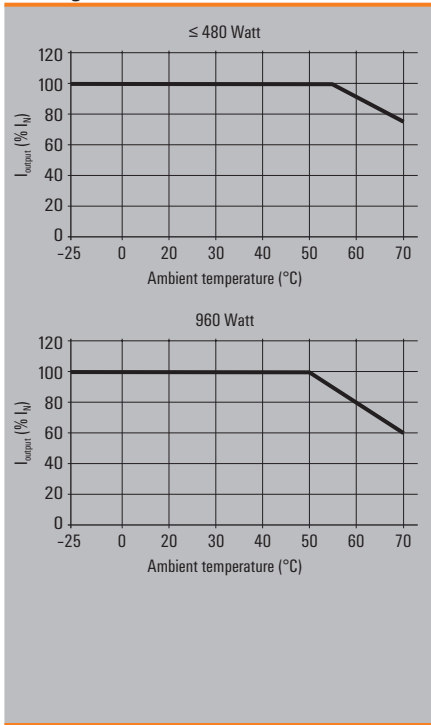


**PROeco power supplies with basic functionality and a high level of reliability**

- Single- and three-phase switched-mode power supply units
- Slim design
- Large temperature range from -25 °C to 70 °C
- The output voltage can be precisely adjusted via the potentiometer on the front
- Remote monitoring via integrated status relay
- Three-coloured LED indicators for simple error detection
- Advanced visual warning at 90 % rated output current
- International approvals



**Derating curves**



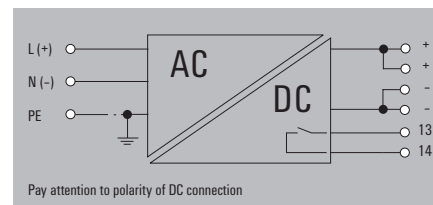
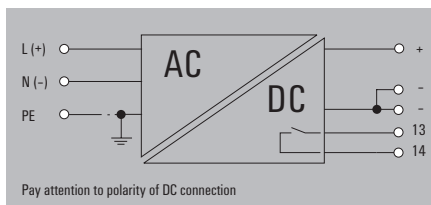
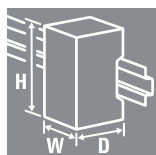
**Technical data**

General technical data	
Ambient temp. operating / storage temperature	-25 °C...+70 °C / -40 °C...+85 °C
Max. perm. air humidity (operation)	5 %...95 % RH
Degree of protection	IP 20
Class of protection	I, with PE connection
Pollution degree	2
Insulation voltage input/output	3 kV E/A / 2 kV E/earth / 0.5 kV A/earth
MTBF	> 500.000 h acc. to IEC 1709 (SN29500)
Parallel connection option	yes, max. 5 without diode module
Housing version	metal, corrosion resistant
Mounting position, installation notice	horizontal on mounting rail TS 35, 50 mm spacing top and bottom for free air circulation
Short-circuit protection	Yes, automatic restart
Overload protection	Yes, IU characteristic curve
Overtemperature protection	Yes, automatic restart
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), EN61000-4-6 (conducted), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	Acc. to EN61000-3-2
Resistance against vibration and shock	1 g acc. to EN50178, shock: 15 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 EN60950-1, PELV acc. to EN60204-1
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

PROeco

PRO ECO 72W 24V 3A

PRO ECO 120W 24V 5A



Technical data

Input	
Rated input voltage	100 ... 240 V AC
AC input voltage range	85 ... 264 V AC (Derating @ 100 V AC)
AC frequency range	47 ... 63 Hz
DC input voltage range	80 ... 370 DC (Derating @ 120 V DC)
AC current consumption	0.55 A @ 230 V AC / 1.04 A @ 110 V AC
DC current consumption	0.22 A @ 370 V DC / 0.68 A @ 120 V DC
Input fuse (internal) / inrush current	Yes / max. 40
Recommended back-up fuse	2 A / DI, Safety fuse 6 A, Char. B, Circuit breaker 2...4 A, Char. C, Circuit breaker

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22...28 V DC (adjustable via potentiometer on front)
Ramp-up time / residual ripple, switching peaks	< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
Rated output current @ U <sub>rated</sub>	3 A up to 55 °C
Continuous output current @ 24 V DC	3 A @ 55 °C, 2.25 A @ 70 °C
Power boost @ 24 V DC, 60 °C	3.6 A for 1 min, ED = 5 %
Capacitive load	Unrestricted
Protection against reverse voltages from the load	30...35 V DC
Protection against internal surge voltage	35 V DC

