

Power supplies

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Overview of power supply modules

connectPower 1ph – WAVEpower



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

connectPower 1ph – ECOLINE



- Single-phase switched-mode power supply modules
- Compact form
- Metal housing
- Power category 70 ... 500 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

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 3ph – ECOLINE



- 3-phase switched-mode power supply modules
- Compact form
- Metal housing
- Power category 250 ... 1000 W
- International approvals

connectPower 3ph



- 3-phase switched-mode power supply modules
- Metal housing
- Power category 300 W with active PFC
- Up to 5 devices can be directly connected in parallel
- Professional display and processing of all relevant signal states
- International approvals

Diode modules – ECOLINE

- 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

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

UPS control unit

- Uninterruptible power supplies
- Battery control module
- Ideal for charging 12 V and 24 V batteries
- Professional display and processing of all relevant signal states
- International approvals

DC/DC converters – connectPower

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

compactPower 3ph – unregulated power supplies

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

WAVEGUARD

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

Introduction

Transformers and power supplies are important links in the energy supply chain of automation systems. They form the heart of each and every electrical cabinet. 24 V has become established as a control voltage throughout the world, supplying power to all manner of electrical subassemblies. Other voltages are still also being used to power user applications. Careful consideration must be given to choosing the correct power supplies as this is decisive for the connected components to function reliably.

Power supply units always consist of a transformer, which converts an AC voltage into a different AC voltage to meet application requirements.

A rectifier converts the AC voltage on the secondary side into a pulsating DC voltage, which is smoothed by means of a filter circuit.

The output voltage of stabilised power supply units is kept constant by means of a stabilising unit.

In use all over the world

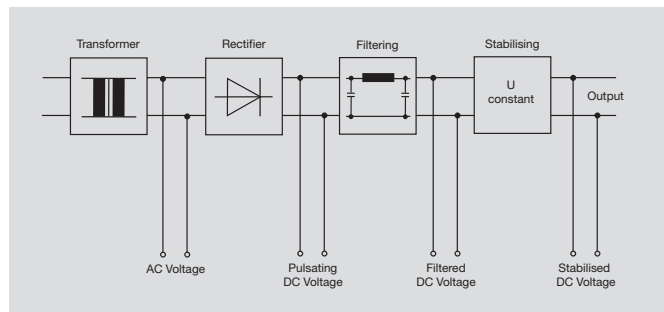
Power supplies from Weidmüller have internationally recognised approvals endorsing their suitability for use in widely varying applications all over the world. They are used in mechanical engineering, in industrial automation, in systems engineering and in the power supply industry, in production lines and in building technology.

Temperature range

The power loss constantly produced by the power supplies is converted into heat. This heat is dissipated via a heat sink and the surface of the housing. Depending on the module, Weidmüller power supplies are suitable for use in ambient temperatures up to 60 °C. The device to be installed is selected taking the prevailing ambient temperatures into consideration.

Compact designs

Due to their small footprint, Weidmüller's power supplies are also suitable for use in confined spaces. That saves space in electrical cabinets and reduces costs!



Weidmüller power supplies have proven themselves over many years in the supply of power to electrical subassemblies. They carry the CE mark and meet the requirements contained in the standards EN 61000-6-2.

As a result, they are suitable for use in industry, small businesses and residential areas. Their performance capabilities have also been proven in harsh environments.

Weidmüller can provide industry-standard power supplies and supplementary components:

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

Standards and approvals

Standard/Approval	Description
DIN EN 50178 DIN VDE 0160	Electronic equipment for use in power installations
DIN EN 61558	Safety of power transformers, power supply units and similar
DIN EN 60950 IEC 950 DIN VDE 0805	Safety of information technology equipment
DIN EN 60742 DIN VDE 0550 part 1	Specifications for small transformers
DIN VDE 0550 part 3	Particular requirements for isolating and control transformers
DIN VDE 0570	Specification for safety isolating transformers
DIN VDE 0106 part 101	Basic specifications for safe isolation in electrical equipment
DIN VDE 0113 part 1	Electrical equipment of machines
DIN IEC 68	Basic environmental test procedures
IEC 38	Supplementary notes relating to status of international standards and European harmonisation of mains voltages 230/400 V
DIN EN 61131-2	Programmable logic controllers – equipment requirements and tests
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
73/23/EC	Electrical equipment for use within specific voltage limits (Low Voltage Directive)
89/336/EC	Electromagnetic compatibility (EMC Directive)
98/37/EC	Safety of machines (directive covering mechanical equipment)

E

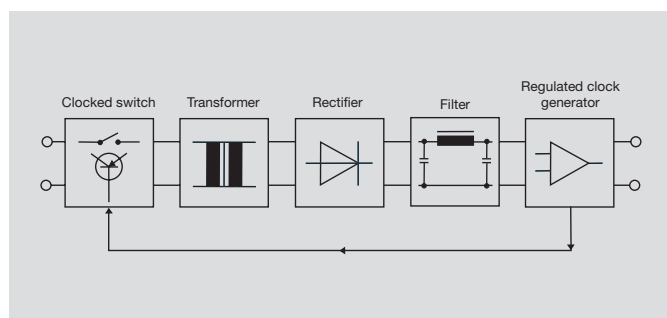
Switch-mode power supplies



Primary switch-mode power supplies connectPower

Thanks to the wide range of inputs (85 V AC to 265 V AC), the connectPower range of switch-mode power supplies is suitable for a wide variety of applications. The devices are interference-suppressed (in accordance with DIN EN 55022 Class B) and fulfil safety extra-low voltage (SELV) requirements.

Equipped with an electronic short-circuit feedback control on the output side, the primary switch-mode power supplies are rated between 12 W and 1000 W. The power supplies are suitable for both industrial and building automation.



Method of operation

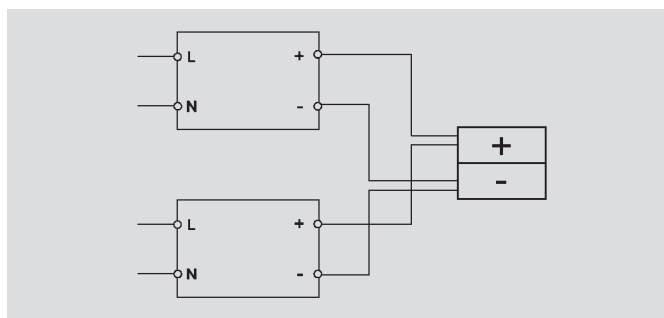
Primary switch-mode power supplies are distinguished by a high degree of efficiency and also by their compact dimensions and moderate generation of heat. The mains voltage is rectified directly. The rectified voltage is then chopped with a higher frequency than that of the mains frequency. A transformer – which can be quite small due to the high switching frequency – converts the voltage with the switching frequency to the required value.

The voltage is now rectified and smoothed by a filter. This regulator control itself is carried out by means of pulse-width modulation. The on and off times of the chopper transformers are regulated to ensure that the output voltage remains stable.

Power distribution and redundancy

To increase performance, or for redundancy purposes, switch-mode power supplies from Weidmüller can be connected in parallel. Two techniques are available: an active and a passive power distribution. Active power distribution requires more complex switching. The advantage is the exact power distribution and uniform device loading.

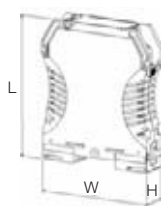
Requiring less sophisticated switching, passive power distribution results in lower costs, but also in a load-dependent characteristic curve and less exact power distribution. Before connecting in parallel, the output voltages of the devices must be adjusted exactly ($\pm 100 - 200$ mV).



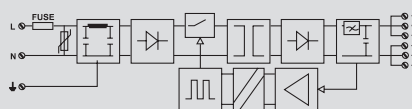
Power factor correction (PFC)

Power factor correction ensures that the mains current drawn is sinusoidal. One positive side-effect is the regulation of the power factor to approx. 1.

connectPower single phase WAVEPOWER



CP SNT 12 W 24 V 0.5 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

85...265 V AC, 120...300 V DC
260 mA @ 115 V AC; 180 mA @ 230 V AC
50/ 60 Hz
2 A slow-blow fuse (internal)
Varistor

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option

24 V DC
0.5 A
12 W
0.1 %
Surge / thermal cut-out
Varistor
30 ms @ 115 V AC / 80 ms @ 230 V AC
0.6 %
no

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Approvals

-20 °C...+50 °C
-40 °C...+85 °C
80 %
green LED
EN 50178, EN 60950, IEC950
IEC 61000-6 /-2, -3
no
CSA;UL;CE;

Clamping range (rating- / min. / max.)

mm²

Length x width x height

mm

Screw connection

2.5 / 0.5 / 2.5

112.4 x 22.5 x 92.4

Note

Ordering data

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

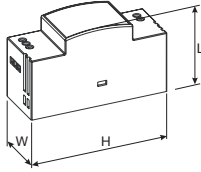
Note

Accessories

Note

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

Switch-mode power supplies

connectPower single phase
INSTAPOWER

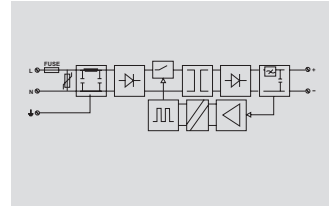
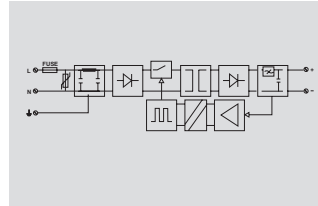
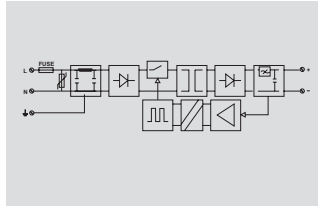
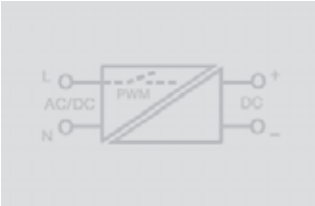
CP SNT 24 W 28 V 1 A



CP SNT 24 W 24 V 1 A



CP SNT 24 W 15 V 1.5 A



Technical data

Input

Input voltage
Input current
Input frequency
Making current limit
Input fuse
Surge protection

85...265 V AC, 120...300 V DC
460 mA @ 115 V AC; 250 mA @ 230 V AC
50/ 60 Hz
Thermistor
2 A slow-blow fuse (internal)
Varistor

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
max. capacitance at output

28 V DC
1 A
28 W
< 2 %
Surge / thermal cut-out
Varistor
35 ms @ 115 V AC / 160 ms @ 230 V AC
0.5 %
8000 µF

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Standards
Approvals
EMC standards

-20 °C...+50 °C
-40 °C...+85 °C
78 %
EN 50178, EN 60950, IEC950
CSA / CE / cULus
EN 61000-6 /-2, -3

85...265 V AC, 120...300 V DC
460 mA @ 115 V AC; 250 mA @ 230 V AC
50/ 60 Hz
Thermistor
2 A slow-blow fuse (internal)
Varistor

24 V DC
1 A
24 W
< 2 %
Surge / thermal cut-out
Varistor
35 ms @ 115 V AC / 160 ms @ 230 V AC
0.5 %
8000 µF

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

-20 °C...+50 °C
-40 °C...+85 °C
78 %
EN 50178, EN 60950, IEC950
CSA / CE / cULus
EN 61000-6 /-2, -3

85...265 V AC, 120...300 V DC
460 mA @ 115 V AC; 250 mA @ 230 V AC
50/ 60 Hz
Thermistor
2 A slow-blow fuse (internal)
Varistor

