declines as the temperature heats up above this level. This is typically specified in %/K. A voltage-dependent specification is another form of derating For switched-mode power supplies, the derating begins below a specific input voltage. So a switched-mode power supply with a wide input range can typically work under full power with 115 V AC input voltage. However at 85 V AC it can only produce 60 % of the power rating. The coefficient is usually specified in %/V.
Diode modules	Diode modules are used to construct a redundant power supply system. They are important for decoupling the power supply unit. Thus, a short circuit that occurs on the output of a power supply unit will not influence the output voltage.





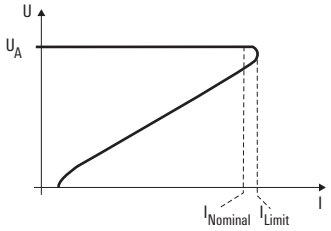
E

Efficiency	The degree of efficiency is equal to the ratio of output power to input power and is expressed in percent. The degree of efficiency can be between 70 and 90 %, depending on the dimensions and type of technology in use.
EMC (electromagnetic compatibility)	Electromagnetic compatibility describes the interference emissions caused by an electronic device and the level of immunity against external electrical influences. Interference emissions can be caused by cabling and wires or by radiated emissions. Immunity measures the resistance against such wire-based emissions and against radiated emissions such as electrostatic fields and magnetic fields. Electric devices must also be protected against electrostatic discharges.

F

Foldback characteristic curve

The foldback characteristic curve is a special type of output curve that protects the power supply unit from overloads. When a specific current limit is exceeded (for example, by 110 or 120 % of the nominal level), the current is limited electronically and lowered to a very low, safe value. This downward-sloping characteristic curve means that it is not sufficient to simply eliminate the overload. The load must be reduced significantly more so that the adjustment control can return to the normal voltage control. Thus this solution is not suitable for many applications and is becoming less popular.



G

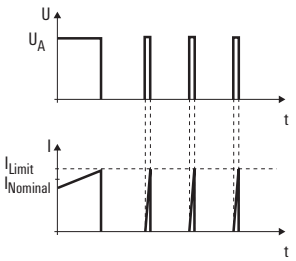
Galvanic isolation

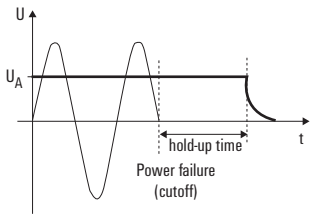
Galvanic (electrical) isolation ensures that no electrical connections can exist between the primary and the secondary sides. Opto modules and transformers are the typical components used.

H

Hiccup mode

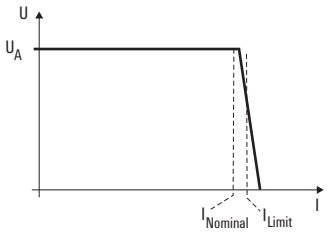
The hiccup mode is a special output characteristic curve that protects power supply units from overloads and short circuits. The unit switches off at a specified current limit (for example, 110 or 120 % on the nominal rating) and then switches back on after a certain delay. This leads to a pulsating mode of operations which can only revert to continual operations after the overload has been eliminated. The main disadvantage here is that the connected consumer load must be restarted after every pause. A restart may not be possible with motors or large capacitive loads since the restart current peak may once again exceed the defined limit.



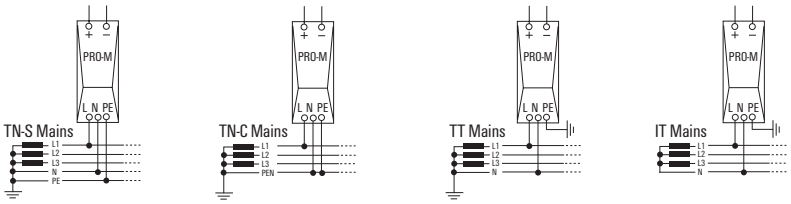
Hold-up time (mains-failure bridging time)	The hold-up time (also known as the mains-failure bridging time) is the interval from the start of the mains outage to the point in time when the output voltage can no longer be maintained at its original level. The hold-up time indicates how long a mains outage may last before it influences the output voltage. For DC power supplies, EN 61204 requires a bridging time of at least 20 ms. 