Signalling	
DC OK	LED Green (U <sub>output</sub> > 21.6 V DC)
Alarm	LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
Error	LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Voltage monitoring / no-voltage contact / contact load	Yes / NO contact / max. 30 V AC/DC 1 A
On/Off relay	Output voltage > 21.6 V DC / < 20.4 V DC

General data	
Efficiency	> 87 % @ 230 V AC & 3 A
Power loss @ idling / nominal load	4 W / 9.5 W
Earth discharge current	< 1 mA
Power factor (approx.)	> 0.42 @ 230 V AC / > 0.45 @ 115 V AC
Mains buffering @ I <sub>rated</sub>	> 100 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5
Height x width x depth / weight	125 / 34 / 100 mm / 0.5 kg

Approvals	
Approvals	CE, TÜV (EN/IEC 60950-1), cULus (Pending)

Connection data	
Conductor connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5/6 mm <sup>2</sup>
Wire cross-section, flexible min/max	0.5/2.5 mm <sup>2</sup>
Wire cross-section, AWG/kcmil	26/12 min/max
Min./max. tightening torque range	0.5/0.6 Nm
Stripping length	6 mm

Note	

Ordering data

Type	Qty.	Order No.
PRO ECO 72W 24V 3A	1	1469470000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

100 ... 240 V AC
85 ... 264 V AC (Derating @ 100 V AC)
47 ... 63 Hz
80 ... 370 DC (Derating @ 120 V DC)
0.55 A @ 230 V AC / 1.04 A @ 110 V AC
0.22 A @ 370 V DC / 0.68 A @ 120 V DC
Yes / max. 40
2 A / DI, Safety fuse
6 A, Char. B, Circuit breaker
2...4 A, Char. C, Circuit breaker

24 V DC ± 1 %
22...28 V DC (adjustable via potentiometer on front)
< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
3 A up to 55 °C
3 A @ 55 °C, 2.25 A @ 70 °C
3.6 A for 1 min, ED = 5 %
Unrestricted
30...35 V DC
35 V DC

LED Green (U <sub>output</sub> > 21.6 V DC)
LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Yes / NO contact / max. 30 V AC/DC 1 A
Output voltage > 21.6 V DC / < 20.4 V DC

> 87 % @ 230 V AC & 3 A
4 W / 9.5 W
< 1 mA
> 0.42 @ 230 V AC / > 0.45 @ 115 V AC
> 100 ms @ 230 V AC / > 20 ms @ 115 V AC
yes, max. 5
125 / 34 / 100 mm / 0.5 kg

CE, TÜV (EN/IEC 60950-1), cULus (Pending)
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Input	Output
Screw connection	Screw connection
3 for L/N/PE	5 (13,14,+, -)
0.5/6	0.5/6
0.5/2.5	0.5/2.5
26/12	26/12
0.5/0.6	0.5/0.6
6	6

100 ... 240 V AC
85 ... 264 V AC (Derating @ 100 V AC)
47 ... 63 Hz
80 ... 370 DC (Derating @ 120 V DC)
1.26 A @ 230 V AC / 2.24 A @ 110 V AC
0.39 A @ 370 V DC / 1.16 A @ 120 V DC
Yes / max. 40
4 A / DI, Safety fuse
6 A, Char. B, Circuit breaker
3...5 A, Char. C, Circuit breaker

24 V DC ± 1 %
22...28 V DC (adjustable via potentiometer on front)
< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
5 A up to 55 °C
5 A @ 55 °C, 3.75 A @ 70 °C
6 A for 1 min, ED = 5 %
Unrestricted
30...35 V DC
35 V DC

LED Green (U <sub>output</sub> > 21.6 V DC)
LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Yes / NO contact / max. 30 V AC/DC 1 A
Output voltage > 21.6 V DC / < 20.4 V DC

> 87 % @ 230 V AC & 5 A
4 W / 15 W
< 1 mA
> 0.47 @ 230 V AC / > 0.56 @ 115 V AC
> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
yes, max. 5
125 / 40 / 100 mm / 0.6 kg

CE, TÜV (EN/IEC 60950-1), cULus (Pending)
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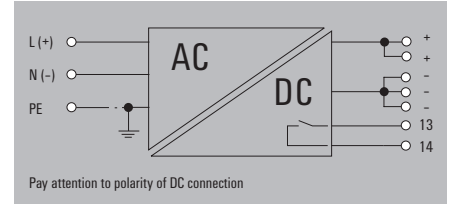
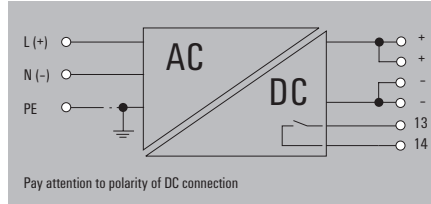
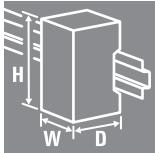
Input	Output
Screw connection	Screw connection
3 for L/N/PE	6 (13,14,+,+, -)
0.5/6	0.5/6
0.5/2.5	0.5/2.5
26/12	26/12
0.5/0.6	0.5/0.6
6	6

