

Power supply unit - MINI-PS-100-240AC/24DC/1



2938840

<https://www.phoenixcontact.com/pc/products/2938840>

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Please use the following items in new systems: 2904597 or 2909575
DIN rail power supply, 24 V DC/1 A, primary-switched, narrow design

Commercial Data

Item number	2938840
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CMPM13
Catalog Page	Page 38 (IF-2005)
GTIN	4017918927097
Weight per Piece (including packing)	247.5 g
Weight per Piece (excluding packing)	200 g
Customs tariff number	85044030
Country of origin	CN

Technical Data

Input data

AC operation

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC 90 V DC ... 350 V DC
Input voltage range AC	85 V AC ... 264 V AC
Input voltage range DC	90 V DC ... 350 V DC
Voltage type of supply voltage	AC/DC
Inrush current	< 15 A (typical)
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Mains buffering time	> 20 ms (120 V AC) > 110 ms (230 V AC)
Current consumption	0.5 A (85 V AC) 0.2 A (264 V AC) approx. 0.4 A (90 V DC) approx. 0.1 A (350 V DC)
Nominal power consumption	45 VA
Typical response time	< 0.2 s
Input fuse	1.25 A (slow-blow, internal)

Output data

Efficiency	> 80 % (for 230 V AC and nominal values)
Output characteristic	U/I
Nominal output voltage	24 V DC \pm 1 %
Setting range of the output voltage (U_{Set})	22.5 V DC ... 28.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	1 A (up to 60 °C)
POWER BOOST (I_{Boost})	1.3 A
Residual ripple	< 100 mV _{PP}
Output power	24 W
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum no-load power dissipation	< 1.4 W
Power loss nominal load max.	< 4.5 W
Connection in parallel	yes, for assembling redundant systems and increasing efficiency
Connection in series	yes

Signal: Active

Output description	$U_{OUT} > 21.5$ V: High signal
Output voltage	+ 24 V (Signal)
Continuous load current	max. 20 mA

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Connection data

Input

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	7 mm
Screw thread	M3

Output

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	7 mm

LED signaling

Operating voltage display	Green LED
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Signal output: Active

Status display	Green LED ($U_{out} > 21,5$ V DC: LED permanently lit)
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Electrical properties

Number of phases	1.00
Insulation voltage input/output	3 kV (routine test)
	3 kV (type test)

Product properties

Product type	Power supply
MTBF (IEC 61709, SN 29500)	> 500000 h

Insulation characteristics

Protection class	II (in closed control cabinet)
Overvoltage category	III

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

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Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

Mounting

Assembly instructions	alignable: vertical with spacing = 5 cm, horizontal with zero spacing
Mounting position	On horizontal DIN rail NS 35 in acc. with EN 60715
With protective coating	No

Material specifications

Color	green
Housing material	Plastic
Type of housing	Polyamide PA, color: green

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	95 % (at 25 °C, non-condensing)

Standards and regulations

Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
Standard - Safe isolation	DIN VDE 0100-410

Approval data

UL approvals	UL/C-UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D
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Conformity/Approvals

SIL in accordance with IEC 61508	0
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EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-3:2007/A1:2011

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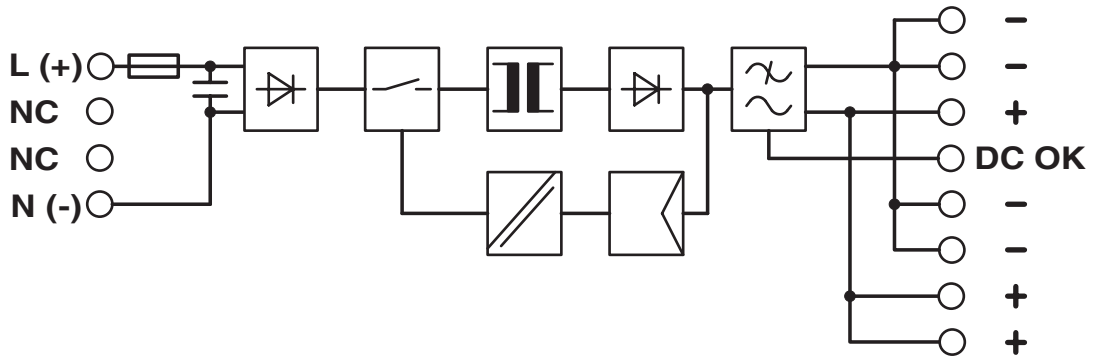