I

Input voltage range	This refers to the minimum and maximum input voltage at which the rated output specifications can be maintained.
Inrush current	The inrush current refers to the peak current that occurs when turning on a consumer load. Switched-mode power supplies have storage capacitors in the input which can cause significant current peaks while the mains power is being switched on. A variety of circuitry solutions can be used to attenuate these current peaks. In the simplest solution, an inrush limiter is used. Active switching can be used in other cases. The peak current specification indicates which upstream fuse should be used in the circuit. If a fuse is selected which is too sensitive, it can trigger when the mains power is switched on.

IU characteristic curve	The IU characteristic curve is a special output characteristic curve that protects power supply units from overloads and short circuits. It offers the best performance with regards to overload and short circuit capabilities. A current limit is activated at a specific current level (for example, 110 or 120 % on the nominal rating). As the load continues to increase, the output voltage is reduced according to the current limit curve until it reaches a level approaching zero volts. Thus a pulsating mode of operations is avoided for short-term overloads. Large capacitive loads or motors are brought back up along the slope of the current-limit characteristic curve. After a short circuit or overload is fixed, the IU characteristic curve offers the advantage of immediately returning to the normal voltage control mechanism. The full output voltage is then immediately available. The IU characteristic curve is becoming the established standard for modern power supplies. Additional variants are available which pertain to the peak current capacity and the slope of the current-limit characteristic curve. 

M

Mains harmonics	Power supplies can experience harmonics caused by mains rectification on the input side. These harmonics are multiples of the mains frequencies. Existing standards define specific limit values since such harmonics can significantly lower the mains quality.
Mains system types	This refers to the types of mains supply systems. Systems differ in their method of earthing and the implementation of the phase wire, PE wire and central-point wire. Common mains systems include the TN, IT and TT networks. The individual mains types can also differ in their voltage levels and frequencies. 
MTBF (mean time between failure)	The MTBF is a statistical value that specifies the probability that a product will fail. It is typically specified in hours and normally assumes a temperature of 25 °C. The probability of failure depends largely on the ambient surroundings. The key variables are the type of load and the ambient temperature.

O

Output characteristic curves	The output characteristic curves of power supply devices are determined by current and voltage. Unregulated devices do not have a current limit. In the case of an overload or short circuit, fuses or temperature switches are used to protect the device. Regulated devices are protected against overload and short circuits by means of various output characteristic curves. In this case, the system attempts to prevent any activation of fuses or temperature switches. The mandatory manual reset which follows an overload or short circuit can then be avoided. Common output characteristic curves include the hiccup mode, the foldback characteristic curve or the IU characteristic curve. → Hiccup mode, foldback characteristic curve, IU characteristic curve
Overvoltage category	Power supply units are classified into overvoltage categories according to the immunity against mains surges and transient voltages.

P

PELV (protective extra-low voltage)	This is a functional DC voltage with secure isolation according to EN 50178. As with SELV, a reinforced or double insulation is used between the primary and secondary sides. However, the secondary side is earthed.
PFC (power factor correction)	The power factor correction can be either passive or active in relation to power supply devices. The reactive power resulting from the bridge rectification puts a significant strain on the power supply network. The relatively poor power efficiency factor that results can be improved by using passive components (such as filters) or an active electronic mechanism. For switched-mode power supplies, PFC usually refers to the active variant of the power factor correction. Power factors of almost 1 can be reached when using an active PFC. Practically no reactive power is drawn from the mains supply network; therefore the strain on the mains network is relatively low.
Pollution severity	Pollution severity describes the environment and ambient conditions that a device requires in order for it to function smoothly. Significant environmental variables include condensation or air containing dust and oil.
Power-boost or boost	The power-boost function is the surge current handling capacity in the seconds to minutes range. This function is often required for starting up DC motors. DC motors have a high start-up current and often require several seconds before they have achieved their rated rotational speed. The power-boost function helps to optimise this start-up phase.
Power factor	The power factor is the ratio of reactive power to apparent power. It is an indicator of the device performance with respect to the load on the mains power network. Depending on the technology in use, the power factor for power supplies can be between 0.45 and nearly 1.