Type	Qty.	Order No.
PRO ECO 120W 24V 5A	1	1469480000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

PROeco

PRO ECO 240W 24V 10A

PRO ECO 480W 24V 20A



Technical data

Input	
Rated input voltage	100 ... 240 V AC
AC input voltage range	85 ... 264 V AC (Derating @ 100 V AC)
AC frequency range	47 ... 63 Hz
DC input voltage range	80 ... 370 DC (Derating @ 120 V DC)
AC current consumption	1.23 A @ 230 V AC / 2.47 A @ 110 V AC
DC current consumption	1.18 A @ 370 V DC / 2.4 A @ 120 V DC
Input fuse (internal) / inrush current	Yes / max. 15 A
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...28 V DC (adjustable via potentiometer on front)
Ramp-up time / residual ripple, switching peaks	< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
Rated output current @ U <sub>rated</sub>	10 A up to 55 °C
Continuous output current @ 24 V DC	10 A @ 55 °C, 7.5 A @ 70 °C
Power boost @ 24 V DC, 60 °C	12 A for 1 min, ED = 5 %
Capacitive load	Unrestricted
Protection against reverse voltages from the load	30...35 V DC
Protection against internal surge voltage	35 V DC
Signalling	
DC OK	LED Green (U <sub>output</sub> > 21.6 V DC)
Alarm	LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
Error	LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Voltage monitoring / no-voltage contact / contact load	Yes / NO contact / max. 30 V AC/DC 1 A
On/Off relay	Output voltage > 21.6 V DC / < 20.4 V DC
General data	
Efficiency	> 90 % @ 230 V AC & 10 A
Power loss @ idling / nominal load	3 W / 24 W
Earth discharge current	< 1 mA
Power factor (approx.)	> 0.93 @ 230 V AC / > 0.99 @ 115 V AC
Mains buffering @ I <sub>rated</sub>	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5
Height x width x depth / weight	125 / 60 / 100 mm / 1 kg
Approvals	
Approvals	CE, TÜV (EN/IEC 60950-1), cULus (Pending)
Connection data	
Conductor connection system	Input                      Output
Number of terminals	Screw connection      Screw connection
Wire cross-section, rigid min/max	3 for L/N/PE            6 (13,14,+,+,-,-)
Wire cross-section, flexible min/max	0.5/6                    0.5/6
Wire cross-section, AWG/kcmil	0.5/2.5                0.5/2.5
Min./max. tightening torque range	26/12                    26/12
Stripping length	0.5/0.6                0.5/0.6
Note	6                            6

Rated input voltage	100 ... 240 V AC
AC input voltage range	85 ... 264 V AC (Derating @ 100 V AC)
AC frequency range	47 ... 63 Hz
DC input voltage range	80 ... 370 DC (Derating @ 120 V DC)
AC current consumption	2.37 A @ 230 V AC / 5.2 A @ 110 V AC
DC current consumption	1.55 A @ 370 V DC / 4.65 A @ 120 V DC
Input fuse (internal) / inrush current	Yes / max. 3 A
Recommended back-up fuse	6 A / DI, Safety fuse 16 A, Char. B, Circuit breaker 6...8 A, Char. C, Circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22...28 V DC (adjustable via potentiometer on front)
Ramp-up time / residual ripple, switching peaks	< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
Rated output current @ U <sub>rated</sub>	20 A up to 55 °C
Continuous output current @ 24 V DC	20 A @ 55 °C, 15 A @ 70 °C
Power boost @ 24 V DC, 60 °C	24 A for 1 min, ED = 5 %
Capacitive load	Unrestricted
Protection against reverse voltages from the load	30...35 V DC
Protection against internal surge voltage	35 V DC
Signalling	
DC OK	LED Green (U <sub>output</sub> > 21.6 V DC)
Alarm	LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
Error	LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Voltage monitoring / no-voltage contact / contact load	Yes / NO contact / max. 30 V AC/DC 1 A
On/Off relay	Output voltage > 21.6 V DC / < 20.4 V DC
General data	
Efficiency	> 91 % @ 230 V AC & 20 A
Power loss @ idling / nominal load	5 W / 43 W
Earth discharge current	< 1 mA
Power factor (approx.)	> 0.97 @ 230 V AC / > 0.99 @ 115 V AC
Mains buffering @ I <sub>rated</sub>	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Height x width x depth / weight	125 / 100 / 120 mm / 1.6 kg
Approvals	
Approvals	CE, TÜV (EN/IEC 60950-1), cULus (Pending)
Connection data	
Conductor connection system	Input                      Output
Number of terminals	Screw connection      Screw connection
Wire cross-section, rigid min/max	3 for L/N/PE            7 (13,14,+,+,-,-,-)
Wire cross-section, flexible min/max	0.5/6                    0.18/6
Wire cross-section, AWG/kcmil	0.5/2.5                0.5/2.5
Min./max. tightening torque range	26/12                    26/10
Stripping length	0.5/0.6                0.5/0.6
Note	6                            7