15 V DC
1.5 A
23 W
< 2 %
Surge / thermal cut-out
Varistor
35 ms @ 115 V AC / 160 ms @ 230 V AC
0.5 %
8000 µF

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

-20 °C...+50 °C
-40 °C...+85 °C
78 %
EN 50178, EN 60950, IEC950
CSA / CE / cULus
EN 61000-6 /-2, -3

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Note

Screw connection

4 / 0.08 / 4
62.5 x 52 x 90.5
Derating: 33% @ 60°C

Screw connection

4 / 0.08 / 4
62.5 x 52 x 90.5
Derating: 33% @ 60°C

Screw connection

4 / 0.08 / 4
62.5 x 52 x 90.5
Derating: 33% @ 60°C

Ordering data

Type	(Qty.=1)	Order No.
CP SNT 24W 28V 1A		9928890028

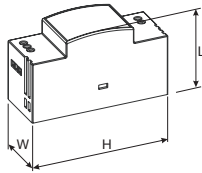
Type	(Qty.=1)	Order No.
CP SNT 24W 24V 1A		9928890024

Type	(Qty.=1)	Order No.
CP SNT 24W 15V 1.5A		9928890015

Note

Accessories

Note

connectPower single phase
INSTAPOWER

CP SNT 24 W 12 V 1.5 A



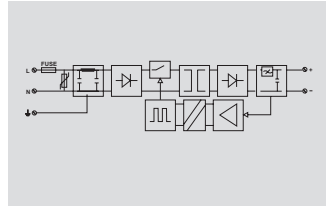
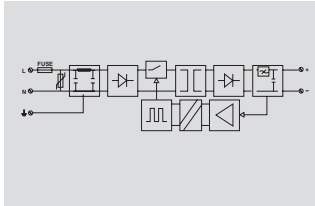
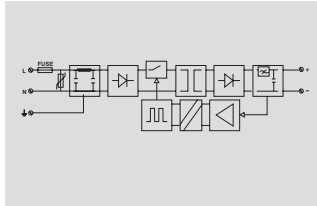
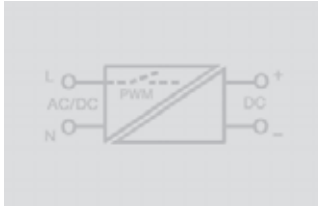
CP SNT 24 W 5 V 2 A



CP SNT 25 W 5 V 5 A



n



Technical data

Input

Input voltage
Input current
Input frequency
Making current limit
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection

Surge protection
Mains failure bridge-over time
Control at 10...100% load
max. capacitance at output

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Standards
Approvals
EMC standards

85...265 V AC, 120...300 V DC
460 mA @ 115 V AC; 250 mA @ 230 V AC
50/ 60 Hz
Thermistor
2 A slow-blow fuse (internal)
Varistor

12 V DC
1.5 A
18 W
< 2 %
Surge / thermal cut-out

Varistor
35 ms @ 115 V AC / 160 ms @ 230 V AC
0.5 %
8000 µF

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

-20 °C...+50 °C
-40 °C...+85 °C
78 %
EN 50178, EN 60950, IEC950
CSA / CE / cULus
EN 61000-6 / -2, -3

Screw connection

4 / 0.08 / 4
62.5 x 52 x 90.5
Derating: 33% @ 60°C

85...265 V AC, 120...300 V DC
460 mA @ 115 V AC; 250 mA @ 230 V AC
50/ 60 Hz
Thermistor
2 A slow-blow fuse (internal)
Varistor

5 V DC
2 A
10 W
< 2 %
Surge / thermal cut-out

Varistor
35 ms @ 115 V AC / 160 ms @ 230 V AC
0.5 %
8000 µF

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

-20 °C...+50 °C
-40 °C...+85 °C
78 %
EN 50178, EN 60950, IEC950
CSA / CE / cULus
EN 61000-6 / -2, -3

Screw connection

4 / 0.08 / 4
62.5 x 52 x 90.5
Derating: 33% @ 60°C

85...264 V AC / 110...370 V DC
500 mA for rated load @ 230 V AC
50/ 60 Hz
yes
Fusible link 2.5 A (T) / 250 V

4...8 V DC (adjustable with potentiometer)
5 A
25 W
120 mV_{ss}
105%...150% I_{konst} of max. output power,
automatic restart
Varistor
11 ms @ 115 V AC / 50 ms @ 230 V AC
1 %
8000 µF

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

-10 °C...+70 °C (derating from 55 °C)
-20 °C...+85 °C
70 %
EN 60950 (SELV); EN 50178 (PELV)
CE / UL 508 / cURus 60950 / GS
EN 55011 / EN 55022 / DIN EN 61000-3-2/-
3EN 61000-6-1, 2, 3, 4

Screw connection

2.5 / 0.5 / 4
62.5 x 70 x 90.5

Ordering data

Type	(Qty.=1)	Order No.
CP SNT 24W 12V 1.5A		9928890012

Type	(Qty.=1)	Order No.
CP SNT 24W 5V 2A		9928890005

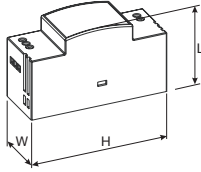
Type	(Qty.=1)	Order No.
CP SNT 25W 5V 5A		8754960000

Note

Accessories

Note

Switch-mode power supplies

connectPower single phase
INSTAPOWER

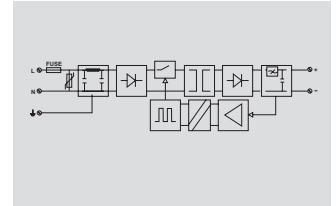
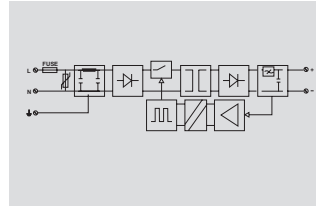
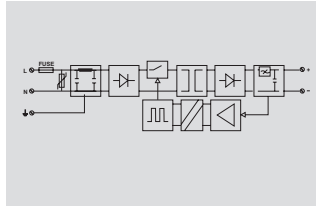
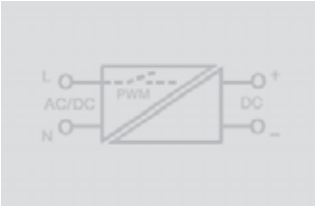
CP SNT 48 W 12 V 4 A



CP SNT 48 W 24 V 2 A



CP SNT 48 W 48 V 1 A



Technical data

Input

Input voltage
Input current
Input frequency
Making current limit
Input fuse
Surge protection

85...264 V AC / 110...370 V DC
500 mA for rated load @ 230 V AC
50/ 60 Hz
yes
Fusible link 2.5 A (T) / 250 V

85...264 V AC / 110...370 V DC
500 mA for rated load @ 230 V AC
50/ 60 Hz
yes
Fusible link 2.5 A (T) / 250 V

85...264 V AC / 110...370 V DC
500 mA for rated load @ 230 V AC
50/ 60 Hz
yes
Fusible link 2.5 A (T) / 250 V

Output

Output voltage

Output current
max. output power
max. residual ripple
Overload protection

9...15 V DC (adjustable with potentiometer)

4 A
48 W
120 mV_{ss}
105%...150% I_{konst} of max. output power,
automatic restart
Varistor
11 ms @ 115 V AC / 50 ms @ 230 V AC
1%
8000 µF

15...28 V DC (can be adjusted with
potentiometer)
2 A
48 W
120 mV_{ss}
105%...150% I_{konst} of max. output power,
automatic restart
Varistor
11 ms @ 115 V AC / 50 ms @ 230 V AC
1%
8000 µF

46...55 V DC (adjustable with potentiometer)

1 A
48 W
120 mV_{ss}
105%...150% I_{konst} of max. output power,
automatic restart
Varistor
11 ms @ 115 V AC / 50 ms @ 230 V AC
1%
8000 µF

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Standards
Approvals
EMC standards

-10 °C...+70 °C (derating from 55 °C)
-20 °C...+85 °C
75 %
EN 60950 (SELV); EN 50178 (PELV)
CE / UL 508 / cURus 60950 / GS
EN 55011 / EN 55022 / DIN EN 61000-3-2/-
3EN 61000-6-1, 2, 3, 4

-10 °C...+70 °C (derating from 55 °C)
-20 °C...+85 °C
78 %
EN 60950 (SELV); EN 50178 (PELV)
CE / UL 508 / cURus 60950 / GS
EN 55011 / EN 55022 / DIN EN 61000-3-2/-
3EN 61000-6-1, 2, 3, 4

-10 °C...+70 °C (derating from 55 °C)
-20 °C...+85 °C
50 %
EN 60950 (SELV); EN 50178 (PELV)
CE / UL 508 / cURus 60950 / GS
EN 55011 / EN 55022 / DIN EN 61000-3-2/-
3EN 61000-6-1, 2, 3, 4

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Screw connection

2.5 / 0.5 / 4
62.5 x 70 x 90.5

Screw connection

2.5 / 0.5 / 4
62.5 x 70 x 90.5

Screw connection

2.5 / 0.5 / 4
62.5 x 70 x 90.5

Note

Ordering data

Type	(Qty.=1)	Order No.
CP SNT 48W 12V 4A		8754970000

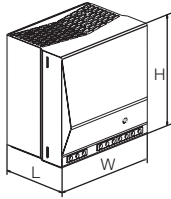
Type	(Qty.=1)	Order No.
CP SNT 48W 24V 2A		8739140000

Type	(Qty.=1)	Order No.
CP SNT 48W 48V 1A		8879230000

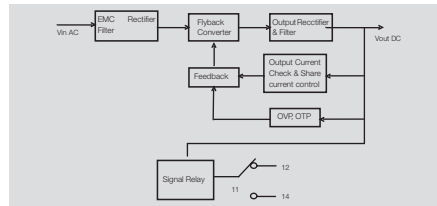
Note

Accessories

Note

connectPower single phase
ECOLINE

CP SNT 70 W 24 V 3 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

85...264 V AC / 110...370 V DC
2 A @ 100...240 V AC
50/ 60 Hz
Fusible link 2.5 A (T) / 250 V
Varistor

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option
Status relay / Change-over contact

24...28 V DC (adjustable via potentiometer)
3 A
72 W
< 100 mV_{ss} / bandwidth 20 MHz
105%...130% I_{konst} of max. output power, automatic restart
29...34 V
10 ms @ 115 V AC / 20 ms @ 230 V AC
< 2 %
recommended with diode module
250 V AC (max. 30 V DC) / 1 A

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output

0.5 kV AC
1.5 kV AC
3 kV AC

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Mounting position horizontal
Installation advice
Weight
Approvals

-10 °C...+55 °C
-20 °C...+85 °C
80 %
green LED
EN 60950 (SELV)
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
on mounting rail TS 35
Clearance: above/below ≥ 3 cm
0.55 kg
CE / cULus 508 / cULus 60950

Clamping range (rating- / min. / max.)
Length x width x height

mm²
mm

Screw connection

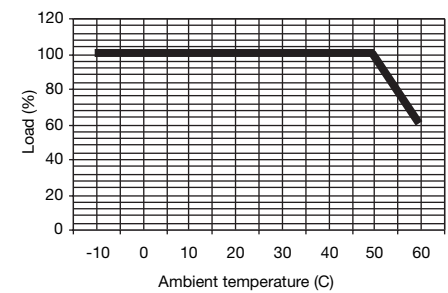
2.5 / 0.13 / 4
110 x 55.5 x 125

Note

For redundant operation or for maintaining fault signalling function - operate with diode module only.