Power loss	For power supply units, the power loss specification indicates the thermal output emitted during nominal (rated) operations. This is a key specification used by engineers when designing the climate control systems within electrical cabinets. It is calculated as the difference between the input and output power and can also take the degree of efficiency into account.
Power rating	The continual output permitted under the rated conditions.
Power supply units connected in series	Power supplies can only be connected in series when this is clearly permitted by the manufacturer. Such series connections are then normally tied to certain conditions. They can be used to increase the output voltage. This is not widely implemented.
Protection degree	According to DIN EN 60529, devices can be classified according to their protection degrees. The numeric code (for example, IP 20) defines two protection degrees: protection against touch or penetration by external objects (the first digit) and protection against water penetration (the second digit). Switched-mode power supplies intended for use in electrical cabinets or similar enclosures are often designed with IP 20 protection. The first digit (in this case, 2) ensures finger protection. The second digit (0) indicates that no protection against water is provided.
Pulsed current capacity	The pulsed current capacity describes the dynamic performance of a switched-mode power supply. Capacitive consumer loads, with their high inrush currents, put a particular strain on a switched-mode power supply. Peak values are reached (in the ms range) which amount to levels many times higher than the mains current. If the current control mechanism reacts too quickly, this can lead to voltage drops and can cause problems for loads which are connected in parallel. For this reason, power supplies are often equipped with a surge current limiting factor based on time. This allows a high current output for only a few ms which can be much higher than the rated current.

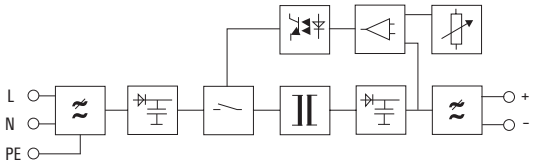
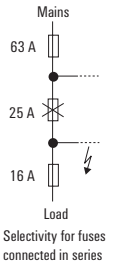
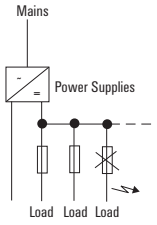
R

Rated control voltage	The nominal value of the sparkover voltage for the relay.
Rated input voltage	The input voltage required at which, under the normal mains voltage fluctuations, the output levels can be kept stable. It usually corresponds to the rated voltage for the electric utility's power grid.
Rated output current	The long-term current permitted under the rated conditions.
Rated output voltage	The nominal output voltage used for the rated specifications. It usually corresponds to the factory default output voltage.

Redundancy	A power supply system is considered redundant if it is constructed so that it has partial power supplies which are independent of each other and each of these can individually deliver the output load. When a fault occurs, therefore, it is still possible to continue to supply the connected rated load. In reality, at least two power supplies are connected in parallel using decoupling diodes. In this way, a short circuit in the output of one power supply will not lead to the failure of the entire power supply system. → Diode modules
Regulated power supply units	Switched-mode power supplies, as opposed to more common power supply units, have become established as the standard for the 10–1,000 W power range. They produce a stable output voltage with minimal residual ripple, even when influenced by fluctuations in the mains voltage, mains frequency or load. Their small size and weight is a result of their superior efficiency degree. The electronic control mechanism typically ensures a constant output voltage that varies ±1 %.
Residual ripple	The residual ripple describes the ratio of superimposed AC voltage to DC voltage on the output side of the power supplies. In addition to a percent specification, the superimposed ripple is often specified in mV_{SS} for switched-mode power supplies.
Resistance to shock	Resistance to shock refers to mechanical immunity against impacts in any direction. This is a key factor while the product is being transported.
Response time	The response time is the time that a power supply unit needs to compensate for a disturbance (for example, a load fluctuation).