Input	
Rated input voltage	100 ... 240 V AC
AC input voltage range	85 ... 264 V AC (Derating @ 100 V AC)
AC frequency range	47 ... 63 Hz
DC input voltage range	80 ... 370 DC (Derating @ 120 V DC)
AC current consumption	2.37 A @ 230 V AC / 5.2 A @ 110 V AC
DC current consumption	1.55 A @ 370 V DC / 4.65 A @ 120 V DC
Input fuse (internal) / inrush current	Yes / max. 3 A
Recommended back-up fuse	6 A / DI, Safety fuse 16 A, Char. B, Circuit breaker 6...8 A, Char. C, Circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22...28 V DC (adjustable via potentiometer on front)
Ramp-up time / residual ripple, switching peaks	< 100 ms / < 50 mVSS @ 24 V DC, I <sub>h</sub>
Rated output current @ U <sub>rated</sub>	20 A up to 55 °C
Continuous output current @ 24 V DC	20 A @ 55 °C, 15 A @ 70 °C
Power boost @ 24 V DC, 60 °C	24 A for 1 min, ED = 5 %
Capacitive load	Unrestricted
Protection against reverse voltages from the load	30...35 V DC
Protection against internal surge voltage	35 V DC
Signalling	
DC OK	LED Green (U <sub>output</sub> > 21.6 V DC)
Alarm	LED Yellow (I <sub>output</sub> > 90 % I <sub>h</sub> )
Error	LED Red (Overload, overtemperature, short-circuit, U <sub>output</sub> < 20.4 V DC)
Voltage monitoring / no-voltage contact / contact load	Yes / NO contact / max. 30 V AC/DC 1 A
On/Off relay	Output voltage > 21.6 V DC / < 20.4 V DC
General data	
Efficiency	> 91 % @ 230 V AC & 20 A
Power loss @ idling / nominal load	5 W / 43 W
Earth discharge current	< 1 mA
Power factor (approx.)	> 0.97 @ 230 V AC / > 0.99 @ 115 V AC
Mains buffering @ I <sub>rated</sub>	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Height x width x depth / weight	125 / 100 / 120 mm / 1.6 kg
Approvals	
Approvals	CE, TÜV (EN/IEC 60950-1), cULus (Pending)
Connection data	
Conductor connection system	Input                      Output
Number of terminals	Screw connection      Screw connection
Wire cross-section, rigid min/max	3 for L/N/PE            7 (13,14,+,+,-,-,-)
Wire cross-section, flexible min/max	0.5/6                    0.18/6
Wire cross-section, AWG/kcmil	0.5/2.5                0.5/2.5
Min./max. tightening torque range	26/12                    26/10
Stripping length	0.5/0.6                0.5/0.6
Note	6                            7

Ordering data

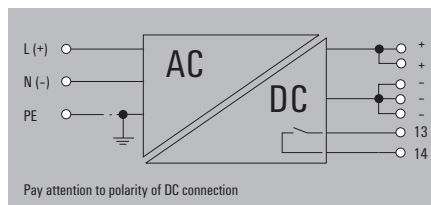
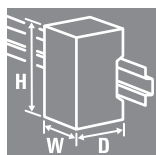
Type	Qty.	Order No.
PRO ECO 240W 24V 10A	1	1469490000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		
Note		

Type	Qty.	Order No.
PRO ECO 480W 24V 20A	1	1469510000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		
Note		

Type	Qty.	Order No.
PRO ECO 480W 24V 20A	1	1469510000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		
Note		