Derating curve

Output load/ambient temperature



Ordering data

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

Note

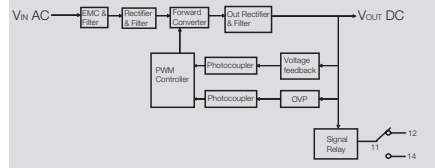
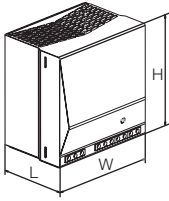
Accessories

Note

Switch-mode power supplies

connectPower single phase
ECOLINE

CP SNT 120 W 24 V 5 A



E

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
max. output power	120 W
max. residual ripple	< 100 mV _{ss} / bandwidth 20 MHz
Overload protection	105%...130% I _{konst} of max. output power, automatic restart
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 / Change-over contact	250 V AC (max. 30 V DC) / 1 A

Insulation coordination

Electrical isolation, output-earth	0.5 kV AC
Electrical isolation, input-earth	1.5 kV AC
Electrical isolation, input-output	3 kV AC

General data

Operating temperature	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	84 %
Status indication	green LED
Standards	EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position horizontal	on mounting rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	0.65 kg
Approvals	CE / cULus 508 / cULus 60950

Clamping range (rating- / min. / max.)

mm²

Length x width x height

mm

Note

Screw connection

2.5 / 0.13 / 4

110 x 65.5 x 125

For redundant operation or for maintaining fault signalling function - operate with diode module only.

Ordering data

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

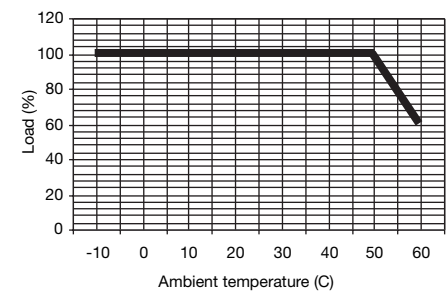
Note

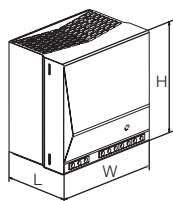
Accessories

Note

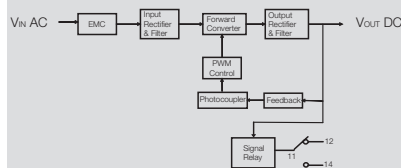
Derating curve

Output load/ambient temperature



connectPower single phase
ECOLINE

CP SNT 250 W 24 V 10 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option
Status relay / Change-over contact

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Mounting position horizontal
Installation advice
Weight
Approvals

88...132 V AC/176...264 V AC selectable; 250...370 V DC
3.6 A @ 115 V AC / 2 A @ 230 V AC
50/ 60 Hz
Fusible link 5 A (T) / 250 V
Varistor

24...28 V DC (adjustable via potentiometer)
0.1...10 A
240 W
< 100 mV_{ss} / bandwidth 20 MHz
105%...130% I_{kons} of max. output power, automatic restart
30...36 V
10 ms @ 115 V AC / 15 ms @ 230 V AC
< 2 %
recommended with diode module
250 V AC (max. 30 V DC) / 1 A

0.5 kV AC
1.5 kV AC
3 kV AC

-10 °C...+55 °C
-20 °C...+85 °C
84 % @ 230 V AC
green LED
EN 60950 (SELV)
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
on mounting rail TS 35
Clearance: above/below ≥ 3 cm
1.6 kg
CE / cULus 508 / cULus 60950

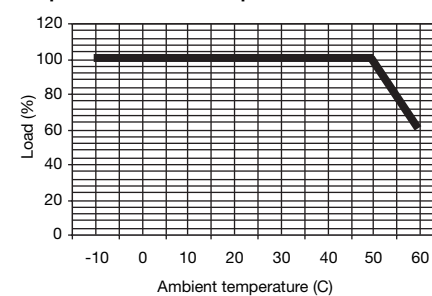
Screw connection

4 / 0.13 / 6
110 x 125.5 x 125

For redundant operation or for maintaining fault signalling function - operate with diode module only.

Derating curve

Output load/ambient temperature



Ordering data

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

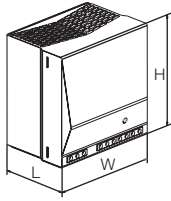
Note

Accessories

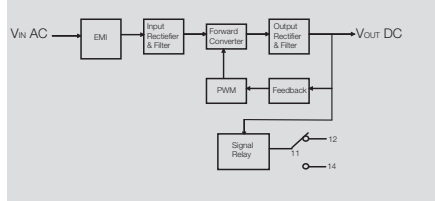
Note

Switch-mode power supplies

connectPower single phase ECOLINE



CP SNT 500 W 24 V 20 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option
Status relay / Change-over contact

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Mounting position horizontal
Installation advice
Weight
Approvals

88...132 V AC/176...264 V AC selectable; 250...370 V DC
9 A @ 115 V AC / 6 A @ 230 V AC
50/ 60 Hz
Fusible link 10 A (T) / 250 V
Varistor

24...28 V DC (adjustable via potentiometer)
2...20 A @ 200...240 V AC; 2...16 A @ 100...120 V AC
480 W
< 100 mV_{ss} / bandwidth 20 MHz
105%...130% I_{kons} of max. output power, automatic restart
30...36 V
10 ms @ 115 V AC / 15 ms @ 230 V AC
< 2 %
recommended with diode module
250 V AC (max. 30 V DC) / 1 A

0.5 kV AC
1.5 kV AC
3 kV AC

-10 °C...+55 °C
-20 °C...+85 °C
86 %
green LED
EN 60950 (SELV)
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
on mounting rail TS 35
Clearance: above/below ≥ 3 cm
2 kg
CE / cULus 508 / cULus 60950

Screw connection

4 / 0.13 / 6
110 x 227.5 x 125

For redundant operation or for maintaining fault signalling function - operate with diode module only.

Ordering data

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

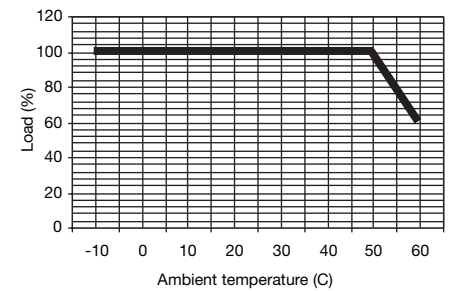
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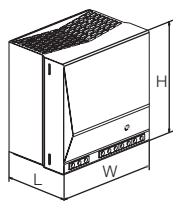
Accessories

Note

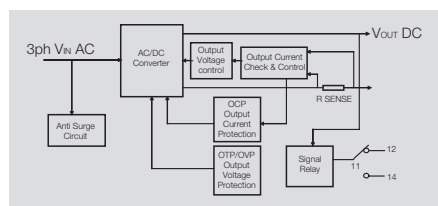
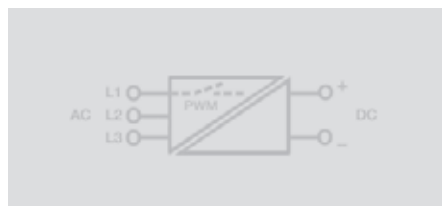
Derating curve

Output load/ambient temperature



connectPower 3-phase
ECOLINE

CP SNT3 250 W 24 V 10 A



Technical data

Input	
Input voltage	3x400 V AC / 340...575 V AC
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
max. output power	250 W
max. residual ripple	< 100 mV _{ss} / bandwidth 20 MHz
Overload protection	105%...130% I _{konst.} of max. output power, automatic restart
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 / Change-over contact	250 V AC (max. 30 V DC) / 1 A
Insulation coordination	
Electrical isolation, output-earth	0.5 kV AC
Electrical isolation, input-earth	1.5 kV AC
Electrical isolation, input-output	3 kV AC
General data	
Operating temperature	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	88 % @ 400 V AC
Status indication	green LED
Standards	EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position horizontal	on mounting rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	1.5 kg
Approvals	CE / cULus 508 / cURus 60950

Screw connection	
Clamping range (rating- / min. / max.)	4 / 0.13 / 6
Length x width x height	110 x 125.5 x 125
Note	
For redundancy or correct function of the signal relays use a diode modul	

Ordering data

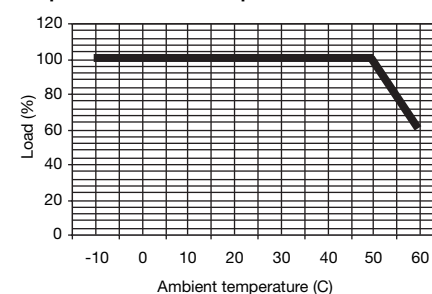
Type	Qty.	Order No.
CP SNT3 250W 24V 10A	1	8708700000
Note		

Accessories

Note	
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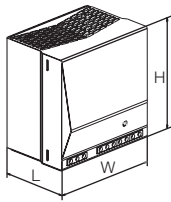
Derating curve

Output load/ambient temperature

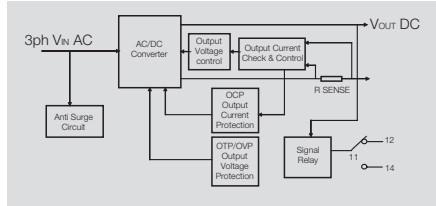
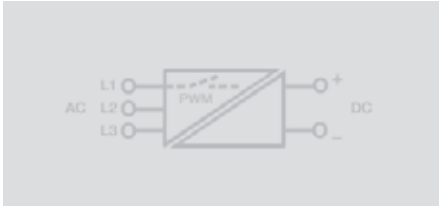


Switch-mode power supplies

connectPower 3-phase ECOLINE



CP SNT3 500 W 24 V 20 A



E

Technical data

Input

Input voltage	3x400 V AC / 340...575 V AC
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
max. output power	480 W
max. residual ripple	< 100 mV _{ss} / bandwidth 20 MHz
Overload protection	105%...130% I _{konst.} of max. output power, automatic restart
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 / Change-over contact	250 V AC (max. 30 V DC) / 1 A

Insulation coordination

Electrical isolation, output-earth	0.5 kV AC
Electrical isolation, input-earth	1.5 kV AC
Electrical isolation, input-output	3 kV AC

General data

Operating temperature	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	88 %
Status indication	green LED
Standards	EN 60950 (SELV)
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position horizontal	on mounting rail TS 35
Installation advice	Clearance: above/below ≥ 3 cm
Weight	3 kg
Approvals	CE / cULus 508 / cURus 60950

Clamping range (rating- / min. / max.)

mm²

Length x width x height

mm

Note

Screw connection

4 / 0.13 / 6

110 x 227.5 x 125

For redundancy or correct function of the signal relays use a diode modul

Ordering data

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

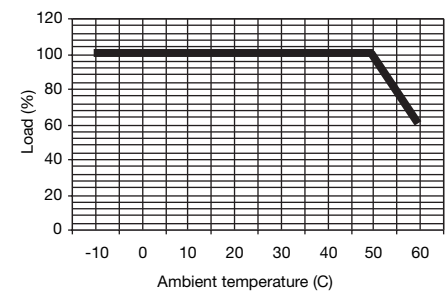
Note

Accessories

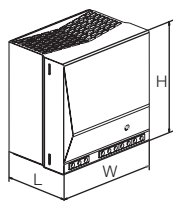
Note

Derating curve

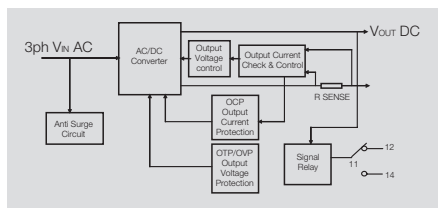
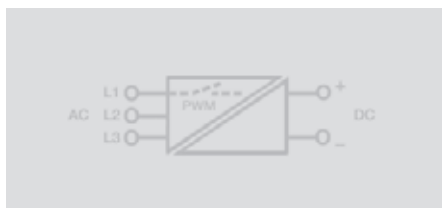
Output load/ambient temperature



connectPower 3-phase ECOLINE



CP SNT3 1000 W 24 V 40 A



Technical data

Input		
Input voltage		3x400 V AC / 340...575 V AC (450...800 V DC)
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
max. output power		960 W
max. residual ripple		< 100 mV _{ss} / bandwidth 20 MHz
Overload protection		105%...130% I _{konst.} of max. output power, automatic restart
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 / Change-over contact		250 V AC (max. 30 V DC) / 1 A
Insulation coordination		
Electrical isolation, output-earth		0.5 kV AC
Electrical isolation, input-earth		1.5 kV AC
Electrical isolation, input-output		3 kV AC
General data		
Operating temperature		-10 °C...+55 °C
Storage temperature		-20 °C...+85 °C
Degree of efficiency at max. load		88 %
Status indication		green LED
Standards		EN 60950 (SELV)
EMC standards		EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
Mounting position horizontal		on mounting rail TS 35
Installation advice		Clearance: above/below ≥ 3 cm
Weight		3.5 kg
Approvals		CE / cULus 508 / cURus 60950
Screw connection		
Clamping range Input (rating-/min./max)	mm ²	4 / 0.1 / 6
Clamping range Output (rating-/ min./max)	mm ²	10 / 0.3 / 16
Length x width x height	mm	125 x 280 x 150
Note		
Clamping range identical for input and signalling contact		

Ordering data

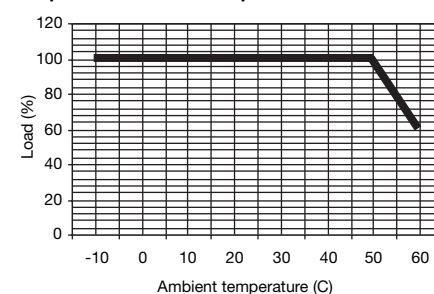
Type	Qty.	Order No.
CP SNT3 1000W 24V 40A	1	8708730000
Note		

Accessories

Note	
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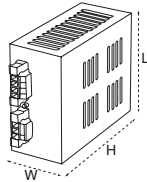
Derating curve

Output load/ambient temperature



Switch-mode power supplies

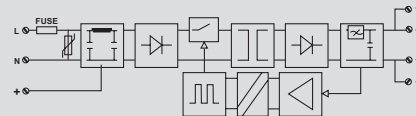
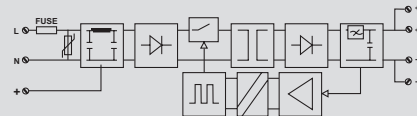
connectPower single phase



CP SNT 55 W 48 V 1.04 A



CP SNT 55 W 24-28 V 2.3 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

General data

Operating temperature/Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Approvals

85...265 V AC, 120...300 V DC
1.1 A @ 115 V AC; 0.55 A @ 230 V AC
50/ 60 Hz
2 A slow-blow fuse (internal)
Varistor

48 V DC
1.04 A
50 V
< 50 mV RMS
Surge / thermal cut-out
Varistor
30 ms @ 115 V AC / 180 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

-20 °C...+40 °C / -40 °C...+85 °C
78 %
green LED
EN 50178, EN 60950, IEC950
IEC 61000-6 /-2, -3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
131 x 57 x 98
Derating: 2.1A/ 24V @ 50°C; 1.5A/ 24V @ 60°C

85...265 V AC, 120...300 V DC
1.1 A @ 115 V AC; 0.55 A @ 230 V AC
50/ 60 Hz
2 A slow-blow fuse (internal)
Varistor

24...28 V DC
2.3 A
55 V
< 50 mV RMS
Surge / thermal cut-out
Varistor
30 ms @ 115 V AC / 180 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

-20 °C...+40 °C / -40 °C...+85 °C
78 %
green LED
EN 50178, EN 60950, IEC950
IEC 61000-6 /-2, -3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
131 x 57 x 98
Derating: 2.1A/ 24V @ 50°C; 1.5A/ 24V @ 60°C

Ordering data

Type	Qty.	Order No.
CP SNT 55W 48V 1.04A	1	9927480048

Type	Qty.	Order No.
CP SNT 55W 24-28V 2.3A	1	9927480024

Note

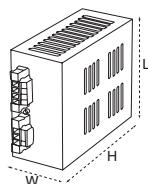
Accessories

Note

Bracket for wall mounting: 7920560000

Bracket for wall mounting: 7920560000

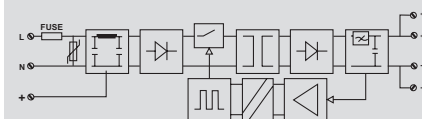
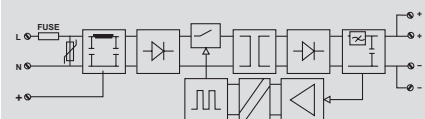
connectPower single phase



CP SNT 55 W 12-15 V 3 A



CP SNT 55 W 5 V 3 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

General data

Operating temperature/Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Approvals

85...265 V AC, 120...300 V DC
1.1 A @ 115 V AC; 0.55 A @ 230 V AC
50/ 60 Hz
2 A slow-blow fuse (internal)
Varistor

12...15 V DC
3 A
36 V
< 50 mV RMS
Surge / thermal cut-out
Varistor
30 ms @ 115 V AC / 180 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

-20 °C...+40 °C / -40 °C...+85 °C
78 %
green LED
EN 50178, EN 60950, IEC950
IEC 61000-6 /-2, -3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
131 x 57 x 98
Derating: 2.1A/ 24V @ 50°C; 1.5A/ 24V @ 60°C

85...265 V AC, 120...300 V DC
1.1 A @ 115 V AC; 0.55 A @ 230 V AC
50/ 60 Hz
2 A slow-blow fuse (internal)
Varistor

5 V DC
3 A
15 V
< 50 mV RMS
Surge / thermal cut-out
Varistor
30 ms @ 115 V AC / 180 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

-20 °C...+40 °C / -40 °C...+85 °C
78 %
green LED
EN 50178, EN 60950, IEC950
IEC 61000-6 /-2, -3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
131 x 57 x 98
Derating: 2.1A/ 24V @ 50°C; 1.5A/ 24V @ 60°C

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Note

Ordering data

Type	Qty.	Order No.
CP SNT 55W 12-15V 3A	1	9927480012

Type	Qty.	Order No.
CP SNT 55W 5V 3A	1	9927480005

Note

Accessories

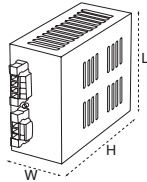
Note

Bracket for wall mounting: 7920560000

Bracket for wall mounting: 7920560000

Switch-mode power supplies

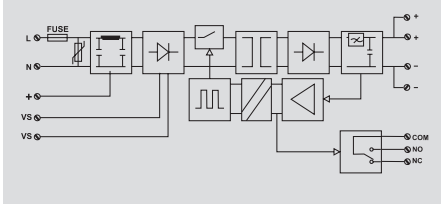
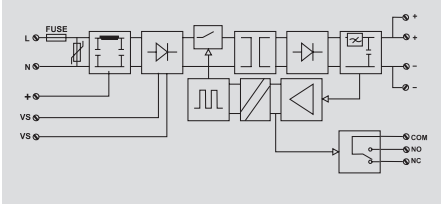
connectPower single phase



CP SNT 160 W 48 V 3.5 A



CP SNT 160 W 24-28 V 6.5 A



Technical data

Input	
Input voltage	
Input current	
Input frequency	
Input fuse	
Surge protection	
Output	
Output voltage	
Output current	
max. output power	
max. residual ripple	
Overload protection	
Surge protection	
Mains failure bridge-over time	
Control at 10...100% load	
Parallel connection option	
Insulation coordination	
Electrical isolation, output-earth	
Electrical isolation, input-earth	
Electrical isolation, input-output	
Electrical isolation, I/O rail	
General data	
Operating temperature/Storage temperature	
Degree of efficiency at max. load	
Status indication	
Standards	
EMC standards	
Power factor correction	
Approvals	

min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
2.9 A @ 115 V AC; 1.45A @ 230 V AC
50/ 60 Hz
6.3 A slow-blow fuse (internal)
Varistor
48 V DC
3.5 A
168 V
0.2 % RMS
Overcurrent and surge protection
Varistor
40 ms @ 115 V AC / 50 ms @ 230 V AC
1%
no
500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS
0 °C...+50 °C /-40 °C...+85 °C
85 %
green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
no
CSA;UL/UR;CE;

min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
2.9 A @ 115 V AC; 1.45A @ 230 V AC
50/ 60 Hz
6.3 A slow-blow fuse (internal)
Varistor
24...28 V DC
6.5 A
156 V
0.2 % RMS
Overcurrent and surge protection
Varistor
40 ms @ 115 V AC / 50 ms @ 230 V AC
1%
no
500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS
0 °C...+50 °C /-40 °C...+85 °C
85 %
green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
no
CSA;UL/UR;CE;

Clamping range (rating- / min. / max.)	mm²
Length x width x height	mm
Note	

Screw connection	
4 / 0.1 / 4	
175 x 57 x 127	
Derating: 10% @ 60°C	

Screw connection	
4 / 0.1 / 4	
175 x 57 x 127	
Derating: 10% @ 60°C	

Ordering data

Type	Qty.	Order No.
CP SNT 160W 48V 3.5A	1	9925340048
Note		

Type	Qty.	Order No.
CP SNT 160W 24-28V 6.5A	1	9925340024
Note		

Type	Qty.	Order No.
CP SNT 160W 24-28V 6.5A	1	9925340024
Note		

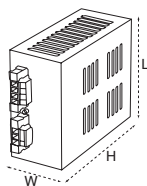
Accessories

Note

Bracket for wall mounting: 7920560000

Bracket for wall mounting: 7920560000

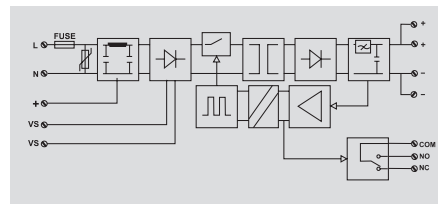
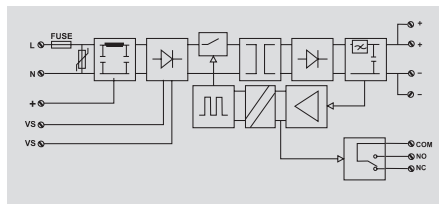
connectPower single phase



CP SNT 160 W 12-15 V 8 A



CP SNT 160 W 5 V 8 A



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

General data

Operating temperature/Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Approvals

min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
2.9 A @ 115 V AC; 1.45A @ 230 V AC
50/ 60 Hz
6.3 A slow-blow fuse (internal)
Varistor

12...15 V DC
8 A
96 W
0.2 % RMS
Overcurrent and surge protection
Varistor
40 ms @ 115 V AC / 50 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

0 °C...+50 °C / -40 °C...+85 °C
85 %
green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
175 x 57 x 127