S

Switching frequency	Switched-mode power supplies are normally operated with switching frequencies from 20 to 200 kHz. The HF or power transformer is switched on an off using transistors at this switching frequency. Small, compact units can be built with this method in comparison with the traditional 50/60 Hz transformers.

Switched-mode power supply units	The switching pulse can be either primary or secondary. Thus there are primary switched-mode and secondary switched-mode power supply units. Secondary switched-mode power supply units are no longer of much significance. The primary switched-mode power supplies are now the focus of attention. The pulse refers to the high-frequency on and off switching of the transformer or transmitter in order to transmit energy. The high frequency allows the use of extra small inductive and capacitive components, particularly for the transmitter. In comparison to transformer-based power supply units, the weight and volume required are much reduced. 
Selectivity	When surge protection equipment is connected in series, selectivity refers to the ability of only one upstream fuse to trigger selectively in the event of an overload. The differentiation can take into account current or also time. With DC power supply systems, selectivity refers to the separate fusing of load circuits on the DC side. In this case as well, only the proper series fuse should trigger in the event of an overload. Fuses in DC circuits play a critical role since the power supplies must react to upcoming short circuits with a speedy cut-off or by limiting the current. Usually electronic fuses are used for this purpose.  Selectivity for fuses connected in series  Selectivity for DC systems
SELV (safety extra low voltage)	SELV refers to extra-low safety voltages according to IEC/EN 60950. Reinforced or doubled insulation between the primary and secondary sides is used to prevent electric shock. The output voltage here is sufficiently low so that it does not pose an injury risk if a person comes into direct contact. Earthing on the secondary side is possible but not required.
Surge	A surge is a high-power voltage pulse which can be caused by, for example, a lightning strike. The switching operations from large consumer loads can also generate such voltage surges on the mains network. The surge test is used to demonstrate the immunity against high-power voltage pulses.

T

Temperature range	The temperature range specifies the minimum and maximum ambient temperatures for which a device can start up and run continuously.

U

Unregulated power supply units	Unregulated power supplies consist mainly of a transformer, a rectifier and an Elkos filter. Since no controlling system is in place, mains voltage fluctuations influence the DC voltage side. Unregulated power supply units are very sturdy; they can be used in applications where a stabilised DC voltage is not necessary (for example, power supply to contactors).

V

Vibration resistance	Vibration resistance describes the resistance against constant mechanical vibrations that occur during operations. Rail and ship applications place stricter demands for vibration resistance on the device.

W

Wide-range input	Modern switched-mode power supplies often feature a wide input range. They can be run under a wide range of voltages: from min. to max. rated voltages including the tolerance limits. They do not require any manual range switching.

