Datasheet

PRO-M Series
Power Supplies

NEW

Weidmuller's new PRO-M Series Switchmode Power Supplies offer a host of advantages. Available in 10 different versions, the 24 VDC PRO-M power supplies all feature a solid ultra-slim metal housing, and are designed to mount on a DIN-rail with no ventilation gap required between multiple units. This feature provides up to a 50% savings in space and allows the PRO-M to fit into the tightest spaces in control cabinets or machines.

These compact and efficient power supplies are optimized for machinery, with features that include overload resistance and high performance reserves. They also provide an increased level of reliability. Should one phase fail, the three-phase PRO-M power supply modules continue to work reliably in a two-phase operation.

The PRO-M Series power supplies are available in single-phase and three-phase versions from 70 W to 1000 W, making them particularly suited for use in many automation applications. The wide-ranging AC and DC inputs, broad operating temperature range and international approvals make the PRO-M supplies a strong choice.

- Slim housings for space saving installation in the cabinet
- DIN-rail mountable without any gap (no clearance necessary)
- Operating temperature range of -25°C to +70°C
- Autoselect Input for wide input range without any switch; for DC and AC voltages
- Power boost of 120% enables inductive and capacitive loads; additional starting capacity with up to a 2-minute boost
- Parallel connections allow simple power increase for up to five units without diode module
- MTBF > 500,000 Hours

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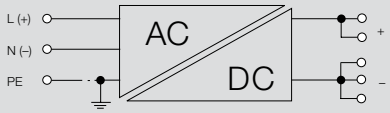
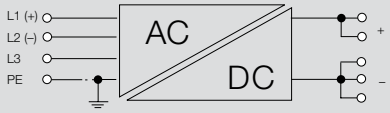
Weidmüller



Two-Phase operation also possible



Permissible maximum continuous current [A]

Max. limiting average on state current [A]

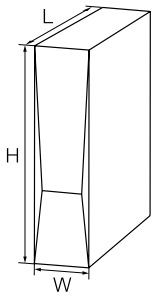
Type\Temp.	45°C	50°C	55°C	60°C	65°C	70°C
1ph 24V / 3A	3.6	3.3	3.0	2.6	2.2	1.8
1ph 24V / 5A	6	5.5	5.0	4.4	3.8	3.1
1ph 24V / 7.5A	9	8.6	8.25	7.5	6.75	5.6
1ph 24V / 10A	12	11.5	11	10	9	7.5
1ph 24V / 20A	24	23	22	20	18	15
1ph 24V / 40A	48	46	44	40	36	30
3ph 24V / 5A	6	5.75	5.5	5	4.5	3.7
3ph 24V / 10A	12	11.5	11	10	9	7.5
3ph 24V / 20A	24	23	22	20	18	15
3ph 24V / 40A	48	46	44	40	36	30

Technical Data

General Specifications	
Current limiting	> 120 % I_N
Ambient temp. operating / storage	–25 °C … +70 °C / –40 °C … +85 °C
Max. perm. air humidity (operation)	20 %…95 % RH
Protection class	IP20
Class of protection	I, with PE connection
Overvoltage category	II
Pollution severity	2
Insulation voltage	4 kV I/O / 2 kV I/ground / 0.5 kV O/ground
MTBF	> 500,000 h acc. to IEC 1709 (SN29500)
Protection against reverse voltages from the load	30…35 V DC
Parallel connection option	yes, without diode module
Housing version	metal, corrosion resistant
Indication	operation, green LED
Mounting position, installation notice	horizontal on mounting rail TS35, 50 mm spacing top and bottom for free air circulation, can be mounted side by side with no space in between
EMC / shock / vibration	
Noise emission acc. to EN55022	Class B
Noise immunity tests acc. to	EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	Acc. to EN 61000-3-2
Resistance against vibration and shock	Acc. to EN50178, shock: 5g in all directions
Electrical safety (applied standards)	
Electrical equipment of machines	Acc. to EN60204
Safety transformers for switched-mode power units	Acc. to EN61558-2-17
Machinery with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV acc. to EN60950, PELV acc. to EN60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

Project Planning Data

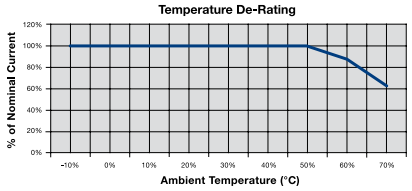
Type		24 V / 3 A	24 V / 5 A	24 V / 7.5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A	24 V / 5 A	24 V / 10 A	24 V / 20 A	24 V / 40 A
		1 - phase						3 - phase			
Rated input voltage		100...240 V AC						3 x 400...500 V AC			
Mains voltage range		85...264 V AC						3 x 320...575 V AC			
Mains input current (max/min)		1.9...0.6 A	3.2...1.0 A	4.7...1.6 A	3.2...1.1 A	6.4...2.1 A	12.7...4.1 A	0.4...0.2 A	0.7...0.4 A	1.3...0.7 A	2.6...1.2 A
Rec. fuse [char..]		2 A / D I	4 A / D I	6 A / D I	6 A / D I	10 A / D I	16 A / D I	2 A / D I	2 A / D I	2 A / D I	4 A / D I
		6 A, [B]	6 A, [B]	16 A, [B]	16 A, [B]	20 A, [B]	25 A, [B]	-	-	-	10 A, [B]
		2...4 A, [C]	3...5 A, [C]	5...10 A, [C]	5...10 A, [C]	10...12 A, [C]	14...16 A, [C]	1...2 A, [C]	2...3 A, [C]	3...5 A, [C]	6...8 A, [C]
Efficiency @ 230VAC		88%	89 %	90 %	90 %	> 90 %	> 90 %	90 %	> 90 %	> 90 %	> 90 %
Rated power loss [W]		10 W	15 W	20 W	27 W	53 W	106 W	13 W	26 W	53 W	107 W
Installation width	mm	33	40	50	60	121	180	40	60	121	180
Input terminals		Screw connection									
Conductor, solid min/max	mm^2	0.5...6				0.5...6		0.5...6		0.5...6	
Conductor, flexible min/max	mm^2	0.5...2.5				0.5...2.5		0.5...2.5		0.5...2.5	
Conductor, AWG/kcmil min/max		26 / 12				26 / 10		26 / 12		26 / 12	
Output terminals		Screw connection									
Number plus/minus		2 / 2	2 / 3								
Conductor, solid min/max	mm^2	0.5...6				0.5...6	0.5...16	0.5...6		0.5...6	0.5...16
Conductor, flexible min/max	mm^2	0.5...2.5				0.5...2.5	2.5...10	0.5...2.5		0.5...2.5	2.5...0
Conductor, AWG/kcmil min/max		26 / 12				26 / 10	26 / 6	26 / 12		26 / 10	26 / 6

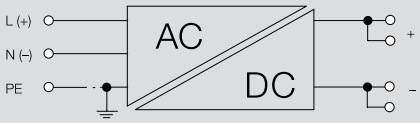


CP M SNT 70W 24V 3A

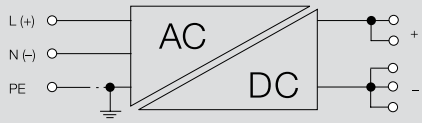
CP M SNT 120W 24V 5A

Derating Curve





With DC connection, note polarity



With DC connection, note polarity

Ordering Data

Type	Part No.
CP M SNT 70W 24V 3A	**8951330000**

Type	Part No.
CP M SNT 120W 24V 5A	**8951340000**

Technical Data

Input Specifications		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
AC input voltage range	85...264 V AC	85...264 V AC
AC frequency range	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	0.80 A @ 230 V AC / 1.5A @ 115 V AC	1.3 A @ 230 V AC / 2.4 A @ 115 V AC
DC current consumption	0.25 A @ 370 V DC / 1.1 A @ 80 V DC	0.5 A @ 370 V DC / 1.8 A @ 80 V DC
Input fuse (internal)/Inrush current	yes/max. 20 A	yes/max. 30 A
Circuit Protection	2 A / DI, safety fuse	4 A / DI, safety fuse
	6 A, Char. B, Circuit breaker	6 A, Char. B, Circuit breaker
	2...4 A, Char. C, Circuit breaker	3...5 A, Char. C, Circuit breaker
Output Specifications		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5…29.5 V DC (adjustable via potentiometer on front)	22.5…29.5 V DC (adjustable via potentiometer on front)
Residual ripple, switching peaks	100 mV_{ss} @ 24 V DC, I_N	100 mV_{ss} @ 24 V DC, I_N
Rated output current @ V_{rated}	3 A @ 55 °C	5 A @ 55 °C
Continuous output current @ 24 V DC	3.6 A @ 45 °C	6.0 A @ 45 °C
	3.3 A @ 50 °C	5.5 A @ 50 °C
	1.8 A @ 70 °C	3.1 A @ 70 °C
Power boost @ 24 V DC, 60 °C	3.6 A for 1 min, ED=5 %	6 A for 1 min, ED=5 %
General Specifications		
Efficiency	88 % @ 230 V AC / > 85 % @ 115 V AC	89 % @ 230 V AC / > 85 % @ 115 V AC
Power factor (approx.)	> 0.5 @ 230 V AC / > 0.53 @ 115 V AC	> 0.5 @ 230 V AC / > 0.53 @ 115 V AC
Mains buffering @ I_{rated}	> 100 ms @ 230 V AC / > 20 ms @ 100 V AC	> 100 ms @ 230 V AC / > 20 ms @ 100 V AC
Parallel connection option	yes	yes
Length x Width x Height mm	125 x 33 x 130	125 x 40 x 130
Weight	0.69 kg	0.8 kg
Approvals/Certifications		
	CE, cURus, UL508, CSA22.2 no.107	CE, cURus, UL508, CSA22.2 no.107

Connection Data	Input	Output
Type of connection	Screw connection	Screw Connection
Number of terminals	3 for L/N/PE	4 (++/--)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2,.5
Conductor cross-section, AWG/kcmil min/max	26 / 12	26 / 12

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

Connection Data	Input	Output
Type of connection	Screw connection	Screw Connection
Number of terminals	3 for L/N/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5
Conductor cross-section, AWG/kcmil min/max	26 / 12	26 / 26

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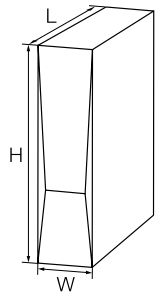
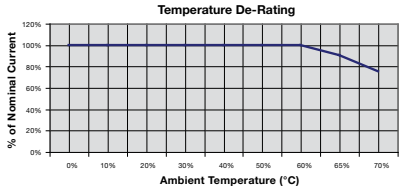
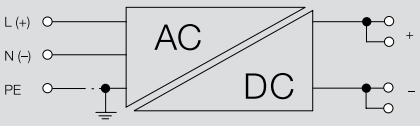


CP M SNT 180W 24V 7.5A

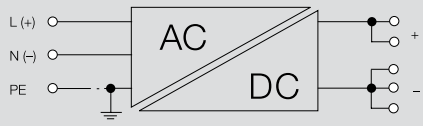
CP M SNT 250W 24V 10A

Derating Curve





With DC connection, note polarity



With DC connection, note polarity

Ordering Data

Type	Part No.
CP M SNT 180W 24V 7.5A	**8951350000**

Type	Part No.
CP M SNT 250W 24V 10A	**8951360000**

Technical Data

Input Specifications		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
AC input voltage range	85...264 V AC	85...264 V AC
AC frequency range	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	1.9 A @ 230 V AC / 3.6 A @ 115 V AC	1.3 A @ 230 V AC / 2.5 A @ 115 V AC
DC current consumption	0.6 A @ 370 V DC / 2.6 A @ 80 V DC	0.9 A @ 370 V DC / 3.4 A @ 80 V DC
Input fuse (internal)/Inrush current	yes	yes
Circuit Protection	6 A / DI, safety fuse 16 A, Char. B, Circuit breaker 5...10 A, Char. C, Circuit breaker	6 A / DI, safety fuse 16 A, Char. B, Circuit breaker 5...10 A, Char. C, Circuit breaker

Output Specifications		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5…29.5 V DC (adjustable via potentiometer on front)	22.5…29.5 V DC (adjustable via potentiometer on front)
Residual ripple, switching peaks	100 mVss @ 24 V DC, IN	100 mVss @ 24 V DC, IN
Rated output current @ V_{rated}	7.5 A @ 60 °C	10 A @ 60 °C
Continuous output current @ 24 V DC	9.0 A @ 45 °C 8.2 A @ 55 °C 5.6 A @ 70 °C	12 A @ 45 °C 11 A @ 55 °C 7.5 A @ 70 °C
Power boost @ 24 V DC, 60 °C	9 A for 1 min, ED=5 %	12 A for 1 min, ED=5 %

General Specifications		
Efficiency	90 % @ 230 V AC / > 85 % @ 115 V AC	90 % @ 230 V AC / > 85 % @ 115 V AC
Power factor (approx.)	> 0.5 @ 230 V AC / > 0.53 @ 115 V AC	> 0.98 @ 230 V AC / > 0.98 @ 115 V AC
Mains buffering @ I_{rated}	> 40 ms @ 230 V AC / > 20 ms @ 100 V AC	> 40 ms @ 230 V AC / > 20 ms @ 100 V AC
Parallel connection option	yes	yes
Length x Width x Height mm	150 x 50 x 130	150 x 60 x 130
Weight	1.0 kg	1.2 kg

Approvals/Certifications		
	CE, cURus, UL508, CSA22.2 no.107	CE, cURus, UL508, CSA22.2 no.107

Connection Data	**Input**	**Output**
Type of connection	Screw connection	Screw Connection
Number of terminals	3 for L/N/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5
Conductor cross-section, AWG/kcmil min/max	26 / 12	26 / 12

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

Connection Data	**Input**	**Output**
Type of connection	Screw connection	Screw Connection
Number of terminals	3 for L/N/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5
Conductor cross-section, AWG/kcmil min/max	26 / 12	26 / 12

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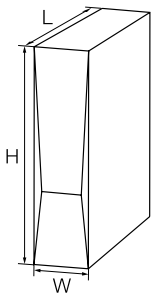
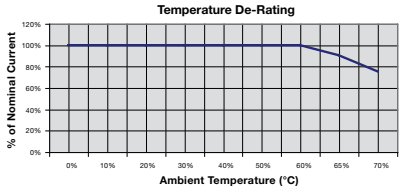
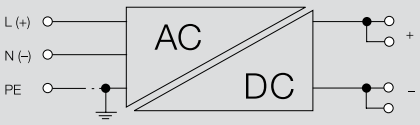


CP M SNT 500W 24V 20A

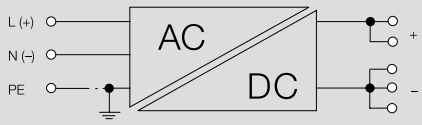
CP M SNT 1000W 24V 40A

Derating Curve





With DC connection, note polarity



With DC connection, note polarity

Ordering Data

Type	Part No.	Type	Part No.
CP M SNT 500W 24V 20A	**8951370000**	CP M SNT 1000W 24V 40A	**8951380000**

Technical Data

Input Specifications		
Rated input voltage	100...240 V AC wide-range input)	100...240 V AC (wide-range input)
AC input voltage range	85...264 V AC	85...264 V AC
AC frequency range	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	2.5 A @ 230 V AC / 4.9 A @ 115 V AC	4.9 A @ 230 V AC / 9.6 A @ 115 V AC
DC current consumption	1.6 A @ 370 V DC / 6.8 A @ 80 V DC	3.0 A @ 370 V DC / 13.5 A @ 80 V DC
Input fuse (internal)/Inrush current	yes	yes
Circuit Protection	10 A / DI, safety fuse 20 A, Char. B, Circuit breaker 10...12 A, Char. C, Circuit breaker	16 A / DI, safety fuse 25 A, Char. B, Circuit breaker 14...16 A, Char. C, Circuit breaker
Output Specifications		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5…29.5 V DC (adjustable via potentiometer on front)	22.5…29.5 V DC (adjustable via potentiometer on front)
Residual ripple, switching peaks	100 mV_{SS} @ 24 V DC, I_N	100 mV_{SS} @ 24 V DC, I_N
Rated output current @ V_{rated}	20 A @ 60 °C	40 A @ 60 °C
Continuous output current @ 24 V DC	24 A @ 45 °C 22 A @ 55 °C 15 A @ 70 °C	48 A @ 45 °C 44 A @ 55 °C 30 A @ 70 °C
Power boost @ 24 V DC, 60 °C	24 A for 1 min, ED=5 %	48 A for 1 min, ED=5 %
General Specifications		
Efficiency	> 90 % @ 230 V AC / > 85 % @ 115 V AC	> 90 % @ 230 V AC / > 85 % @ 115 V AC
Power factor (approx.)	> 0.98 @ 230 V AC / > 0.98 @ 115 V AC	> 0.98 @ 230 V AC / > 0.98 @ 115 V AC
Mains buffering @ I_{rated}	> 40 ms @ 230 V AC / > 20 ms @ 100 V AC	> 40 ms @ 230 V AC / > 20 ms @ 100 V AC
Parallel connection option	yes	yes
Length x Width x Height mm	150 x 121 x 130	150 x 180 x 130
Weight	1.5 kg	1.5 kg
Approvals/Certifications		
	CE, cURus, UL508, CSA22.2 no.107	CE, cURus, UL508, CSA22.2 no.107

Connection Data	**Input**	**Output**	**Input**	**Output**
Type of connection	Screw connection	Screw Connection	Screw connection	Screw Connection
Number of terminals	3 for L/N/PE	5 (++/---)	3 for L/N/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 16
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	2.5 / 10
Conductor cross-section, AWG/kcmil min/max	26 / 10	26 / 10	26 / 10	26 / 6

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

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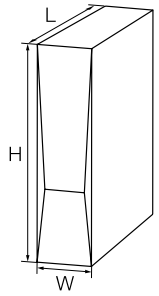
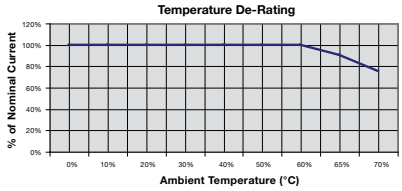


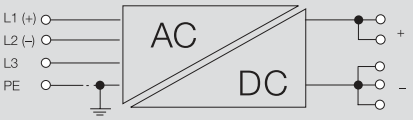
CP M SNT3 120W 24V 5A

CP M SNT3 250W 24V 10A

Derating Curve



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



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

Ordering Data

Type	Part No.	Type	Part No.
CP M SNT3 120W 24V 5A	**8951390000**	CP M SNT3 250W 24V 10A	**8951400000**

Technical Data

Input Specifications		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	3 x 400...3 x 500 V AC (wide-range input)
AC input voltage range	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
AC frequency range	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0.25 A @ 3 x 500 V AC / 0.3 A @ 3 x 400 V AC	0.5 A @ 3 x 500 V AC / 0.6 A @ 3 x 400 V AC
DC current consumption	0.2 A @ 800 V DC / 0.4 A @ 450 V DC	0.4 A @ 800 V DC / 0.7 A @ 450 V DC
Input fuse (internal)	no	no
Circuit Protection	2 A / DI, safety fuse	2 A / DI, safety fuse
	1...2 A, Char. C, Circuit breaker	2...3 A, Char. C, Circuit breaker

Output Specifications		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5…29.5 V DC (adjustable via potentiometer on front)	22.5…29.5 V DC (adjustable via potentiometer on front)
Residual ripple, switching peaks	100 mV_{SS} @ 24 V DC, I_N	100 mV_{SS} @ 24 V DC,I_N
Rated output current @ V_{rated}	5 A @ 60 °C	10 A @ 60 °C
Continuous output current @ 24 V DC	6.0 A @ 45 °C	12 A @ 45 °C
	5.5 A @ 55 °C	11 A @ 55 °C
	3.7 A @ 70 °C	7.5 A @ 70 °C
Power boost @ 24 V DC, 60 °C	6 A for 1 min, ED=5 %	12 A for 1 min, ED=5 %

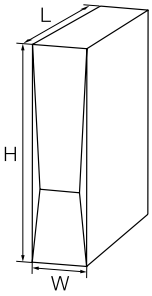
General Specifications		
Efficiency	90 % @ 3 x 500 V AC / > 90 % @ 3 x 400 V AC	90 % @ 3 x 500 V AC / > 90 % @ 3 x 400 V AC
Power factor (approx.)	> 0.75 @ 3 x 500 V AC / > 0.78 @ 3 x 400 V AC	> 0.75 @ 3 x 500 V AC / > 0.78 @ 3 x 400 V AC
Mains buffering @ I_{rated}	> 25 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	> 25 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC
Parallel connection option	yes	yes
Length x Width x Height mm	125 x 40 x 130	150 x 60 x 130
Weight	0.55 kg	0.9 kg

Approvals/Certifications		
	CE, cURus, UL508, CSA22.2 no.107	CE, cURus, UL508, CSA22.2 no.107

Connection Data	**Input**	**Output**	**Input**	**Output**
Type of connection	Screw connection	Screw Connection	Screw connection	Screw Connection
Number of terminals	4 for L1/L2/L3/PE	5 (++/---)	4 for L1/L2/L3/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Conductor cross-section, AWG/kcmil min/max	26 / 12	26 / 12	26 / 12	26 / 12

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

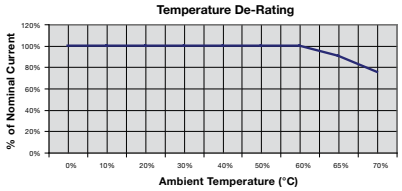
* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!



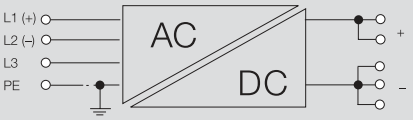
CP M SNT3 500W 24V 20A

CP M SNT3 1000W 24V 40A

Derating Curve



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



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

Ordering Data

Type	Part No.
CP M SNT3 500W 24V 20A	**8951410000**

Type	Part No.
CP M SNT3 1000W 24V 40A	**8951420000**

Technical Data

Input Specifications		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	3 x 400...3 x 500 V AC (wide-range input)
AC input voltage range	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
AC frequency range	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0.9 A @ 3 x 500 V AC / 1.1 A @ 3 x 400 V AC	1.8 A @ 3 x 500 V AC / 2.1A @ 3 x 400 V AC
DC current consumption	0.7 A @ 800 V DC / 1.3 A @ 450 V DC	1.4 A @ 800 V DC / 2.5A @ 450 V DC
Input fuse (internal)	no	no
Circuit Protection	2 A / DI, safety fuse 3...5 A, Char. C, Circuit breaker	4 A / DI, safety fuse 10 A, Char. B, Circuit breaker 6...8 A, Char. C, Circuit breaker

Output Specifications		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5…29.5 V DC (adjustable via potentiometer on front)	22.5…29.5 V DC (adjustable via potentiometer on front)
Residual ripple, switching peaks	100 mV_{SS} @ 24 V DC, I_N	100 mV_{SS} @ 24 V DC, I_N
Rated output current @ V_{rated}	20 A @ 60 °C	40 A @ 60 °C
Continuous output current @ 24 V DC	24 A @ 45 °C 22 A @ 55 °C 15 A @ 70 °C	48 A @ 45 °C 44 A @ 55 °C 30 A @ 70 °C
Power boost @ 24 V DC, 60 °C	24 A for 1 min, ED=5 %	48 A for 1 min, ED=5 %

General Specifications		
Efficiency	> 90 % @ 3 x 500 V AC / > 91 % @ 3 x 400 V AC	> 90 % @ 3 x 500 V AC / 92 % @ 3 x 400 V AC
Power factor (approx.)	> 0.75 @ 3 x 500 V AC / > 0.78 @ 3 x 400 V AC	> 0.75 @ 3 x 500 V AC / > 0.78 @ 3 x 400 V AC
Mains buffering @ I_{rated}	> 25 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	> 25 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC
Parallel connection option	yes	yes
Length x Width x Height mm	150 x 121 x 130	150 x 180 x 130
Weight	1.5 kg	2.9 kg

Approvals/Certifications		
	CE, cURus, UL508, CSA22.2 no.107	CE, cURus, UL508, CSA22.2 no.107

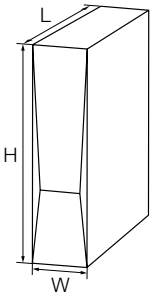
Connection Data	**Input**	**Output**
Type of connection	Screw connection	Screw Connection
Number of terminals	4 for L1/L2/L3/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 6
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 2.5
Conductor cross-section, AWG/kcmil min/max	26 /10	26 / 10

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

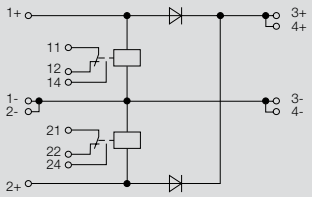
Connection Data	**Input**	**Output**
Type of connection	Screw connection	Screw Connection
Number of terminals	4 for L1/L2/L3/PE	5 (++/---)
Conductor cross-section, rigid min/max mm²	0.5 / 6	0.5 / 16
Conductor cross-section, flexible min/max mm²	0.5 / 2.5	0.5 / 10
Conductor cross-section, AWG/kcmil min/max	26 / 10	26 / 6

* Recommendation applies only for AC operation; the max. permissible operating voltage is to be observed in all cases!

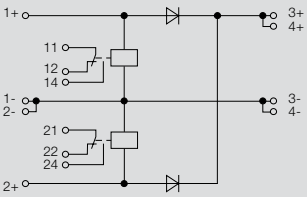
PRO-M: Diode Modules



CP M DM20



CP DM40



Ordering Data

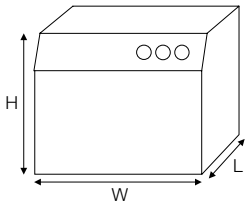
Type	Part No.
CP M DM20	**1222210000**

Type	Part No.
CP M DM40	**1222220000**

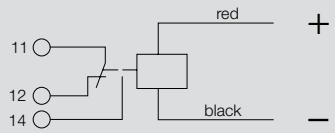
Technical Data

Input Specifications			
Rated input voltage		24 V DC	24 V DC
Input voltage range AC		18…30 V DC	18…30 V DC
Input current		2 x 10 A or 1 x 20 A	2 x 20 A or 1 x 40 A
Output Specifications			
Rated output voltage		24 V DC	24 V DC
Output voltage		Input voltage - 0.7 V	Input voltage - 0.7 V
Rated (nominal) output current @ U_N		20 A DC @ 60 °C	40 A @ 60 °C
Continous output current @ 24 V DC		24 A @ 45 °C 22.5 A @ 55 °C 15 A @ 70 °C	48 A @ 45 °C 45 A @ 55 °C 30 A @ 70 °C
Voltage monitoring		yes, in both inputs	yes, in both inputs
Switching thresholds		21.6 V DC, relay is on for Power Good 20.4 V DC, relay is off for Power Fail	21.6 V DC, relay is on for Power Good 20.4 V DC, relay is off for Power Fail
Potential free, floating contacts		Max. 30 V DC / 1 A, CO contact	Max. 30 V DC / 1 A, CO contact
General Specifications			
Degree of efficiency		> 97 % @ 24 V input voltage	> 97 % @ 24 V input voltage
Length x width x height	mm	150 x 34 x 130	150 x 60 x 130
Weight		0.3 kg	0.6 kg
Ambient temperature (operational) / Storage temperature		-25…+70 °C / -40 °C…+85 °C	-25…+70 °C / -40 °C…+85 °C
Max. permitted humidity (operational)		5 %…95 % RH	5 %…95 % RH
Degree of protection		IP20	IP20
Class of protection		III, without PE connection, for SELV	III, without PE connection, for SELV
Pollution degree		2	2
Insulation voltage I/O to housing		0.5 kV	0.5 kV
MTBF		> 500.000 h according to IEC 1709 (SN29500)	> 500.000 h according to IEC 1709 (SN29500)
Mounting position, installation notice		Horizontal on TS35 mounting rail, with 50 mm space at top and bottom. Direct side by side mounting allowed.	Horizontal on TS35 mounting rail, with 50 mm space at top and bottom. Direct side by side mounting allowed.
EMC / shock / vibration			
Noise emission acc. to EN55022		Class B	Class B
Noise immunity tests acc. to		EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted)	EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted)
Resistance against vibration and shock		1 g according to EN50178 / 15 g in all directions	1 g according to EN50178 / 15 g in all directions
Electrical safety (applied standards)			
Electrical equipment of machines		according to EN60204	according to EN60204
Safety transformers for switched-mode power units		according to EN50178 / VDE0160	according to EN50178 / VDE0160
Safety extra low voltage		SELV according to EN60950, PELV according to EN60204	SELV according to EN60950, PELV according to EN60204
Approvals			
Pending		CE, TUV, cCSAus, GL, GOST	CE, TUV, cULus, GL, GOST
Connection data		**Input** / **Output**	**Input** / **Output**
Conductor connection system		Screw connection / Screw connection	Screw connection / Screw connection
Number of terminals		4 (1+, 2+, 1-, 2-) / 4 (3+, 4+, 3-, 4-)	4 (1+, 2+, 1-, 2-) / 4 (3+, 4+, 3-, 4-)
Conductor cross section, rigid min/max	mm²	0.5 / 6 / 0.5 / 6	0.5 / 16 / 0.5 / 16
Conductor cross section, flexible min/max	mm²	0.5 / 2.5 / 0.5 / 2.5	2.5 / 10 / 2.5 / 10
Conductor cross section, AWG/kcmil min/max		26 / 12 / 26 / 12	22 / 6 / 22 / 6

PRO-M: Relay Module



CP M RM24



Ordering Data

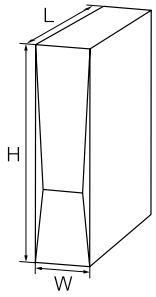
Type	Part No.
CP M RM24	**1222230000**

Technical Data

Input Specifications		
Rated input voltage		24 V DC
Input voltage range DC		18…30 V DC
Output Specifications		
Voltage monitoring		yes
Switching thresholds		21.6 V DC, relay is on for Power Good 20.4 V DC, relay is off for Power Fail
Potential free, floating contacts		Max. 30 V DC / 1 A, CO contact
General Specifications		
Length x width x height	mm	22 x 33 x 28
Weight		75 g
Ambient temperature (operational) / Storage temperature		-25…+70 °C / -40 °C…+85 °C
Max. permitted humidity (operational)		5 %…95 % RH
Degree of protection		IP20
Class of protection		III, without PE connection, for SELV
Pollution degree		2
Insulation voltage I/O to housing		0.5 kV
MTBF		> 500.000 h according to IEC 1709 (SN29500)
Mounting position, installation notice		Plugged in to the front of the PRO-M power supply
EMC / shock / vibration		
Noise emission acc. to EN55022		Class B
Noise immunity tests acc. to		EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Resistance against vibration and shock		1 g according to EN50178 / 15 g in all directions
Electrical safety (applied standards)		
Electrical equipment of machines		according to EN60204
Safety transformers for switch mode power units		according to EN50178 / VDE0160
Safety extra low voltage		SELV according to EN60950, PELV according to EN60204
Approvals		
Pending		CE, TUV, cULus, GL, GOST

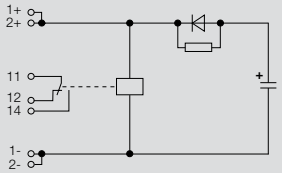
Connection data	**Input**	**Output**
Conductor connection system	10 cm cable (red/black) with ferrules	PUSH IN
Number of terminals		3 (Changeover contact)
Conductor cross section, rigid min/max mm²		0.2 / 1.5
Conductor cross section, flexible min/max mm²		0.2 / 1.5
Conductor cross section, AWG/kcmil min/max		24 / 16

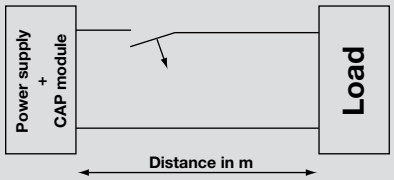
PRO-M: Capacity Module



CP M CAP

Pulse triggering for cable circuit breakers:
with the Weidmuller capacitance module
The following conditions apply to the table entries:
- Ambient temperature of 20 °C
- Inner resistance of the circuit breakers is taken into account
- Half of the rated current flows to a neighbouring circuit before the short circuit is formed
- DC-compatible circuit breakers: Siemens 5SY series





Ordering Data

Type	Part No.
CP M CAP	**1222240000**

Technical Data

Input Specifications		
Rated input voltage		24 V DC
Input voltage range DC		18…30 V DC
Output Specifications		
Peak current output		Depending on load
Recovery time for the capacitor		approx. 1 s
Voltage monitoring		yes
Switching thresholds		21.6 V DC, relay is on for Power Good 20.4 V DC, relay is off for Power Fail
Potential free, floating contacts		Max. 30 V DC / 1 A, CO contact
General Specifications		
Length x width x height	mm	150 x 34 x 130
Weight		0.4 kg
Ambient temperature (operational) / Storage temperature		-25…+70 °C / -40 °C…+85 °C
Max. permitted humidity (operational)		5 %…95 % RH
Degree of protection		IP20
Class of protection		III, without PE connection, for SELV
Pollution degree		2
Insulation voltage I/O to housing		0.5 kV
MTBF		> 500.000 h according to IEC 1709 (SN29500)
Mounting position, installation notice		Horizontal on TS35 mounting rail, with 50 mm space at top and bottom. Direct side by side mounting allowed
EMC / shock / vibration		
Noise emission acc. to EN55022		Class B
Noise immunity tests acc. to		EN61000-4-2 (ESD), EN61000-4-3 and EN61000-4-8 (Fields), EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN610004-6 (conducted), EN61000-4-11 (Dips)
Resistance against vibration and shock		1 g according to EN50178 / 15 g in all directions
Electrical safety (applied standards)		
Electrical equipment of machines		according to EN60204
Safety transformers for switch mode power units		according to EN50178 / VDE0160
Safety extra low voltage		SELV according to EN60950, PELV according to EN60204
Approvals		
		CE, TUV, GL
Pending		cULus, GOST

Connection data		**Input**	**Output**
Conductor connection system		Screw connection	Screw connection
Number of terminals		4 (++--)	3 (Changeover contact)
Conductor cross section, rigid min/max	mm²	0.5 / 6	0.5 / 6
Conductor cross section, flexible min/max	mm²	0.5 / 4	0.5 / 2.5
Conductor cross section, AWG/kcmil min/max		26 / 12	26 / 12

Fuse Tripping

Conductor cross section	B6	B10
0.75 mm²	10 m	
1.0 mm²	14 m	6 m
1.5 mm²	20 m	9 m
2.5 mm²	30 m	15 m
4 mm²	50 m	24 m
6 mm²		

	B16
0.75 mm²	
1.0 mm²	
1.5 mm²	4 m
2.5 mm²	6 m
4 mm²	10 m
6 mm²	16 m

	C2	C4
0.75 mm²	11 m	6 m
1.0 mm²	14 m	8 m
1.5 mm²	21 m	12 m
2.5 mm²	34 m	19 m
4 mm²		32 m
6 mm²		

	C6	C10
0.75 mm²	3 m	
1.0 mm²	3,5 m	2 m
1.5 mm²	5,5 m	3 m
2.5 mm²	9 m	5 m
4 mm²	14 m	8 m
6 mm²		12 m