Derating: 10% @ 60°C

min. 85/138 V AC, max. 195/250 V AC, typ. 115...230 V AC
2.9 A @ 115 V AC; 1.45A @ 230 V AC
50/ 60 Hz
6.3 A slow-blow fuse (internal)
Varistor

5 V DC
8 A
40 W
0.2 % RMS
Overcurrent and surge protection
Varistor
40 ms @ 115 V AC / 50 ms @ 230 V AC
1%
no

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

0 °C...+50 °C / -40 °C...+85 °C
85 %
green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
no
CSA;UL/UR;CE;

Screw connection

4 / 0.1 / 4
175 x 57 x 127

Derating: 10% @ 60°C

Ordering data

Type	Qty.	Order No.
CP SNT 160W 12-15V 8A	1	9925340012

Type	Qty.	Order No.
CP SNT 160W 5V 8A	1	9925340005

Note

Accessories

Note

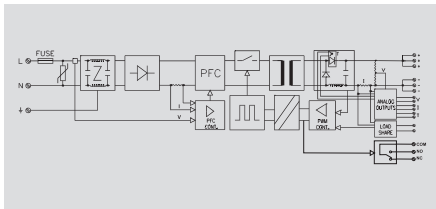
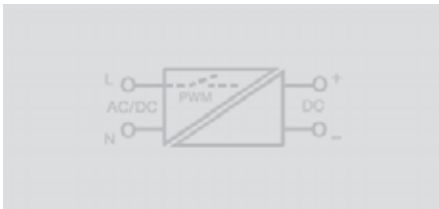
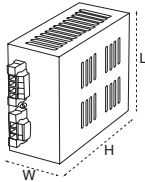
Bracket for wall mounting: 7920560000

Bracket for wall mounting: 7920560000

Switch-mode power supplies

connectPower single phase

CP SNT 300 W 24 V 12.5 A



E

Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

86...265 V AC, 100...200 V DC; typ 115...230 V AC
3.3 A @ 115 V AC; 1.65 A @ 230 V AC
50/ 60 Hz
Thermistor
Varistor

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option
Signalling delay
Monitoring function

Adjustable, 22-28 V DC
12.5 A
300 W
at 100 kHz: 2 mV_{ss}; at 120 Hz: 20 mV AC RMS
Overcurrent and surge protection
Varistor
40 ms @ 115 V AC / 40 ms @ 230 V AC
0.2 %
Yes, max. 5 devices, active current splitting
2 s
Output voltage, current, temperature

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

500 V RMS
1.5 kV RMS
3 kV RMS
4 kV RMS

General data

Operating temperature/Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Derating
Approvals

-15°C...+50°C (at 100% duty cycle) / -40 °C...+85 °C
80 %
Current limiting: yellow LED / Error: red LED / On: green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
PFC passive
Derating: 20% @ 60°C
CSA;UL/UR;CE;

Clamping range (rating- / min. / max.)

mm²

Length x width x height

mm

Note

Screw connection

4 / 0.1 / 4

101 x 240 x 155

Ordering data

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

Note

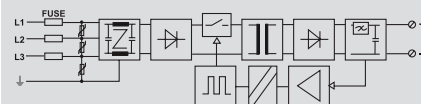
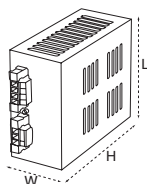
Accessories

Note

Bracket for wall mounting: 7920560000

connectPower 3-phase

CP-SNT 380-480 V AC/24 V



Technical data

Input

Input voltage
Input current
Input frequency
Input fuse
Surge protection

306... 550 V AC, typ.: 360...480 V AC
120 mA @ 360 V AC; 100 mA @ 230 V AC
50/ 60 Hz
3 x 1 A slow-blow fuse (internal)
Varistor

Output

Output voltage
Output current
max. output power
max. residual ripple
Overload protection
Surge protection
Mains failure bridge-over time
Control at 10...100% load
Parallel connection option
Overload protection

24 V DC
2.3 A
55 W
< 50 mV RMS
Surge / thermal cut-out
Varistor
120 ms @ 360 V AC / 120 ms @ 480 V AC
1%
no
Surge / thermal cut-out

Insulation coordination

Electrical isolation, output-earth
Electrical isolation, input-earth
Electrical isolation, input-output
Electrical isolation, I/O rail

500 V RMS
1.5 kV RMS
3 kV RMS
3 kV RMS

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Status indication
Standards
EMC standards
Power factor correction
Approvals

0 °C...+50 °C
-40 °C...+85 °C
85 %
green LED
EN 50178, EN 60950, IEC950
EN 55011, EN 55022, EN 55024, EN 61000-6-2, 3
no
CSA;UL/UR;CE;

Clamping range (rating- / min. / max.)

mm²

Length x width x height

mm

Note

Screw connection

4 / 0.1 / 4

168 x 60 x 108

Derating: 10% @ 85°C

Ordering data

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

Note

Accessories

Note

Bracket for wall mounting: 7920560000

Diode modules



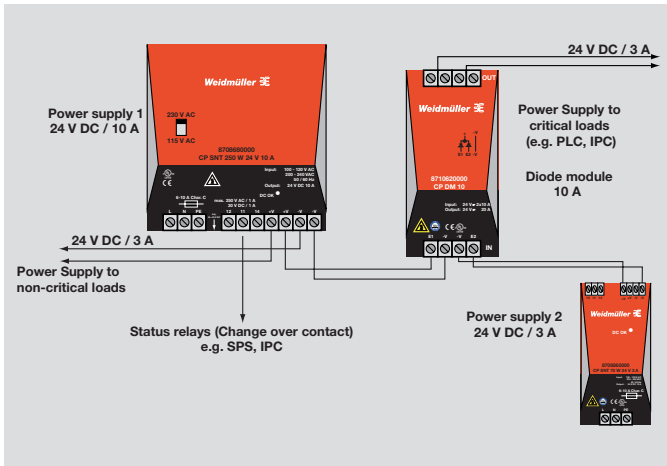
Power supplies to critical loads

As a rule, actuators require relative high amounts of current, and a modern power supply concept should envisage supplying them separately. It is also recommended that a second power supply unit with lower output be used to supply the controls (for example, PLC, IPC). Together with a diode module, doubling up guarantees that the controls are constantly supplied with power should one of the devices fail; thus ensuring that no data is lost.

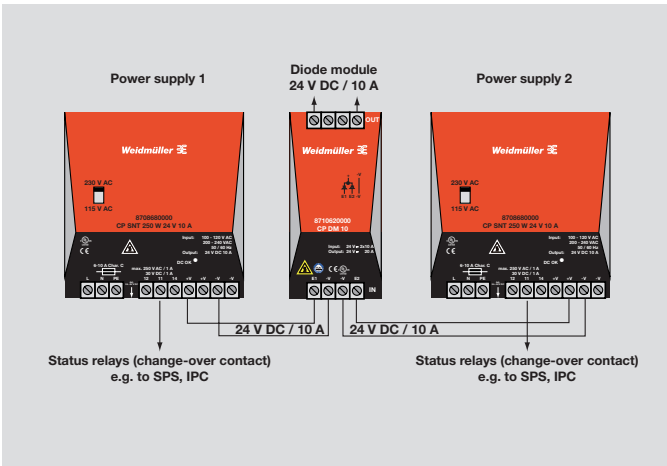
Redundant circuit for fail-safe power supplies to loads

Both devices operate in parallel and share the load required by the equipment via the diode module. Should one of these devices fail, the second device immediately supplies the full amount of power. The diode module decouples both switch-mode power supplies to 100 %, so that they do not negatively affect each other if a failure occurs.

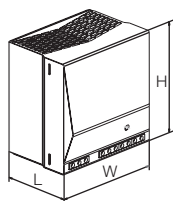
Power supplies to critical loads



Redundant circuit for fail-safe power supplies to loads



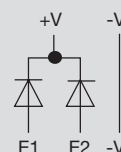
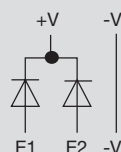
connectPower diode module ECOLINE



CP DM 10



CP DM 20



Technical data

Input

Input voltage
Input current

Output

Output voltage
Output current

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
DIN Rail compatibility
Mounting position horizontal
Installation advice
Weight
Approvals

40 V DC max.
2 x 0...10 A max.

V_{in} - 0.5 typical
0...20 A max. or 10 A max. for redundancy operation

-10 °C...+55 °C
-20 °C...+85 °C
96 %
Terminal rail TS 35 to DIN 50022
horizontal
Clearance: side $\geq$ 2 cm; above/below $\geq$ 10 cm
0.15 g
CE / cULus 508 / cURus 60950

40 V DC max.
2 x 0...20 A max.

V_{in} - 0.5 typical
0...40 A max. or 20 A max. for redundant operations

-10 °C...+55 °C
-20 °C...+85 °C
98 %
Terminal rail TS 35 to DIN 50022
on mounting rails
Clearance: side $\geq$ 2 cm; above/below $\geq$ 10 cm
0.5 kg
CE / cULus 508 / cURus 60950

Clamping range Input (rating-/min./max) mm²
Clamping range Output (rating-/ min./max) mm²
Length x width x height mm

Note

Screw connection

4 / 0.13 / 6
4 / 0.13 / 6
110 x 55.5 x 125

Identical clamping range for input and output

Screw connection

4 / 0.13 / 6
10 / 0.32 / 16
110 x 55.5 x 142

Ordering data

Type	Qty.	Order No.
CP DM 10	1	8710620000

Type	Qty.	Order No.
CP DM 20	1	8768650000

Note

Accessories

Note

DC/DC converters



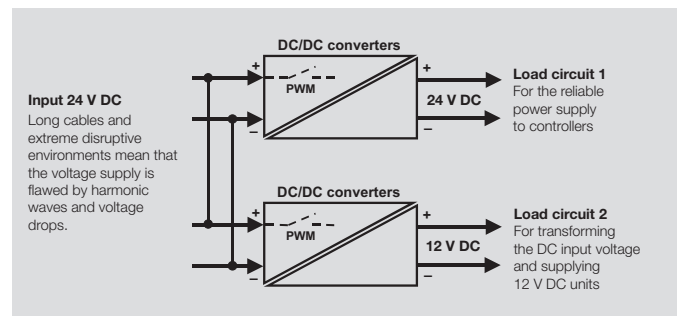
If there is no regulated and stable DC voltage available to supply sensitive equipment, DC/DC converters can guarantee a stabilised voltage. To a certain extent, other voltage levels are generated at the output; consequently, DC/DC converters can also be utilised for converting to other voltage levels. Electrical isolation of the input and output ensures reliable and safe separation of the circuits. The status of the output is reliably indicated by means of a status LED.

DC/DC converters

DC/DC converters are particularly suitable for decentralised power supplies to circuitry, subassemblies and modules. DC/DC converters are often required in emergency power supplies supplying electrical devices from batteries and other DC systems.

DC/DC converters for supplying sensitive loads for example, PLCs, mini controllers etc.

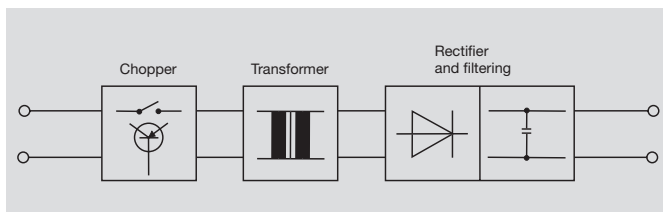
Power supply to loads with different voltage levels



It is possible to supply both sides of an analogue coupling module with the help of a DC/DC converter without neutralising the electrical isolation. Weidmüller's DC/DC converters are available in housings suitable for mounting on DIN rails.