PROeco

PRO ECO 960W 24V 40A



Technical data

Input	
Rated input voltage	
AC input voltage range	
AC frequency range	
DC input voltage range	
AC current consumption	
DC current consumption	
Input fuse (internal) / inrush current	
Recommended back-up fuse	
Output	
Rated output voltage	
Output voltage	
Ramp-up time / residual ripple, switching peaks	
Rated output current @ $U_{rated}$	
Continuous output current @ 24 V DC	
Power boost @ 24 V DC, 60 °C	
Capacitive load	
Protection against reverse voltages from the load	
Protection against internal surge voltage	
Signalling	
DC OK	
Alarm	
Error	
Voltage monitoring / no-voltage contact / contact load	
On/Off relay	
General data	
Efficiency	
Power loss @ idling / nominal load	
Earth discharge current	
Power factor (approx.)	
Mains buffering @ $I_{rated}$	
Parallel connection option	
Height x width x depth / weight	
Approvals	
Approvals	
Connection data	
Conductor connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm <sup>2</sup>
Wire cross-section, flexible min/max	mm <sup>2</sup>
Wire cross-section, AWG/kcmil	min/max
Min./max. tightening torque range	Nm
Stripping length	mm
Note	

100 ... 240 V AC		
85 ... 264 V AC (Derating @ 100 V AC)		
47 ... 63 Hz		
80 ... 370 DC (Derating @ 120 V DC)		
4.6 A @ 230 V AC / 9.9 A @ 110 V AC		
2.9 A @ 370 V DC / 9 A @ 120 V DC		
Yes / max. 3 A		
16 A / DI, Safety fuse		
20 A, Char. B, Circuit breaker		
16 A, Char. C, Circuit breaker		
24 V DC ± 1 %		
22...28 V DC (adjustable via potentiometer on front)		
< 100 ms / < 50 mVSS @ 24 V DC, $I_h$		
40 A up to 50 °C		
40 A @ 50 °C, 24 A @ 70 °C		
48 A for 1 min, ED = 5 %		
Unrestricted		
30...35 V DC		
35 V DC		
LED Green ( $U_{output} > 21.6$ V DC)		
LED Yellow ( $I_{output} > 90 \% I_R$ )		
LED Red (Overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC)		
Yes / NO contact / max. 30 V AC/DC 1 A		
Output voltage > 21.6 V DC / < 20.4 V DC		
> 93 % @ 230 V AC & 40 A		
6 W / 76 W		
< 1 mA		
> 0.97 @ 230 V AC / > 0.99 @ 115 V AC		
> 20 ms @ 230 V AC / > 20 ms @ 115 V AC		
yes, max. 3		
125 / 160 / 120 mm / 2.9 kg		
CE, TÜV (EN/IEC 60950-1), cULus (Pending)		
Input	Output	
Screw connection	Screw connection	
3 for L/N/PE	7 (13,14,+,+,-,-)	
0.18/6	0.5/16	
0.5/2.5	2.5/10	
26/10	22/8	
0.5/0.6	1.2/1.5	
7	12	
Type	Qty.	Order No.
PRO ECO 960W 24V 40A	1	1469520000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

Ordering data

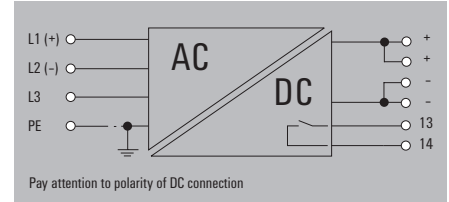
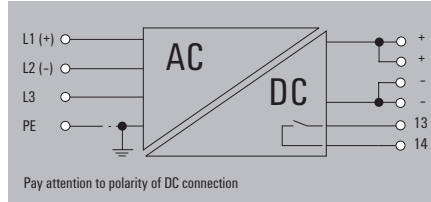
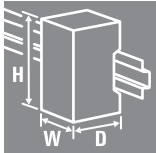
Type	Qty.	Order No.
PRO ECO 960W 24V 40A	1	1469520000

Note

PROeco

PRO ECO3 120W 24V 5A

PRO ECO3 240W 24V 10A



Technical data

Input	
Rated input voltage	
AC input voltage range	
AC frequency range	
DC input voltage range	
AC current consumption	
DC current consumption	
Input fuse (internal) / inrush current	
Recommended back-up fuse	
Output	
Rated output voltage	
Output voltage	
Ramp-up time / residual ripple, switching peaks	
Rated output current @ $U_{rated}$	
Continuous output current @ 24 V DC	
Power boost @ 24 V DC, 60 °C	
Capacitive load	
Protection against reverse voltages from the load	
Protection against internal surge voltage	
Signalling	
DC OK	
Alarm	
Error	
Voltage monitoring / no-voltage contact / contact load	
On/Off relay	
General data	
Efficiency	
Power loss @ idling / nominal load	
Earth discharge current	
Power factor (approx.)	
Mains buffering @ $I_{rated}$	
Parallel connection option	
Height x width x depth / weight	
Approvals	
Approvals	
Connection data	
Conductor connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm <sup>2</sup>
Wire cross-section, flexible min/max	mm <sup>2</sup>
Wire cross-section, AWG/kcmil	min/max
Min./max. tightening torque range	Nm
Stripping length	mm
Note	

3 x 400...3 x 500 V AC (Wide-range input)	
3 x 340...3 x 575 V AC / 2 x 360...2 x 575 V AC	
47...63 Hz	
450...800 V DC (max. 500 V DC in accordance with UL 508)	
0.3 A @ 3 x 500 V AC / 0.4 A @ 3 x 400 V AC	
0.2 A @ 800 V DC / 0.4 A @ 450 V DC	
Yes / max. 40 A	
2 A / DI, Safety fuse	
2...3 A, Char. C, Circuit breaker	
24 V DC ± 1 %	
22...28 V DC (adjustable via potentiometer on front)	
< 100 ms / < 50 mVSS @ 24 V DC, $I_R$	
5 A up to 55 °C	
5 A @ 55 °C, 3.75 A @ 70 °C	
6 A for 1 min, ED = 5 %	
Unrestricted	
30...35 V DC	
35 V DC	
LED Green ( $U_{output} > 21.6$ V DC)	
LED Yellow ( $I_{output} > 90 \% I_R$ )	
LED Red (Overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC)	
Yes / NO contact / max. 30 V AC/DC 1 A	
Output voltage > 21.6 V DC / < 20.4 V DC	
87 % @ 3 x 500 V AC / 88 % @ 3 x 400 V AC	
6 W / 13 W	
< 1 mA	
> 0.4 @ 3 x 500 V AC / > 0.45 @ 3 x 400 V AC	
> 40 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	
yes, max. 5	
125 / 40 / 100 mm / 0.6 kg	
CE, TÜV (EN/IEC 60950-1), cULus (Pending)	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	6 (13,14,+,+,-,-)
0.18/6	0.5/6
0.5/2.5	0.5/2.5
26/10	26/12
0.5/0.6	0.5/0.6
8	6

3 x 400...3 x 500 V AC (Wide-range input)	
3 x 340...3 x 575 V AC / 2 x 360...2 x 575 V AC	
47...63 Hz	
450...800 V DC (max. 500 V DC in accordance with UL 508)	
0.6 A @ 3 x 500 V AC / 0.8 A @ 3 x 400 V AC	
0.4 A @ 800 V DC / 0.7 A @ 450 V DC	
Yes / max. 50 A	
2 A / DI, Safety fuse	
2...3 A, Char. C, Circuit breaker	
24 V DC ± 1 %	
22...28 V DC (adjustable via potentiometer on front)	
< 100 ms / < 50 mVSS @ 24 V DC, $I_R$	
10 A up to 55 °C	
10 A @ 55 °C, 7.5 A @ 70 °C	
12 A for 1 min, ED = 5 %	
Unrestricted	
30...35 V DC	
35 V DC	
LED Green ( $U_{output} > 21.6$ V DC)	
LED Yellow ( $I_{output} > 90 \% I_R$ )	
LED Red (Overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC)	
Yes / NO contact / max. 30 V AC/DC 1 A	
Output voltage > 21.6 V DC / < 20.4 V DC	
88 % @ 3 x 500 V AC / 89 % @ 3 x 400 V AC	
8 W / 26 W	
< 0.5 mA	
> 0.45 @ 3 x 500 V AC / > 0.5 @ 3 x 400 V AC	
> 40 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	
yes, max. 5	
125 / 60 / 100 mm / 1 kg	
CE, TÜV (EN/IEC 60950-1), cULus (Pending)	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	6 (13,14,+,+,-,-)
0.18/6	0.5/6
0.5/2.5	0.5/2.5
26/10	26/12
0.5/0.6	0.5/0.6
7	6

Ordering data

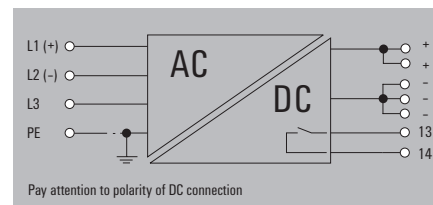
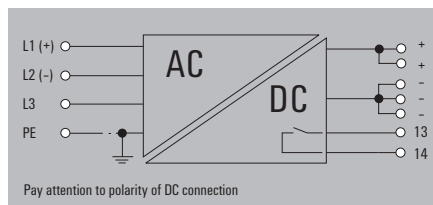
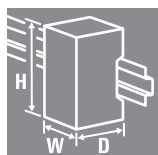
Type	Qty.	Order No.
PRO ECO3 120W 24V 5A	1	1469530000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		
Note		

Type	Qty.	Order No.
PRO ECO3 240W 24V 10A	1	1469540000
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		
Note		