Status: 01.07.2012

Index

Order No.	Type	Page
1000000000		
1009990000	PTDS 4 DC	E.17
1010000000		
1010910000	PTS 4 MPB	E.18
1070000000		
1076510000	FP Box 10P SNT 4XVG	E.6
1100000000		
1101940000	BG SNT PT6	E.7
1105430000	CP T SNT 70W 12V 6A	A.17
1105440000	CP T SNT 140W 12V 12A	A.17
1105790000	CP T SNT 90W 24V 3,8A	A.18
1105810000	CP T SNT 180W 24V 7,5A	A.19
1105820000	CP T SNT 360W 24V 15A	A.19
1105840000	CP T SNT 600W 24V 25A	A.20
1105850000	CP T SNT 180W 48V 4A	A.21
1105860000	CP T SNT 360W 48V 7,5A	A.22
1105870000	CP T SNT 600W 48V 12,5A	A.22
1105880000	CP T RM 10	A.25
1105890000	CP T RM 20	A.25
1120000000		
1121950000	BG GHDE 10P HO PT6	E.11
1121980000	GH 10P PT6	E.10
1121990000	BG GH 10P 4XVG PT6	E.10
1122200000	BG GHDE 10P PT6	E.11
1126840000	PT6 DC	E.14
1130000000		
1131730000	PTS 4 DC	E.17
1132320000	FP Box 10P SNT	E.6
1160000000		
1165480010	CP M SNT 250W 24V 10AUW	A.15
1170000000		
1170690000	TS 35 PT6	E.10
1190000000		
1194310000	CP T SNT2 600 W 24 V 25 A	A.24
1194410000	CP T SNT 90W 24V3,8ACL2	A.18
1194420000	CP T SNT 90W 48V 2A	A.21
1194430000	CP T SNT 600W 36V 16,5A	A.20
1194480000	CP T SNT2 180 W 24 V 7,5 A	A.23
1194490000	CP T SNT2 360 W 24 V 15 A	A.23
1220000000		
1222210000	CP M DM20	A.10
1222210010	CP M DM20	A.10
1222220000	CP M DM40	A.10
1222220010	CP M DM40	A.10
1222230000	CP M RM24	A.11
1222240000	CP M CAP	A.12
1222240010	CP M CAP	A.12
1250000000		
1251070000	CP A BATTERY 24V DC3.4AH	B.6
1251080000	CP A BATTERY 24V DC7.2AH	B.6
1251090000	CP A BATTERY 24V DC12AH	B.7
1251110000	CP A BATTERY 24V DC17AH	B.7
1251220000	CP DC BUFFER 24V 20A	B.8
1252210000	PTSI 4/LD 36V AC/DC	E.19
1260000000		
1269960000	PT6 230/BUS	E.15
1310000000		
1313320010	CP DCDC 250W 24V 10A	A.57
1370000000		
1370040010	CP DC UPS 24V 40A	B.5
1370050010	CP DC UPS 24V 20A/10A	B.5
1950000000		
1952120000	PTS 4	E.16
1952130000	PTDS 4	E.16
1957620000	PT6	E.14
1960000000		
1961770000	PTSI 4/LD 400V AC	E.19

