



Switched-mode power supply unit, 110-120VAC/220-240VAC/24VDC, 10A



Powering Business Worldwide™

Part no. SN3-100-BV8
Article no. 100641

Delivery programme

Product range			SN3 switched-mode power supply units
Description			Primary pulsed power supply, power reserve from up to 50 % Up to 5 devices can be paralleled to increase power and for redundancy
Phases			Single-phase
Input voltage range			85 - 132 V AC 184 - 264 V AC 220 - 350 V DC
Instructions			At 264 V DC additionally suitable, use fuse.
Nominal input voltage			110 - 120 V AC 220 - 240 V AC
Rated output voltage			24 V DC (-1/5%)
Rated output current		A	10
Rated output power		W	240
For use with			easy... MFD... EC4P... XC-CPU... XIOC... PS4...

Technical data

General

Standards			EN 61204, 2006/95/EC, 2004/108/EC, EN 50178, EN 60950, UL 60950, UL 508, SELV (EN 60950)
Degree of protection			
Enclosures			IP20
Terminals			IP20
Protection class			according to EN 61140, Class 1
Mounting			DIN rail (IEC/EN 60715), snap fixing
Mounting position			Horizontal
Heat dissipation		W	part no. 29
Efficiency		%	88

Dimensions

Width		mm	90
Height		mm	130
Depth		mm	130
Weight		kg	1.07
Minimum distance to adjacent devices		mm	horizontal 10, vertical 80

Terminal capacities

			Only operate plug-in terminals off load.
Input circuit			
Flexible with ferrule		mm ²	0.2...2.5 (22...14 AWG)
Flexible without ferrule		mm ²	0.2...2.5 (22...14 AWG)
Massive		mm ²	0.2...2.5 (22...14 AWG)
Output circuit			
Flexible with ferrule		mm ²	0.12...2.5 (26...14 AWG)
Flexible without ferrule		mm ²	0.12...2.5 (26...14 AWG)
Massive		mm ²	0.12...2.5 (26...14 AWG)

Environmental compatibility

Ambient temperature, operation		°C	-25 - +70
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Ambient temperature, full load	°C	0 - +60 (without derating)
Ambient temperature, storage	°C	- 40 - + 85
Climatic proofing		to IEC 60068-2-3, 93% at +40 °C, no condensation
Overvoltage category/pollution degree		according to EN 50178; 2
Climatic class (IEC)		according EN 60721; 3K3
Vibrations (IEC/EN 60068-2-6)		1...57 Hz, amplitude ±0.075 mm; 57...100 Hz, 5 g
Mechanical shock resistance (IEC 60068-2-27)		30 g all directions

Insulation voltage

Inputs/outputs		3 kV AC (type test), 1.2 kV AC (routine test)
Input		1.5 kV AC (type test), 1.2 kV AC (routine test)
Output		350 V AC (routine test)

Electromagnetic compatibility (EMC)

Interference immunity		EN 61000-6-2
ESD	kV	according to EN 61000-4-2, level 4-8KV/15KV
RFI		according to EN 61000-4-3, level 3-10 V/m
Burst		according to EN 61000-4-4, level 4-4 KV
Surge		according to EN 61000-4-5, level 4-2KV symmetrical, Level 3-3KV asymmetrical
Cable-born HF		according to EN 61000-4-6, level 3-10 V
Emitted interference		EN 61000-6-3
Electromagnetic fields	V/m	according to EN 55022, Class B
Cable-born HF		according to EN 55022, Class B

Input circuit

at switch position			
110 V AC			110-120 AC
230 V AC			220-240 AC
at switch position			
110 V AC			85-132 AC
230 V AC			184-264 AC
230 V DC			220-350 DC
Supply frequency			
Rated value	Hz		50/60
Range	Hz		47 - 63
Current consumption			
Switch position 110 V AC	A		Approx. 4.2...4.0
Switch position 230 V AC	A		Approx. 2.4...2.2
Power consumption	W		Normally 269
Inrush current limiter/ i^2t (cold start)			≤ 40 A / approx. 1.8 A ² s
Mains failure bridging	ms		typ. ≤ 50
Run-up time after mains voltage applied	ms		Normally ≤ 10
Transient overvoltage protection			Varistors
Internal input fuse (device protection, not accessible)			6.3 AT
Discharge current to PE	mA		< 3.5 mA

Output circuit

L+, L+, L-, L-			Proof against short-circuit, no-load and overload
Rated output power	W		240
Rated output current $T_u \leq 60$ °C	A		10
Peak output current (power reserves) $T_u \leq 40$ °C	A		Normally ≤ 12.25
Derating 60 °C $\leq T_u \leq 70$ °C			2.5 % per Kelvin temperature increase
Control deviation at			
Load change 10...90 %, static	Normally		±0.1 %
Load change 10...90 %, dynamic	Normally		±3 %
Controller acting time	ms		Normally 1
Input voltage deviation ±10 %			Normally ±0.05 %

Rise time 10...90 %		ms	Normally \approx 5
Residual ripple and switching peaks			20 MHz typically < 50 mV _{SS}
Can be switched in parallel			yes, up to 5 devices for redundancy and for power increase, non symmetrical current
Series connection capability			yes, for voltage increase (max. 2 off)
Resistance to reverse feed			yes, limited to approx. 35 V AC
Power factor correction (PFC)			No
Status indication			OUTPUT OK: LED green
Overload characteristics			→ AWA2727-2317 (www.moeller.net/support)
Behaviour on short-circuit			continuously with current limitation
Current limitation at short-circuit		A	Approx. 19
Short-circuit protection			Proof against sustained short circuit
Overload protection			thermal protection
Capacitive load starting			Not restricted

Notes

At U \approx 264 V DC additionally suitable, use external fuse.

Design verification as per IEC/EN 61439

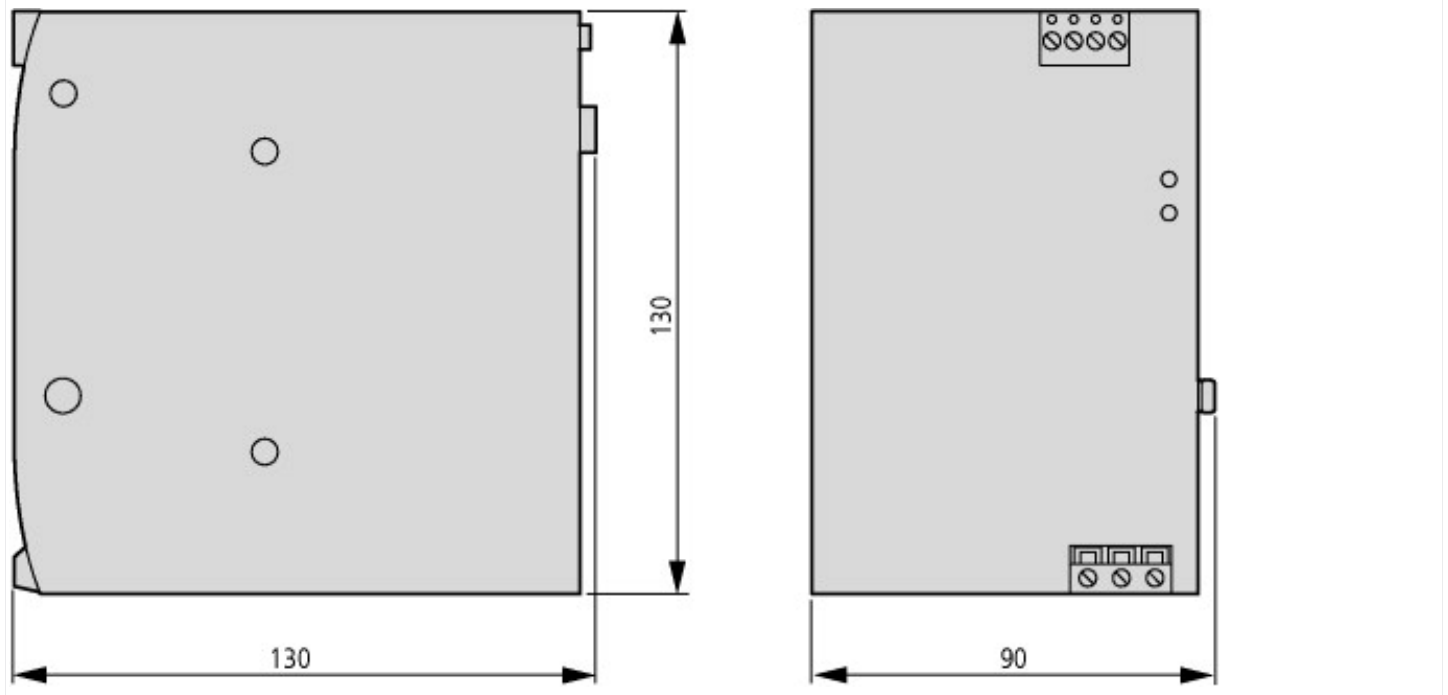
Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	0
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	29
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.2.1 Verification of thermal stability of enclosures			
10.2.2.2 Verification of resistance of insulating materials to normal heat			
10.2.2.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
10.2.4 Resistance to ultra-violet (UV) radiation			
10.2.5 Lifting			
10.2.6 Mechanical impact			
10.2.7 Inscriptions			
10.3 Degree of protection of ASSEMBLIES			
10.4 Clearances and creepage distances			
10.5 Protection against electric shock			
10.6 Incorporation of switching devices and components			
10.7 Internal electrical circuits and connections			
10.8 Connections for external conductors			
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
10.9.3 Impulse withstand voltage			
10.9.4 Testing of enclosures made of insulating material			
10.10 Temperature rise			
10.11 Short-circuit rating			
10.12 Electromagnetic compatibility			
10.13 Mechanical function			

Technical data ETIM 6.0

PLC's (EG000024) / PLC system power supply (EC000599)

Input voltage at AC 50 Hz	V	85 - 264
Input voltage at AC 60 Hz	V	85 - 264
Input voltage at DC	V	220 - 350
Type of voltage (input voltage)		AC/DC
Max. input current AC 50 Hz	A	4.2
Max. input current AC 60 Hz	A	4.2
Max. input current DC	A	1.22
Type of output voltage		DC
Output voltage at AC 50 Hz	V	0 - 0
Output voltage at AC 60 Hz	V	0 - 0
Output voltage at DC	V	0 - 0
Max. output current AC 50 Hz	A	0
Max. output current AC 60 Hz	A	0
Max. output current DC	A	10
Redundancy		Yes
Suitable for safety functions		Yes
Width	mm	130
Height	mm	130
Depth	mm	90

Dimensions



Additional product information (links)

IL05012004Z (IL05012004Z) Power supply unit

IL05012004Z (IL05012004Z) Power supply unit ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05012004Z2011_02.pdf