PROeco

PRO ECO3 480W 24V 20A

PRO ECO3 960W 24V 40A



Technical data

Input	
Rated input voltage	
AC input voltage range	
AC frequency range	
DC input voltage range	
AC current consumption	
DC current consumption	
Input fuse (internal) / inrush current	
Recommended back-up fuse	
Output	
Rated output voltage	
Output voltage	
Ramp-up time / residual ripple, switching peaks	
Rated output current @ $U_{rated}$	
Continuous output current @ 24 V DC	
Power boost @ 24 V DC, 60 °C	
Capacitive load	
Protection against reverse voltages from the load	
Protection against internal surge voltage	
Signalling	
DC OK	
Alarm	
Error	
Voltage monitoring / no-voltage contact / contact load	
On/Off relay	
General data	
Efficiency	
Power loss @ idling / nominal load	
Earth discharge current	
Power factor (approx.)	
Mains buffering @ $I_{rated}$	
Parallel connection option	
Height x width x depth / weight	
Approvals	
Approvals	
Connection data	
Conductor connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm <sup>2</sup>
Wire cross-section, flexible min/max	mm <sup>2</sup>
Wire cross-section, AWG/kcmil	min/max
Min./max. tightening torque range	Nm
Stripping length	mm
Note	

3 x 400...3 x 500 V AC (Wide-range input)	
3 x 340...3 x 575 V AC / 2 x 360...2 x 575 V AC	
47...63 Hz	
450...800 V DC (max. 500 V DC in accordance with UL 508)	
1.2 A @ 3 x 500 V AC / 1.5 A @ 3 x 400 V AC	
0.7 A @ 800 V DC / 1.2 A @ 450 V DC	
Yes / max. 50 A	
4 A / DI, Safety fuse	
3...5 A, Char. C, Circuit breaker	
24 V DC ± 1 %	
22...28 V DC (adjustable via potentiometer on front)	
< 100 ms / < 50 mVSS @ 24 V DC, $I_R$	
20 A up to 55 °C	
20 A @ 55 °C, 15 A @ 70 °C	
24 A for 1 min, ED = 5 %	
Unrestricted	
30...35 V DC	
35 V DC	
LED Green ( $U_{output} > 21.6$ V DC)	
LED Yellow ( $I_{output} > 90 \% I_R$ )	
LED Red (Overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC)	
Yes / NO contact / max. 30 V AC/DC 1 A	
Output voltage > 21.6 V DC / < 20.4 V DC	
89 % @ 3 x 500 V AC / 90 % @ 3 x 400 V AC	
8 W / 48 W	
< 0.5 mA	
> 0.41 @ 3 x 500 V AC / > 0.43 @ 3 x 400 V AC	
> 30 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	
yes, max. 3	
125 / 100 / 120 mm / 1.3 kg	
CE, TÜV (EN/IEC 60950-1), cULus (Pending)	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	7 (13,14,+,+,-,-)
0.18/6	0.18/6
0.5/2.5	0.5/2.5
26/10	26/10
0.5/0.6	0.5/0.6
7	7

3 x 400...3 x 500 V AC (Wide-range input)	
3 x 340...3 x 575 V AC / 2 x 360...2 x 575 V AC	
47...63 Hz	
450...800 V DC (max. 500 V DC in accordance with UL 508)	
2.15 A @ 3 x 500 V AC / 2.68 A @ 3 x 400 V AC	
1.37 A @ 800 V DC / 2.37 A @ 450 V DC	
Yes / max. 40 A	
6 A / DI, Safety fuse	
10 A, Char. B, Circuit breaker	
6...8 A, Char. C, Circuit breaker	
24 V DC ± 1 %	
22...28 V DC (adjustable via potentiometer on front)	
< 100 ms / < 50 mVSS @ 24 V DC, $I_R$	
40 A up to 50 °C	
40 A @ 50 °C, 24 A @ 70 °C	
48 A for 1 min, ED = 5 %	
Unrestricted	
30...35 V DC	
35 V DC	
LED Green ( $U_{output} > 21.6$ V DC)	
LED Yellow ( $I_{output} > 90 \% I_R$ )	
LED Red (Overload, overtemperature, short-circuit, $U_{output} < 20.4$ V DC)	
Yes / NO contact / max. 30 V AC/DC 1 A	
Output voltage > 21.6 V DC / < 20.4 V DC	
90 % @ 3 x 500 V AC / 91 % @ 3 x 400 V AC	
5 W / 95 W	
< 1 mA	
> 0.56 @ 3 x 500 V AC / > 0.56 @ 3 x 400 V AC	
> 25 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	
yes, max. 3	
125 / 160 / 120 mm / 2.5 kg	
CE, TÜV (EN/IEC 60950-1), cULus (Pending)	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	7 (13,14,+,+,-,-)
0.18/6	0.5/16
0.5/2.5	2.5/10
26/10	22/8
0.5/0.6	1.2/1.5
7	12

Ordering data

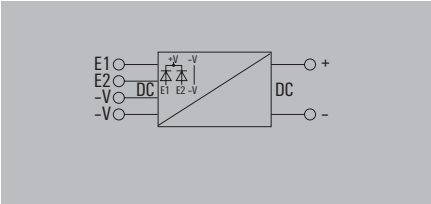
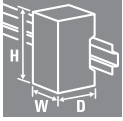
Type	Qty.	Order No.
PRO ECO3 480W 24V 20A	1	1469550000
Note		
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

Type	Qty.	Order No.
PRO ECO3 960W 24V 40A	1	1469560000
Note		
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

Type	Qty.	Order No.
PRO ECO3 960W 24V 40A	1	1469560000
Note		
The internal varistor found in a switch-mode power unit does not replace the necessary surge protection in a system.		

connectPower PROeco

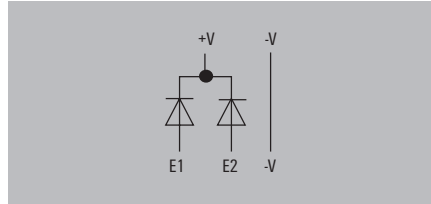
connectPower PROeco diode module



Technical data

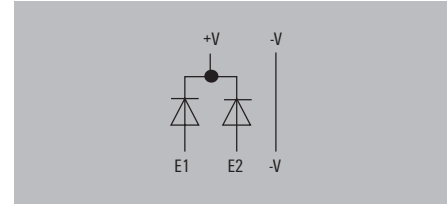
<b>Input</b>	
Input voltage	
Input current	
<b>Output</b>	
Output voltage	
Output current	
<b>General data</b>	
Ambient temperature (operational)	
Storage temperature	
Degree of efficiency at max. load	
Mounting position, installation notice	
Installation advice	
Weight	
Approvals	

CP DM 10



Input voltage	40 V DC max.
Input current	2 x 0...10 A max.
Output voltage	$U_m$ - 0.5 V typical
Output current	0...20 A max. or 10 A max. for redundancy operation
Ambient temperature (operational)	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	95.5%
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Space: side $\geq$ 2 cm; above/below $\geq$ 10 cm
Weight	0.4 kg
Approvals	CE; cULus; cURus

CP DM 20



Input voltage	40 V DC max.
Input current	2 x 0...20 A max.
Output voltage	$U_m$ - 0.5 V typical
Output current	0...40 A max. or 20 A max. for redundant operations
Ambient temperature (operational)	-10 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Degree of efficiency at max. load	97.5%
Mounting position, installation notice	horizontally, on terminal rail TS 35
Installation advice	Space: side $\geq$ 2 cm; above/below $\geq$ 10 cm
Weight	0.4 kg
Approvals	CE; cULus; cURus

<b>Dimensions</b>	
Clamping range (nominal / min. / max.)	mm <sup>2</sup>
Depth x width x height	mm
<b>Note</b>	

<b>Input</b>	<b>Output</b>
4 / 0.13 / 6	4 / 0.13 / 6
110 / 55.5 / 125	110 / 55.5 / 125

<b>Input</b>	<b>Output</b>
4 / 0.13 / 6	10 / 0.32 / 16
110 / 55.5 / 125	110 / 55.5 / 125

Ordering data

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

Type	Qty.	Order No.
CP DM 20	1	8768650000

<b>Note</b>
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<b>Note</b>
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<b>Note</b>
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Accessories

<b>Note</b>
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<b>Note</b>
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<b>Note</b>
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**Small metal foot**



Type	Order No.
MTA 30 MF	1251320000

**Large metal foot**



Type	Order No.
MTA 45 MF	1251310000

**Small plastic foot**



Type	Order No.
MTA 30 BK	1168970000

**Large plastic foot**



Type	Order No.
MTA 45 BK	1962250000

**Small wall mounting**



Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

**Large wall mounting**



Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

**Small screwdriver**



Type	Blade type	Size/AF	a	b	c	Order No.
SDIK PH1		1.00			80	9008570000
SDIS 0.5X3.0X100	B		0.5	3	100	9008380000

**Markers**



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

**End bracket**

For DIN rail TS 35



Polyamide with fibre glass, screwable	Colour	Torque	Qty.	Order No.
WEW 35/1 SW	black	1.2 Nm	50	1162600000