Order No.	Type	Page
4320000000		
4323210000	RKDG D11 PT6	E.12
4323220000	RKDG D15 PT6	E.12
4323230000	RKDG D13 PT6	E.12
4323240000	DG DO PT6	E.12
4324010000	RKDG D17 PT6	E.12
4329610000	RKDG D9 PT6	E.12
8570000000		
8575260000	CP NT 36W 24V 1.5A	D.4
8575270000	CP NT 72W 24V 3A	D.4
8575280000	CP NT 144W 24V 6A	D.5
8575300000	CP NT 192W 24V 8A	D.5
8575310000	CP NT 264W 24V 11A	D.6
8575320000	CP NT 432W 24V 18A	D.6
8610000000		
8618890000	WGS 24Vdc 1,6A	C.4
8618910000	WGS 24Vdc 3,15A	C.4
8618930000	WGS 24Vdc 6,3A	C.5
8618940000	WGS 24Vdc 8,0A	C.5
8620000000		
8621010000	WGZ 24VDC 8,0A	C.5
8621020000	WGZ 24Vdc 6,3A	C.5
8621030000	WGZ 24Vdc 3,15A	C.4
8621040000	WGZ 24Vdc 1,6A	C.4
8628620000	CP NT3 250W 24V 10A	D.7
8628630000	CP NT3 400W 24V 15A	D.7
8628650000	CP NT3 500W 24V 20A	D.8
8628660000	CP NT3 600W 24V 25A	D.8
8628670000	CP NT3 750W 24V 30A	D.9
8628680000	CP NT3 1000W 24V 40A	D.9
8700000000		
8708660000	CP SNT 70W 24V 3A	A.28
8708670000	CP SNT 120W 24V 5A	A.29
8708680000	CP SNT 250W 24V 10A	A.30
8708700000	CP SNT3 250W 24V 10A	A.34
8708710000	CP SNT3 500W 24V 20A	A.35
8708730000	CP SNT3 1000W 24V 40A	A.36
8710000000		
8710270000	WGS 24Vdc 0.5...5A	C.6
8710620000	CP DM 10	A.37
8720000000		
8727630000	WGZ 24Vdc 0.5...5A	C.6
8730000000		
8734580000	Schuko TS35	E.24
8739140000	CP SNT 48W 24V 2A	A.43
8750000000		
8754960000	CP SNT 25W 5V 5A	A.41
8754970000	CP SNT 48W 12V 4A	A.42
8760000000		
8768650000	CP DM 20	A.37
8770000000		
8778870000	CP SNT 500W 24V 20A	A.31
8860000000		
8862730000	CP SNT3 120W 24V 5A	A.33
8862780000	CP SNT 1000W 24V 40A	A.32
8870000000		
8879230000	CP SNT 48W 48V 1A	A.44
8950000000		
8951330000	CP M SNT 70W 24V 3A	A.5
8951330010	CP M SNT 70W 24V 3A	A.5
8951340000	CP M SNT 120W 24V 5A	A.5
8951340010	CP M SNT 120W 24V 5A	A.5
8951350000	CP M SNT 180W 24V 7,5A	A.6
8951350010	CP M SNT 180W 24V 7,5A	A.6
8951360000	CP M SNT 250W 24V 10A	A.6
8951360010	CP M SNT 250W 24V 10A	A.6
8951370000	CP M SNT 500W 24V 20A	A.7
8951370010	CP M SNT 500W 24V 20A	A.7
8951380000	CP M SNT 1000W 24V 40A	A.7
8951380010	CP M SNT 1000W 24V 40A	A.7
8951390000	CP M SNT3 120W 24V 5A	A.8
8951390010	CP M SNT3 120W 24V 5A	A.8

Order No.	Type	Page
8951400000	CP M SNT3 250W 24V 10A	A.8
8951400010	CP M SNT3 250W 24V 10A	A.8
8951410000	CP M SNT3 500W 24V 20A	A.9
8951410010	CP M SNT3 500W 24V 20A	A.9
8951420000	CP M SNT3 1000W 24V 40A	A.9
8951420010	CP M SNT3 1000W 24V 40A	A.9
9910000000		
9916250024	CP SNT 300W 24V 12.5A	A.50
9917790324	CP-SNT 380-480VAC/24V	A.51
9918840024	CP SNT 12W 24V 0.5A	A.45
9919371212	CP DCDC 50W 12V 3A	A.53
9919371215	CP DCDC 50W 15V 3A	A.53
9919371224	CP DCDC 50W 22-24V 2A	A.53
9919372405	CP DCDC 50W 5V 8A	A.54
9919372412	CP DCDC 50W 12V 3A	A.54
9919372415	CP DCDC 50W 15V 3A	A.52
9919372424	CP DCDC 50W 22-24V 2A	A.52
9920000000		
9925340005	CP SNT 160W 5V 8A	A.49
9925340012	CP SNT 160W 12-15V 8A	A.49
9925340024	CP SNT 160W 24-28V 6.5A	A.48
9925340048	CP SNT 160W 48V 3.5A	A.48
9927480005	CP SNT 55W 5V 3A	A.47
9927480012	CP SNT 55W 12-15V 3A	A.47
9927480024	CP SNT 55W 24-28V 2.3A	A.46
9927480048	CP SNT 55W 48V 1.04A	A.46
9928890005	CP SNT 24W 5V 2A	A.40
9928890012	CP SNT 24W 12V 1.5A	A.39
9928890015	CP SNT 24W 15V 1.5A	A.39
9928890024	CP SNT 24W 24V 1A	A.38
9928890028	CP SNT 24W 28V 1A	A.38