Product data sheet
Characteristics

ABLS1A24100
Regulated Power Supply, 100 to 240V AC, 24V, 10A, 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	240 W
Output voltage	24 V DC
Power supply output current	10 A

Complementary

Input voltage limits	85...264 V AC without temperature derating 120...375 V DC without 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) 6.3 A External protection (recommended) 20 A Curve B External protection (recommended) 20 A Curve C External protection (recommended) 6 A Curve B External protection (recommended) 6 A Curve C
Inrush current	30.0 A at 115 V 60.0 A at 230 V
Power factor	0.95 at 115 V AC 0.95 at 230 V AC
Efficiency	85 % at 115 V AC 88 % at 230 V AC
Output voltage limits	22...28 V
Power dissipation in W	36 W
Current consumption	< 2.8 A 115 V AC < 1.4 A 230 V AC < 2.4 A 140 V DC
Response time	< 1 s
Holding time	> 20 ms 115 V AC > 20 ms 230 V AC
Load capacitance	8000 MF
Residual ripple	< 120 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, (20 AWG...12 AWG) without wire end ferrule for output Screw connection: 0.5...2.5 mm², (20 AWG...14 AWG) with wire end ferrule for output Screw connection: 0.75...4 mm², (18 AWG...12 AWG) without wire end ferrule for input Screw connection: 0.75...4 mm², (18 AWG...12 AWG) 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	60 Mm
Net weight	0.8 Kg
Output coupling	Parallel Serial
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
Product certifications	CE[RETURN]CUL listed[RETURN]CUL recognized[RETURN]RCM[RETURN]CB Scheme[RET
Operating altitude	< 5000 m
Shock resistance	150 m/s² for 11 ms
IP degree of protection	IP20
Ambient air temperature for operation	-20…40 °C without derating mounting position A 115 V AC < 2000 m -20…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 610 Immunity to electrostatic discharge - test level: 15 kV (air discharge) conforming to IEC 61000- Immunity to conducted RF disturbances - test level: 15 V/m (80 MHz...2 GHz) conforming to IE Immunity to conducted RF disturbances - test level: 5 V/m (2...2.7 GHz) conforming to IEC 610 Immunity to conducted RF disturbances - test level: 5 V/m (2.7...6 GHz) conforming to IEC 610 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 610 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 61 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	7.000 Cm
Package 1 Width	17.500 Cm
Package 1 Length	18.500 Cm
Package 1 Weight	990.000 G
Unit Type of Package 2	S03
Number of Units in Package 2	9
Package 2 Height	30.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	9.495 Kg
Unit Type of Package 3	P12
Number of Units in Package 3	216
Package 3 Height	105.000 Cm
Package 3 Width	80.000 Cm
Package 3 Length	120.000 Cm
Package 3 Weight	241.000 Kg

Offer Sustainability

Recyclability potential, in %	12
Total lifecycle Carbon footprint	1 799 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	7.615912046201498
Carbon footprint of the manufacturing phase [A1 to A3]	8 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.32782445220859463
Carbon footprint of the distribution phase [A4]	0.3 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.013232829626003108
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	1789.5952095872728
Carbon footprint of the use phase [B2, B3, B4, B6]	1 790 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	1.534724708115669
Carbon footprint of the end-of-life phase [C1 to C4]	2 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	1799
Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
SCIP Number	698d9b2a-7a6a-4b8f-a149-489156f55645
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised