

Product Datasheet

Characteristic

ABLS1A48025

Regulated Power Supply, 100 to 240V AC, 48V, 2.5A, single phase, Optimized



Main

Range of product	Modicon Power Supply
product or component type	Power supply
Power supply type	Regulated switch mode
Variant option	Optimized
Enclosure material	Aluminium
Input voltage	100...240 V AC single phase 100...240 V AC phase to phase 140...340 V DC
Rated power in W	120 W
Output voltage	48 V DC
Power supply output current	2.5 A

Complementary

Input voltage limits	85...264 V AC without temperature derating 120...375 V DC without temperature derating 85...120 V DC with temperature derating
network frequency limits	50...60 Hz
Earthing system	TN TT IT
Maximum leakage current	1 mA 240 V AC
Input protection type	Integrated fuse (not interchangeable) 4 A External protection (recommended) 20 A Curve C External protection (recommended) 13 A Curve C
Inrush current	30.0 A at 115 V 60.0 A at 230 V
Power factor	0.55 at 115 V AC 0.45 at 230 V AC
Efficiency	85 % at 115 V AC 88 % at 230 V AC
Output voltage limits	44...56 V
Power dissipation in W	23 W
Current consumption	< 2.5 A 115 V AC < 1.4 A 230 V AC < 1.3 A 140 V DC
Response time	< 1 s

Holding time	> 20 ms 115 V AC > 40 ms 230 V AC
Load capacitance	4000 µF
residual ripple	< 150 mV
Meantime between failure [MTBF]	700000 h at 25 °C, full load conforming to SR 332
Output protection type	Against overload and short-circuits, protection technology: automatic reset Against over temperature, protection technology: manual reset Against overvoltage, protection technology: manual reset
Connections - terminals	Screw connection: 0.5...4 mm², (AWG 20...AWG 12) without wire end ferrule for output Screw connection: 0.5...2.5 mm², (AWG 20...AWG 14) with wire end ferrule for output Screw connection: 0.75...4 mm², (AWG 18...AWG 12) without wire end ferrule for input Screw connection: 0.75...4 mm², (AWG 18...AWG 12) with wire end ferrule for input
Line and load regulation	< 0.5 % at 0 to 100 % load at 25 °C < 1 % at full voltage range in line at 25 °C
Status LED	1 LED (green) output voltage
Depth	117.6 mm
Height	123.6 mm
Width	40 mm
net weight	0.55 kg
Output coupling	Parallel
Mounting support	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 Double-profile DIN rail
Supply	SELV conforming to IEC 60950-1 SELV conforming to IEC 60204-1 SELV conforming to IEC 60364-4-41
Dielectric strength	3000 V AC with input to output
Service life	10 year(s)
Overvoltage category	II

Environment

Standards	IEC 62368-1 EN/IEC 61204-3 IEC 61000-6-1 IEC 61000-6-2 IEC 61000-6-3 IEC 61000-6-4 IEC 61000-3-2 EN 61000-3-3 UL 62368-1 CSA C22.2 No 62368-1 UL 508 CSA C22.2 No 107.1 EN/IEC 62368-1
Product certifications	CE CUL listed CUL recognized RCM CB Scheme EAC KC
Operating altitude	< 5000 m
Shock resistance	150 m/s² for 11 ms
IP degree of protection	IP20
Ambient air temperature for operation	-20...-10 °C with current derating of 2 % per °C mounting position A < 2000 m -10...40 °C without derating mounting position A 115 V AC < 2000 m -10...50 °C without derating mounting position A 230 V AC < 2000 m 40...70 °C with current derating of 1.67 % per °C mounting position A 115 V AC < 2000 m 50...70 °C with current derating of 2.5 % per °C mounting position A 230 V AC < 2000 m
Electrical shock protection class	Class I

Pollution degree	2
Vibration resistance	3 mm (f= 2...9 Hz) conforming to IEC 60068-2-6 10 m/s² (f= 9...200 Hz) conforming to IEC 60068-2-6
Electromagnetic compatibility	Immunity to electrostatic discharge - test level: 8 kV (contact discharge) conforming to IEC 61000-4-2 Immunity to electrostatic discharge - test level: 15 kV (air discharge) conforming to IEC 61000-4-2 Immunity to conducted RF disturbances - test level: 15 V/m (80 MHz...2 GHz) conforming to IEC 61000-4-3 Immunity to conducted RF disturbances - test level: 5 V/m (2...2.7 GHz) conforming to IEC 61000-4-3 Immunity to conducted RF disturbances - test level: 5 V/m (2.7...6 GHz) conforming to IEC 61000-4-3 Immunity to fast transients - test level: 4 kV (on input-output) conforming to IEC 61000-4-4 Surge immunity test - test level: 4 kV (between power supply and earth) conforming to IEC 61000-4-5 Surge immunity test - test level: 3 kV (between phases) conforming to IEC 61000-4-5 Immunity to conducted RF disturbances - test level: 15 V (0.15...80 MHz) conforming to IEC 61000-4-6 Immunity to magnetic fields - test level: 30 A/m (50...60 Hz) conforming to IEC 61000-4-8 Immunity to voltage dips conforming to IEC 61000-4-11 Disturbing field emission conforming to EN 55016-2-3 Limits for harmonic current emissions conforming to IEC 61000-3-2 conforming to EN 55016-1-2 conforming to EN 55016-2-1
Electromagnetic emission	Conducted emissions conforming to IEC 61000-6-3 Radiated emissions conforming to IEC 61000-6-4

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.1 cm
Package 1 Width	17.3 cm
Package 1 Length	17.9 cm
Package 1 Weight	690 g
Unit Type of Package 2	S03
Number of Units in Package 2	13
Package 2 Height	30 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	9.734 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	X
RoHS exemption information	Yes
Environmental Disclosure	ENVPEP2007005EN
Circularity Profile	ENVEOLI2007005EN
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins