PRO ECO 120W 24V 5A II

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com



The new PROeco 2nd generation power supplies maximise the availability of automation applications. The twelve-part series offers standard functions: with high performance, efficiency and suitability for many systems. The three-colour LED makes service activities and the integration of PROeco devices particularly easy. The series is compatible with DC UPS, electronic load monitoring and diode modules and is suitable for setting up power management systems. The compact design suits space-contrained applications, such as flat control cabinets in the field.

General ordering data

Version	Power supply, switch-mode power supply unit, 24 V
Order No.	3025570000
Type	PRO ECO 120W 24V 5A II
GTIN (EAN)	4099986951952
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	100 mm	Depth (inches)	3.937 inch
Height	130 mm	Height (inches)	5.118 inch
Width	35 mm	Width (inches)	1.378 inch
Net weight	510 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
Start-up	≥ -40 °C	Humidity	5...95 % rel. humidity, no condensation

Rated data UL

Certificate No. (cURus)	E255651

Input

AC input voltage range	85...264 V AC (derating at 100 V AC)	
Connection system	Screw connection	
Current consumption in relation to the input voltage	Voltage type	AC
	Input voltage	100 V
	Input current	2.17 A
	Voltage type	AC
	Input voltage	240 V
	Input current	1.08 A
	Voltage type	DC
	Input voltage	120 V
	Input current	1.15 A
	Voltage type	DC
	Input voltage	370 V
	Input current	0.41 A
DC input voltage range	110...370 V DC (derating at <120 V DC)	
Frequency range AC	45...65 Hz	
Input fuse	internal	
Inrush current (typ.)	40 A	
Line regulation (typ.)	1 %	
Load regulation (typ.)	2 %	
Nominal power consumption	134.8 VA	
Rated input voltage	100...240 V AC / 120...340 V DC	
Recommended back-up fuse	3 A / DI, safety fuse 6 A, Char. B, circuit breaker 3...5 A, Char. C circuit breaker	
Start-up time, max.	1 s	
Surge protection	Varistor	
Wire connection method	Screw connection	

Output

Capacitive load	unrestricted
Connection system	Screw connection
Continuous output current @ $U_{Nominal}$	3.125 A @ 70 °C
Line regulation (typ.)	1 %
Load regulation (typ.)	2 %

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Mains failure bridge-over time	Mains failure bridge-over time, min.	118 ms
	Input voltage type	AC
	Input voltage	230 V
	Output current	5 A
	Output voltage	24 V
	Mains failure bridge-over time, min.	25 ms
	Input voltage type	AC
	Input voltage	120 V
	Output current	5 A
	Output voltage	24 V
Max. residual ripple	<50 mV_{PP} / bandwidth 20 MHz	
Nominal output current for U_{nom}	5 A @ 55 °C	
Output power	120 W	
Output voltage, max.	28 V	
Output voltage, min.	22 V	
Output voltage, note	(adjustable via potentiometer)	
Overload protection	Yes	
Parallel connection option	yes, max. 3	
Protection against inverse voltage	Yes	
Ramp-up time	≤ 100 ms	
Rated output voltage	24 V DC	
Wire connection method	Screw connection	

General data

Degree of efficiency	Typ.: 88,4% @ 120 V AC, Typ.: 90,1% @ 230 V AC	
Earth leakage current, max.	3.5 mA	
Housing version	Metal, corrosion resistant	
Humidity	5...95 % rel. humidity, no condensation	
Mounting position, installation notice	on terminal rail TS 35	
Power factor	Power factor typical	0.6
	Input voltage	120 V
	Ambient temperature	25 °C
	Output power	120 W
	Power factor typical	0.5
	Input voltage	230 V
	Ambient temperature	25 °C
	Output power	120 W
Power loss, idling	1 W	
Power loss, nominal load	15 W	
Protection against over-heating	Yes	
Protection against reverse voltages from the load	30...35 V DC	
Protection degree	IP20	
Short-circuit protection	Yes	
Surge voltage category	II	

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EMC / shock / vibration

Interference immunity test acc. to	EN 61000-4-2 (ESD), EN 61000-4-3 (RS), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN61000-4-8 (Fields), EN 61000-4-11 (Dips), IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4	Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Noise emission in accordance with EN55032	Class B	Shock resistance IEC 60068-2-27	30 g in all directions
Vibration resistance IEC 60068-2-6	0.7 g		

Insulation coordination

Insulation voltage input / earth	3 kV	Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV	Pollution severity	2
Protection class	I, with PE connection	Surge voltage category	II

Electrical safety (applied standards)

Electrical machine equipment	Acc. to EN60204	For use with electronic equipment	Acc. to EN50178 / VDE0160
Protection against dangerous shock currents	Acc. to VDE0106-101	Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Safety extra-low voltage	SELV acc. to IEC 61010-1, PELV acc. to IEC 61010-2-201	Safety transformers for switch-mode power supplies	According to EN 61558-2-16

Connection data (input)

Conductor cross-section, AWG/kcmil , max.	12 AWG	Conductor cross-section, AWG/kcmil , min.	26 AWG
Conductor cross-section, flexible , min.	0.5 mm²	Conductor cross-section, rigid , max.	6 mm²
Conductor cross-section, rigid , min.	0.5 mm²	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Screwdriver blade	0.6 x 3.5
Stripping length (input)	6 mm	Tightening torque, max.	0.6 Nm
Tightening torque, min.	0.5 Nm	Wire connection cross section, flexible (input), max.	4 mm²

Connection data (output)

Conductor cross-section, AWG/kcmil , max.	12 AWG	Conductor cross-section, AWG/kcmil , min.	26 AWG
Conductor cross-section, flexible , max.	4 mm²	Conductor cross-section, flexible , min.	0.5 mm²
Conductor cross-section, rigid , max.	6 mm²	Conductor cross-section, rigid , min.	0.5 mm²
Connection system	Screw connection	Number of terminals	4 (++ / –)
Screwdriver blade	0.6 x 3.5	Stripping length (output)	6 mm
Tightening torque, max.	0.6 Nm	Tightening torque, min.	0.5 Nm

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Connection data (signal)

Number of terminals	2	Stripping length (Signal)	8 mm
Wire connection cross-section, flexible (signal), max.	1.5 mm²	Wire connection cross-section, flexible (signal), min.	0.2 mm²
Wire cross-section, AWG/kcmil , max.	14	Wire cross-section, AWG/kcmil , min.	28 mm²
Wire cross-section, solid , max.	1.5 mm²	Wire cross-section, solid , min.	0.2 mm²

Signalling

Contact load (NO contact)	max. 30 V DC / 1 A	Floating contact	Yes
LED green	Operating voltage OK		

Classifications

ETIM 6.0	EC002540	ETIM 7.0	EC002540
ETIM 8.0	EC002540	ETIM 9.0	EC002540
ETIM 10.0	EC002540	ECLASS 9.0	27-04-07-01
ECLASS 9.1	27-04-07-01	ECLASS 10.0	27-04-07-01
ECLASS 11.0	27-04-07-01	ECLASS 12.0	27-04-07-01
ECLASS 13.0	27-04-07-01	ECLASS 14.0	27-04-07-01
ECLASS 15.0	27-04-07-01		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	6c, 7a, 7cl
REACH SVHC	Lead 7439-92-1 Lead monoxide 1317-36-8
SCIP	cc530c6d-a7ac-41ec-a2b4-caa3b47dbe25

Approvals

Approvals	
Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319260/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E255651
Certificate no. (cULus)	E258476

Downloads

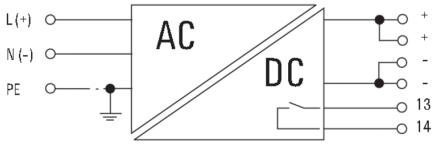
Approval/Certificate/Document of Conformity	UL 61010 Certificate.pdf UL 62368-1 Certificate.pdf Declaration of Conformity
Engineering Data	CAD data – STEP
User Documentation	Operating instructions
Catalogues	Catalogues in PDF-format

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Drawings



Pay attention to polarity of DC connection

Status indicator and status relay

Operational status	Status LED	Relay contact (NO)
Fault-free operation: U_{OUT} > 90 % of the set voltage	green	closed
Fault: U_{OUT} ≤ 85 % of the set voltage	red	opened
Overload pre-warning: I_{OUT} > 90 % I_N (tolerance: ± 5 %) and U_{OUT} > 90 % of the set voltage	yellow	closed