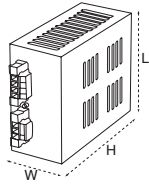
Method of operation

DC/DC converters are a variation on switched-mode regulators. The DC current at the input is chopped with the switching frequency and brought up to the required voltage by a transformer. The voltage is then rectified, smoothed and regulated.



DC/DC converters

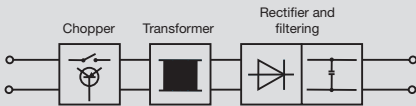
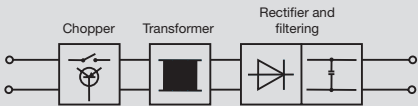
connectPower



CP DCDC 50 W 22-24 V DC 2 A



CP DCDC 50 W 15 V DC 3 A



Technical data

Input

Input voltage
Input fuse

Output

Output voltage
Output current
Overload behaviour

General data

Operating temperature
Storage temperature
Status indication
Switching frequency
Approvals

18...30 V DC, typ. 24 V DC
internal

22...24 V DC
2 A
Surge cut-out with self-reset

0 °C...+40 °C max. full rate load
-40 °C...+85 °C
green LED
200 kHz
CSA / UL/UR / CE

18...30 V DC, typ. 24 V DC
internal

15 V DC
3 A
Surge cut-out with self-reset

0 °C...+40 °C max. full rate load
-40 °C...+85 °C
green LED
200 kHz
CSA / UL/UR / CE

Clamping range (rating- / min. / max.)
Length x width x height

mm²
mm

Note

Screw connection

4 / 0.1 / 4
131 x 57 x 98

Screw connection

4 / 0.1 / 4
131 x 57 x 98

Ordering data

Connection system

Screw connection

Type

CP DCDC 50W 22-24V 2A

Qty.

1

Order No.

9919372424

Note

Type

CP DCDC 50W 15V 3A

Qty.

1

Order No.

9919372415

Accessories

Note

Bracket for wall mounting: 7920560000

Bracket for wall mounting: 7920560000

Unregulated power supplies



Unregulated power supplies – compactPower

Compact power supply units are important links in the power supplies for controllers. They are utilised 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 2000 V.

Screw terminals secure the input-side connection to the mains.

The single-phase devices are rated for a nominal voltage of $\sim 230 \pm \sim 15\text{V}$, or $\sim 400 \text{ V} \pm \sim 15\text{V}$, 50/60 Hz, the 3-phase devices for $3 \times 400 \text{ V} \pm 5\%$. 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.

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

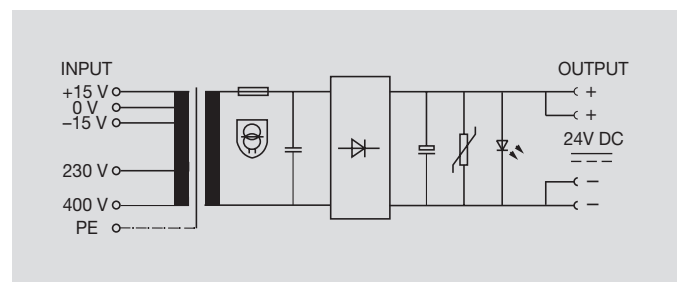
By choosing the appropriate terminals, the $\pm 15 \text{ V}$ tapping capability allows the single-phase devices to be connected to six different nominal AC voltages: 215, 230, 245, 385, 400, 415 V.

The $\pm 5\%$ tapping capability allows the 3-phase devices to be connected to three different nominal voltages: 380, 400, 415 V.

Single-phase unregulated power supplies



Block diagram for single-phase devices CP NT



Reliable short-circuit and overload protection

Integrated on the secondary side in device sizes up to CP NT 192W, the FKS fuse protects against overloads and short-circuits. For the devices CP NT 264W and CP NT 432W, 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!

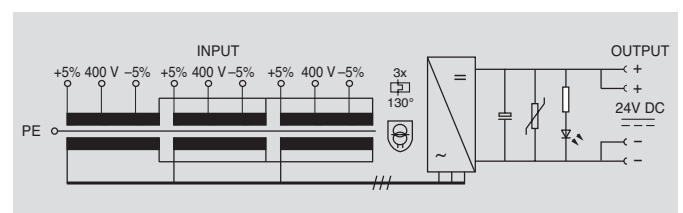
Transformers, vacuum-impregnated, painted black

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

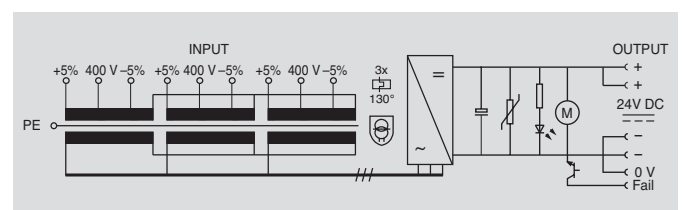
3-phase unregulated power supplies



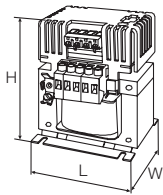
Block diagram for 3-phase devices CP NT3 250 / 400 / 500 W



Block diagram for 3-phase devices CP NT3 600 / 750 / 1000 W



Unregulated power supplies

compactPower
single phase

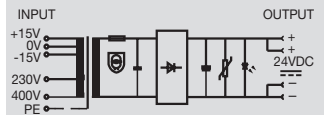
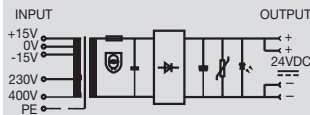
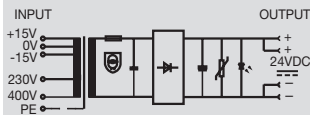
CP NT 36



CP NT 72



CP NT 144



Technical data

Input

Input voltage
Input current
Input frequency
No-load input current
External back-up fuse

230 V/ 400 V $\pm$ 15V
0.35 A/ 0.2 A
50/ 60 Hz
0.1A / 0.06A
0.63At / 0.315At

Output

Output voltage
Output current at 40°C
Output current at 55°C
max. output power
max. residual ripple
Fuse, max.
Protective circuit

24 V SELV
2 A
1 A
36 W
< 5 %
3 At flat plug-in fuse
varistor

Insulation coordination

Electric shock protection
Insulation strength
Insulation class
Ingress protection class
pollution severity

to VBG4
4 kV
B
IP 20
1

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Mounting position horizontal/arbitrary
Status indication
Weight
Standards
DIN Rail compatibility
EMC standards
Approvals

-20 °C...+55 °C
-20 °C...+80 °C
80 %
1A @ 55 °C; 1.5A @ 40 °C / 1A @ 40 °C
green LED
1.5 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
Direct mounting, TS 35 with clip-on plate
EN 61000-6 /-2, -3
CE;cURus;UL/LIST;

230 V/ 400 V $\pm$ 15V
0.56 A/ 0.32 A
50/ 60 Hz
0.13A / 0.08A
0.1 At / 0.63 At

24 V SELV
3 A
3 A
72 W
< 5 %
7.5 At flat plug-in fuse
varistor

to VBG4
4 kV
B
IP 20
1

-20 °C...+55 °C
-20 °C...+80 °C
83 %
2.5A @ 55 °C; 3A @ 40 °C / 2.5A @ 40 °C
green LED
2.1 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
Direct mounting, TS 35 with clip-on plate
EN 61000-6 /-2, -3
CE;cURus;UL/LIST;

230 V/ 400 V $\pm$ 15V
0.95 A/ 0.55 A
50/ 60 Hz
0.33A / 0.19A
1.6At / 1.0At

24 V SELV
6 A
5 A
144 W
< 5 %
10 At flat plug-in fuse
varistor

to VBG4
4 kV
B
IP 20
1

-20 °C...+55 °C
-20 °C...+80 °C
88 %
5A @ 55 °C; 6A @ 40 °C / 5A @ 40 °C
green LED
3.1 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
Direct mounting, TS 35 with clip-on plate
EN 61000-6 /-2, -3
CE;cURus;UL/LIST;

Screw connection

Clamping range In. (rating-/min./max) mm²
Clamping range Out. (rating-/ min./max)mm²
Length x width x height mm

2.5 / 0.13 / 2.5
2.5 / 0.5 / 4
68 x 78 x 123

Screw connection

2.5 / 0.13 / 2.5
2.5 / 0.5 / 4
85 x 84 x 125

Screw connection

2.5 / 0.13 / 2.5
2.5 / 0.5 / 4
92 x 96 x 135

Note

Ordering data

Type	(Qty.=1)	Order No.
CP NT 36W 24V 1.5A		8575260000

Type	(Qty.=1)	Order No.
CP NT 72W 24V 3A		8575270000

Type	(Qty.=1)	Order No.
CP NT 144W 24V 6A		8575280000

Note

Accessories

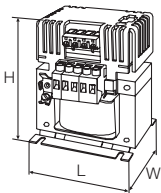
Note

Clip-in plate for TS35: 8588900000

Clip-in plate for TS35: 8588900000

Clip-in plate for TS35: 8588900000

compactPower
single phase



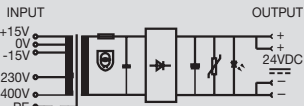
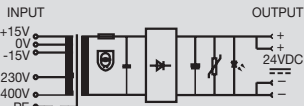
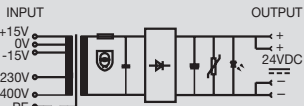
CP NT 192



CP NT 264



CP NT 432



Technical data

Input	
Input voltage	230 V/ 400 V ±15V
Input current	1.3 A/ 0.7 A
Input frequency	50/ 60 Hz
No-load input current	0.3A / 0.16A
External back-up fuse	2.0At / 1.25At
Output	
Output voltage	24 V SELV
Output current at 40°C	8 A
Output current at 55°C	7 A
max. output power	192 W
max. residual ripple	< 5 %
Fuse, max.	15 At flat plug-in fuse
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	90 %
Mounting position horizontal/arbitrary	7A @ 55 °C; 8A @ 40 °C /7A @ 40 °C
Status indication	green LED
Weight	4.3 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
DIN Rail compatibility	Direct mounting
EMC standards	EN 61000-6 /-2, -3
Approvals	CE;cURus;UL/LIST;
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.13 / 2.5
Clamping range Out. (rating-/ min./max)mm²	2.5 / 0.5 / 4
Length x width x height	105 x 105 x 145
Note	

Input	
Input voltage	230 V/ 400 V ±15V
Input current	1.3 A/ 0.7 A
Input frequency	50/ 60 Hz
No-load input current	0.3A / 0.16A
External back-up fuse	2.0At / 1.25At
Output	
Output voltage	24 V SELV
Output current at 40°C	8 A
Output current at 55°C	7 A
max. output power	192 W
max. residual ripple	< 5 %
Fuse, max.	15 At flat plug-in fuse
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	90 %
Mounting position horizontal/arbitrary	7A @ 55 °C; 8A @ 40 °C /7A @ 40 °C
Status indication	green LED
Weight	4.3 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
DIN Rail compatibility	Direct mounting
EMC standards	EN 61000-6 /-2, -3
Approvals	CE;cURus;UL/LIST;
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.13 / 2.5
Clamping range Out. (rating-/ min./max)mm²	2.5 / 0.5 / 4
Length x width x height	105 x 105 x 145
Note	

Input	
Input voltage	230 V/ 400 V ±15V
Input current	1.8 A/ 1 A
Input frequency	50/ 60 Hz
No-load input current	0.5A / 0.28A
External back-up fuse	3.15At / 1.6At
Output	
Output voltage	24 V SELV
Output current at 40°C	11 A
Output current at 55°C	10 A
max. output power	264 W
max. residual ripple	< 5 %
Fuse, max.	Thermal switch
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	93 %
Mounting position horizontal/arbitrary	10A @ 55 °C; 11A @ 40 °C /10A @ 40 °C
Status indication	green LED
Weight	6.1 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
DIN Rail compatibility	Direct mounting
EMC standards	EN 61000-6 /-2, -3
Approvals	CE;cURus;UL/LIST;
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.13 / 2.5
Clamping range Out. (rating-/ min./max)mm²	2.5 / 0.5 / 4
Length x width x height	113 x 120 x 165
Note	

Input	
Input voltage	230 V/ 400 V ±15V
Input current	2.5 A/ 1.3 A
Input frequency	50/ 60 Hz
No-load input current	0.54A / 0.31A
External back-up fuse	4.0At / 2.0At
Output	
Output voltage	24 V SELV
Output current at 40°C	18 A
Output current at 55°C	15 A
max. output power	432 W
max. residual ripple	< 5 %
Fuse, max.	Thermal switch
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+55 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	95 %
Mounting position horizontal/arbitrary	15A @ 55 °C; 18A @ 40 °C /15A @ 40 °C
Status indication	green LED
Weight	9.1 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
DIN Rail compatibility	Direct mounting
EMC standards	EN 61000-6 /-2, -3
Approvals	CE;cURus;UL/LIST;
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.13 / 2.5
Clamping range Out. (rating-/ min./max)mm²	2.5 / 0.5 / 4
Length x width x height	135 x 135 x 185
Note	

Ordering data

Type	(Qty.=1)	Order No.
CP NT 192W 24V 8A		8575300000
Note		

Type	(Qty.=1)	Order No.
CP NT 192W 24V 8A		8575300000
Note		

Type	(Qty.=1)	Order No.
CP NT 264W 24V 11A		8575310000
Note		

Type	(Qty.=1)	Order No.
CP NT 432W 24V 18A		8575320000
Note		

Accessories

Note

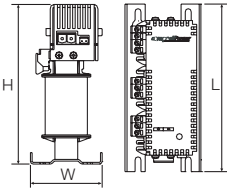
Note

Note

Note

Unregulated power supplies

compactPower 3-phase



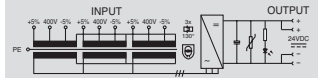
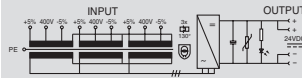
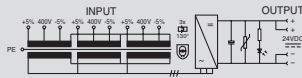
CP NT3 250



CP NT3 400



CP NT3 500



Technical data

Input

Input voltage
Input current
Input frequency
No-load input current
Input fuse

External back-up fuse

Output

Output voltage
Output current at 40°C/60°C
max. output power
max. residual ripple
Fuse, max.
Protective circuit

Insulation coordination

Electric shock protection
Insulation strength
Insulation class
Ingress protection class
pollution severity

General data

Operating temperature
Storage temperature
Degree of efficiency at max. load
Mounting position horizontal/vertical
Fan signal
Status indication
Weight
Standards
EMC standards
DIN Rail compatibility

3 x 400 V ±5 %
0.5 A
50/ 60 Hz
0.1A
3 No. thermostatic switches in primary winding
3 x 1.0AT

to VBG4
4 kV
B
IP 20
1

-20 °C...+60 °C
-20 °C...+80 °C
76 %
11A @ 40 °C /10A @ 60 °C
no integral fan
green LED
4.7 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
EN 61000-6 /-2, -3
Direct mounting

Screw connection

2.5 / 0.5 / 2.5
6 / 0.5 / 6
185 x 84 x 192

Condensation not allowed

3 x 400 V ±5 %
0.75 A
50/ 60 Hz
0.11 A
3 No. thermostatic switches in primary winding
3 x 1.2 AT

to VBG4
4 kV
B
IP 20
1

-20 °C...+60 °C
-20 °C...+80 °C
77 %
18A @ 40 °C /16A @ 60 °C
no integral fan
green LED
6.9 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
EN 61000-6 /-2, -3
Direct mounting

Screw connection

2.5 / 0.5 / 2.5
6 / 0.5 / 6
220 x 88 x 213

Condensation not allowed

3 x 400 V ±5 %
0.9 A
50/ 60 Hz
0.13 A
3 No. thermostatic switches in primary winding
3 x 1.6 AT

to VBG4
4 kV
B
IP 20
1

-20 °C...+60 °C
-20 °C...+80 °C
78 %
22A @ 40 °C /20A @ 60 °C
no integral fan
green LED
10 kg
EN 60950, EN 61558-2-4, -6, 72/23/EWG
EN 61000-6 /-2, -3
Direct mounting

Screw connection

2.5 / 0.5 / 2.5
6 / 0.5 / 6
220 x 108 x 215

Condensation not allowed

Ordering data

Type	(Qty.=1)	Order No.
CP NT3 250W 24V 10A		8628620000

Type	(Qty.=1)	Order No.
CP NT3 400W 24V 15A		8628630000

Type	(Qty.=1)	Order No.
CP NT3 500W 24V 20A		8628650000

Note

Accessories

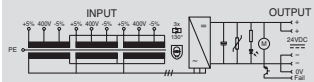
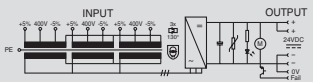
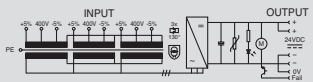
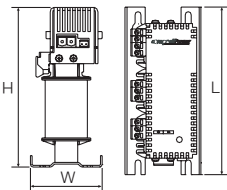
Note

compactPower 3-phase

CP NT3 600

CP NT3 750

CP NT3 1000



Technical data

Input	
Input voltage	3 x 400 V ±5 %
Input current	1.2 A
Input frequency	50/ 60 Hz
No-load input current	0.15 A
Input fuse	3 No. thermostatic switches in primary winding
External back-up fuse	3 x 2 AT
Output	
Output voltage	24 V SELV
Output current at 40°C/60°C	26 A/25 A
max. output power	600 W
max. residual ripple	< 2 %
Fuse, max.	External 25/26 AT
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+60 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	78 %
Mounting position horizontal/vertical	26A @ 40 °C /25A @ 60 °C
Fan signal	Open collector <30 V/ <5 mA during fault
Status indication	green LED
Weight	11 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3
DIN Rail compatibility	Direct mounting
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.5 / 2.5
Clamping range Out. (rating-/ min./max)mm²	6 / 0.5 / 6
Length x width x height	230 x 108 x 212
Note	Condensation not allowed

Input	
Input voltage	3 x 400 V ±5 %
Input current	1.4 A
Input frequency	50/ 60 Hz
No-load input current	0.16 A
Input fuse	3 No. thermostatic switches in primary winding
External back-up fuse	3 x 2.5 AT
Output	
Output voltage	24 V SELV
Output current at 40°C/60°C	32 A/30 A
max. output power	750 W
max. residual ripple	< 2 %
Fuse, max.	External 30/32 AT
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+60 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	77 %
Mounting position horizontal/vertical	32A @ 40 °C /30A @ 60 °C
Fan signal	Open collector <30 V/ <5 mA during fault
Status indication	green LED
Weight	14 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3
DIN Rail compatibility	Direct mounting
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.5 / 2.5
Clamping range Out. (rating-/ min./max)mm²	6 / 0.5 / 6
Length x width x height	270 x 121 x 255
Note	Condensation not allowed

Input	
Input voltage	3 x 400 V ±5 %
Input current	1.8 A
Input frequency	50/ 60 Hz
No-load input current	0.14 A
Input fuse	3 No. thermostatic switches in primary winding
External back-up fuse	3 x 3.15 AT
Output	
Output voltage	24 V SELV
Output current at 40°C/60°C	42 A/40 A
max. output power	1000 W
max. residual ripple	< 2 %
Fuse, max.	External 40/42 AT
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+60 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	77 %
Mounting position horizontal/vertical	42A @ 40 °C /40A @ 60 °C
Fan signal	Open collector <30 V/ <5 mA during fault
Status indication	green LED
Weight	18 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3
DIN Rail compatibility	Direct mounting
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.5 / 2.5
Clamping range Out. (rating-/ min./max)mm²	10 / 0.5 / 10
Length x width x height	280 x 122 x 275
Note	Condensation not allowed

Input	
Input voltage	3 x 400 V ±5 %
Input current	1.8 A
Input frequency	50/ 60 Hz
No-load input current	0.14 A
Input fuse	3 No. thermostatic switches in primary winding
External back-up fuse	3 x 3.15 AT
Output	
Output voltage	24 V SELV
Output current at 40°C/60°C	42 A/40 A
max. output power	1000 W
max. residual ripple	< 2 %
Fuse, max.	External 40/42 AT
Protective circuit	varistor
Insulation coordination	
Electric shock protection	to VBG4
Insulation strength	4 kV
Insulation class	B
Ingress protection class	IP 20
pollution severity	1
General data	
Operating temperature	-20 °C...+60 °C
Storage temperature	-20 °C...+80 °C
Degree of efficiency at max. load	77 %
Mounting position horizontal/vertical	42A @ 40 °C /40A @ 60 °C
Fan signal	Open collector <30 V/ <5 mA during fault
Status indication	green LED
Weight	18 kg
Standards	EN 60950, EN 61558-2-4, -6, 72/23/EWG
EMC standards	EN 61000-6 /-2, -3
DIN Rail compatibility	Direct mounting
Screw connection	
Clamping range In. (rating-/min./max)	2.5 / 0.5 / 2.5
Clamping range Out. (rating-/ min./max)mm²	10 / 0.5 / 10
Length x width x height	280 x 122 x 275
Note	Condensation not allowed

Ordering data

Type	(Qty.=1)	Order No.
CP NT3 600W 24V 25A		8628660000
Note		

Type	(Qty.=1)	Order No.
CP NT3 750W 24V 30A		8628670000
Note		

Type	(Qty.=1)	Order No.
CP NT3 1000W 24V 40A		8628680000
Note		

Type	(Qty.=1)	Order No.
CP NT3 1000W 24V 40A		8628680000
Note		

Accessories

Note

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UPS control unit

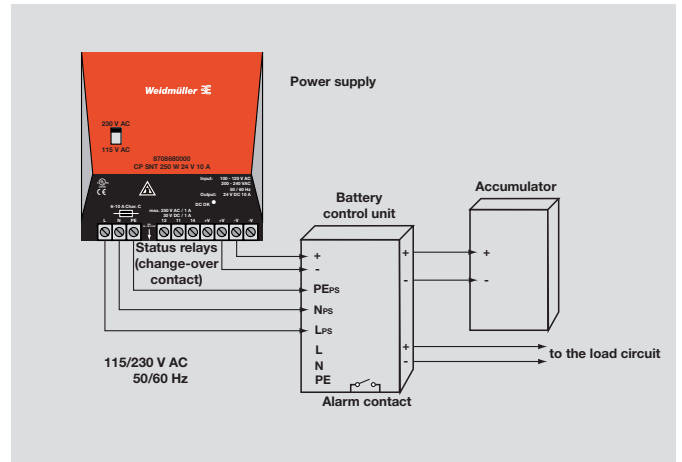


When the power supply fails, UPS control units take over the 12/24 V DC power supplies to the installation within seconds, and guarantee plant availability for a defined length of time.

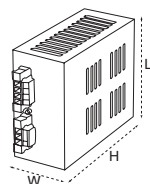
Professional signalling guarantees that all relevant signal statuses can be evaluated on the spot. Critical statuses can also be immediately redirected to a higher-level controller.

The battery module undertakes complete battery management of the connected lead-acid batteries. Constant charging and discharging plus electronic overcurrent protection guarantee an extremely long operational lifetime for the batteries.

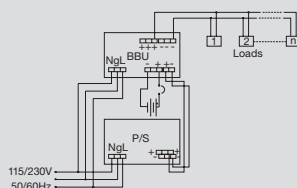
Switch-mode power supplies, battery control unit and battery providing an uninterrupted power supply.



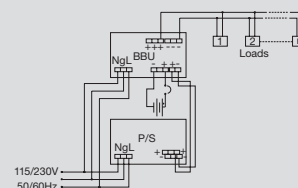
connectPower



CP-BBU 115-230 V AC / 12 V DC



CP-BBU 115-230 V AC / 24 V DC



Technical data

Input			
Input voltage		85...265 V AC; 120...300 V DC; typ.115-230 V AC $\pm 10\%$	85...265 V AC; 120...300 V DC; typ.115-230 V AC $\pm 10\%$
Input current		0.8 A @ 115 V AC; 0.5 A @ 230 V AC	1 A @ 115 V AC; 0.6 A @ 230 V AC
Input frequency		50/ 60 Hz	50/ 60 Hz
Input fuse		2 A slow-blow fuse (internal)	2 A slow-blow fuse (internal)
Making current limit		Thermistor	Thermistor
Surge protection		Varistor	Varistor
Output			
Output voltage		12 V DC	24 V DC
Output current		max. 15 A / max 9.2 A for power supplies	max. 15 A / max 9.0 A for power supplies
Mains failure bridge-over time			
Battery charging current		2.00 A	3.00 A
Battery voltage		13.65 V	27.3 V
Control at input voltage		0.2 %	0.2 %
General data			
Operating temperature		-20 °C...+50 °C	-20 °C...+50 °C
Storage temperature		-20 °C...+85 °C	-20 °C...+85 °C
Status indication		LED green (Full Charge): Battery voltage > 14.75 Vdc LED yellow (Battery Low): Battery voltage < 11 Vdc LED yellow (Chargin): BBU charges Battery LED red (Fault): no AC input voltage LED red (Battery Reverse): Battery polarizing	LED green (Full Charge): Battery voltage > 29.5 Vdc LED yellow (Battery Low): Battery voltage < 22 Vdc LED yellow (Charging): BBU charges Battery LED red (Fault): no AC input voltage LED red (Batterie Reverse): Battery polarizing fault LED red (Battery open): no battery connected
Standards		EN 50178, EN 60950, IEC950	EN 50178, 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
Approvals		CSA;UL/UR;CE;	CSA;UL/UR;CE;
Dimensions			
Clamping range (rating- / min. / max.)	mm ²	4 / 0.1 / 4	4 / 0.1 / 4
Length x width x height	mm	161 x 72.5 x 127.5	161 x 72.5 x 127.5
Note			
Screw connection			
Screw connection			

Ordering data

Connection system	Type	Qty.	Order No.
Screw connection	CP-BBU 115-230VAC / 12VDC	1	9916280012
Note			

Accessories

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

WAVEGUARD electronic fusing

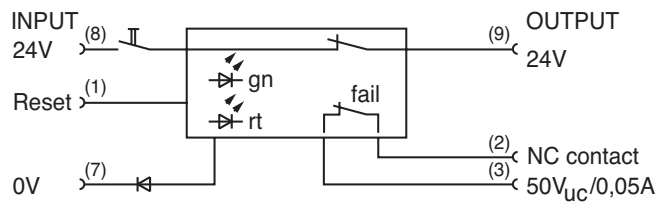
Owing to their technical characteristics, switch-mode power units cannot supply a dynamic output current, or at best only a very limited one. For protection in the case of an overload, the device switches to a current limit and reduces the voltage. As this means that sufficient power is no longer available, circuit-breakers and cartridge fuses do not operate reliably. Selective electronic fusing eliminates detrimental cross-coupling between parallel current paths, protects and switches off only the defective circuits. That results in high system availability and minimises the troubleshooting workload in the ever more complex systems.

Additional reset input

The reset input can be switched with a voltage pulse for remote resetting of the system, and the load circuit is closed again with the trailing pulse edge. A cyclic automatic reset is not permissible and is also inadvisable for safety reasons.

Visual signalling and floating signal contact

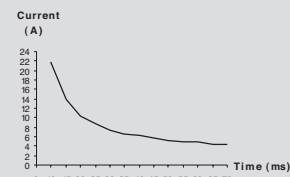
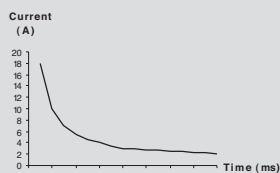
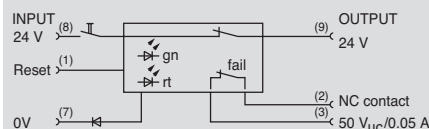
It is necessary to signal one malfunction: the switching status of the fuse is shown by the integral LED and the signal contact (NCC). This speeds up troubleshooting and therefore reduces maintenance costs.



WAVEGUARD

24 V DC 1.6 A

24 V DC 3.15 A



Technical data

Input

Rated voltage
Rated current
Reset

Output

Status relay / Change-over contact
Signalling delay

General data

Operating temperature
Storage temperature
Status indication
Standards
EMC standards
Sliding switch
Approvals

24 V DC
1.6 A
Pulse > 100 ms +24 V, falling edge ON
NCC, max. 50 V / 0.05 A; for low voltage only!
3.5 ms typically

0°C...+55°C (fitted)
-20 °C...+85 °C
LED green: OK, LED red: Tripped
EN 50178
EN 61000-6-1, 2, 4; EN 55011
OFF - wait 10 s - ON; on / off
CE / cURus

24 V DC
3.15 A
Pulse > 100 ms +24 V, falling edge ON
NCC, max. 50 V / 0.05 A; for low voltage only!
3.5 ms typically

0°C...+55°C (fitted)
-20 °C...+85 °C
LED green: OK, LED red: Tripped
EN 50178
EN 61000-6-1, 2, 4; EN 55011
OFF - wait 10 s - ON; on / off
CE / cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Note

Screw connection

2.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Tension clamp connection

1.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Periodic auto-reset not permitted; Tu=23°C, single module

Screw connection

2.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Tension clamp connection

1.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Periodic auto-reset not permitted; Tu=23°C, single module

Ordering data

Connection system

Screw connection
Tension clamp connection

Type	Qty.	Order No.
WGS 24Vdc 1.6A	1	8618890000
WGZ 24Vdc 1.6A	1	8621040000

Type	Qty.	Order No.
WGS 24Vdc 3.15A	1	8618910000
WGZ 24Vdc 3.15A	1	8621030000

Note

Accessories

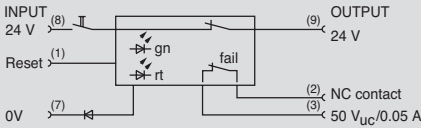
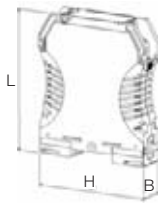
Note

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

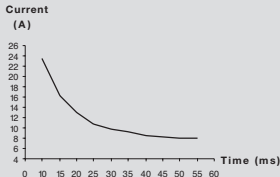
Supply voltage +24V and 0V can be cross-connected with ZQV 2.5N/2

Fuse for 24 V DC electric circuits

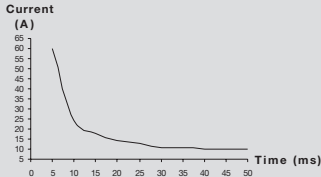
WAVEGUARD



24 V DC 6.3 A



24 V DC 8 A



Technical data

Input

Rated voltage
Rated current
Reset

Output

Status relay / Change-over contact
Signalling delay

General data

Operating temperature
Storage temperature
Status indication
Standards
EMC standards
Sliding switch
Approvals

24 V DC
6.3 A
Pulse > 100 ms +24 V, falling edge ON
NCC, max. 50 V / 0.05 A; for low voltage only!
3.5 ms typically
0°C...+55°C (fitted)
-20 °C...+85 °C
LED green: OK, LED red: Tripped
EN 50178
EN 61000-6-1, 2, 4; EN 55011
OFF - wait 10 s - ON; on / off
CE / cURus

24 V DC
8 A
Pulse > 100 ms +24 V, falling edge ON
NCC, max. 50 V / 0.05 A; for low voltage only!
3.5 ms typically
0°C...+55°C (fitted)
-20 °C...+85 °C
LED green: OK, LED red: Tripped
EN 50178
EN 61000-6-1, 2, 4; EN 55011
OFF - wait 10 s - ON; on / off
CE / cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Note

Screw connection

2.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Tension clamp connection

1.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Periodic auto-reset not permitted; Tu=23°C, single module

Screw connection

2.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Tension clamp connection

1.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Periodic auto-reset not permitted; Tu=23°C, single module

Ordering data

Connection system

Screw connection
Tension clamp connection

Type	Qty.	Order No.
WGS 24Vdc 6.3A	1	8618930000
WGZ 24Vdc 6.3A	1	8621020000

Note

Type	Qty.	Order No.
WGS 24Vdc 8.0A	1	8618940000
WGZ 24Vdc 8.0A	1	8621010000

Accessories

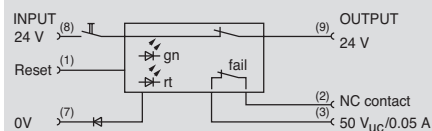
Note

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

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

WAVEGUARD

24 V DC 0.5...5 A



Technical data

Input

Rated voltage
Rated current
Reset

Output

Status relay / Change-over contact
Signalling delay

General data

Operating temperature
Storage temperature
Status indication
Standards
EMC standards
Sliding switch
Approvals

24 V DC
0.5...5 A adjustable
Pulse > 100 ms +24 V, falling edge ON

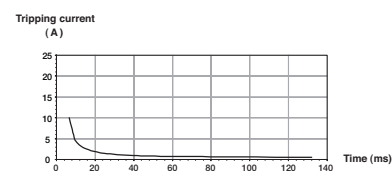
NCC, max. 50 V / 0.05 A; for low voltage only!
3.5 ms typically

0°C...+55°C (fitted)
-20 °C...+85 °C
LED green: OK, LED red: Tripped
EN 50178
EN 61000-6-1, 2, 4; EN 55011
OFF - wait 10 s - ON; on / off
CE / cURus

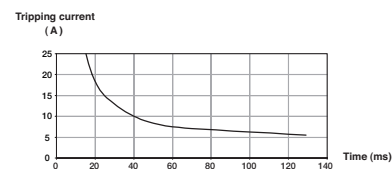
Derating curve

Dynamic tripping characteristic

Tripping current: 0.5 A



Tripping current: 5.0 A



Dimensions

Clamping range (rating- / min. / max.) mm²
Length x width x height mm

Note

Screw connection

2.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Tension clamp connection

1.5 / 0.5 / 2.5
92.4 x 22.5 x 72

Periodic auto-reset not permitted; Tu=23°C, single module

Ordering data

Connection system

Screw connection
Tension clamp connection

Type	Qty.	Order No.
WGS 24Vdc 0.5...5A	1	8710270000
WGZ 24Vdc 0.5...5A	1	8727630000

Note

Accessories

Note

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