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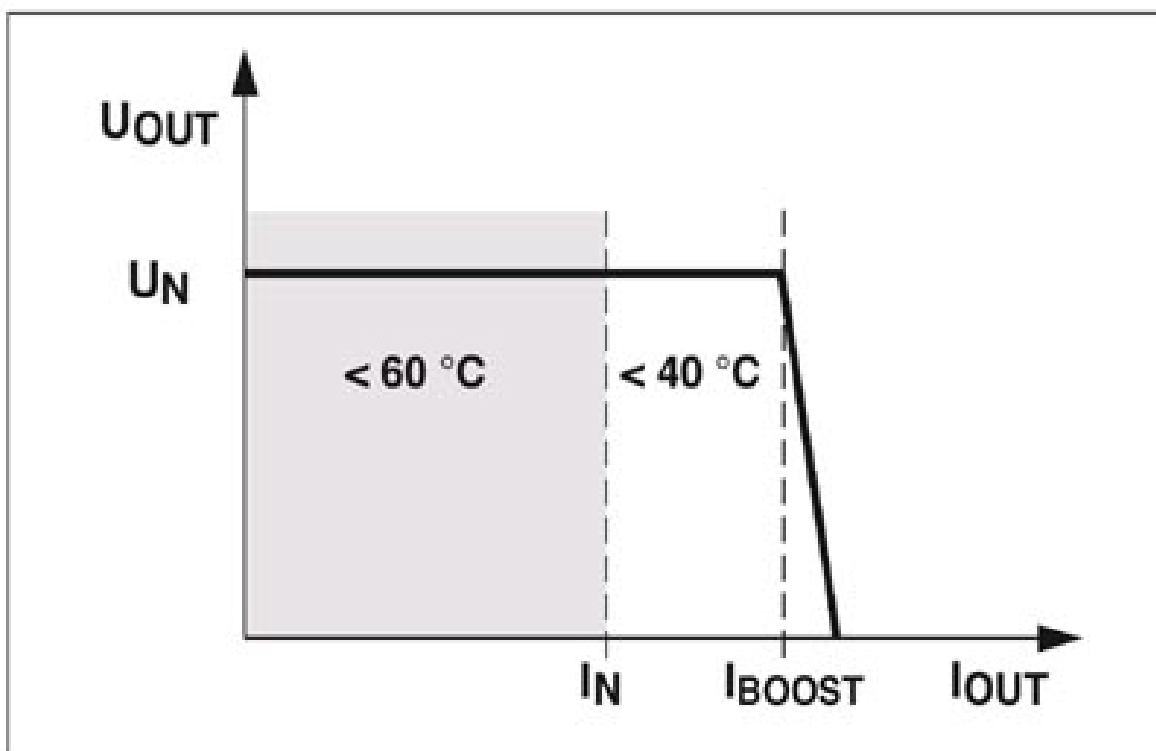
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Drawings

Block diagram



Diagram



POWER BOOST

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Approvals



cUL Recognized
Approval ID: FILE E 211944



UL Recognized
Approval ID: FILE E 211944



EAC
Approval ID: EAC-Zulassung



UL Recognized
Approval ID: FILE E 211944



EAC
Approval ID: RU S-DE.BL08.W.00764



UL Listed
Approval ID: FILE E 123528



cUL Recognized
Approval ID: FILE E 211944



cUL Listed
Approval ID: FILE E 123528



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UL Listed
Approval ID: FILE E 123528



EAC
Approval ID: RU S-DE.BL08.W.00764



cUL Listed
Approval ID: FILE E 199827

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Classifications

ECLASS

ECLASS-9.0	27040701
ECLASS-10.0.1	27040701
ECLASS-11.0	27040701

ETIM

ETIM 8.0	EC002540
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UNSPSC

UNSPSC 21.0	39121000
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Type 3 surge protection device

Type 3 surge protection device - PLT-SEC-T3-230-FM-UT - 2907919

<https://www.phoenixcontact.com/pc/products/2907919>



Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

Type 3 surge protection device

Type 3 surge protection device - TTC-6P-T3-24DC-PT-I - 1027586

<https://www.phoenixcontact.com/pc/products/1027586>



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator for 24 V DC power supplies

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