

Regulated Power Supply, 380...500V AC, 24V, 5A, 3 phases, Universal

ABLU3A24050

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Modicon Power Supply
Product or Component Type	Power supply
Power supply type	Regulated switch mode
Variant option	Universal
Enclosure Material	Metal
Nominal input voltage	380500 V AC three phase
Kw Rating	120 W
Output voltage	24 V DC
Power supply output current	5 A
Permissible temporary current boost	1.5 x In for 5 seconds)

Complementary

Efficiency at full load	320575 V AC 3 phase
Nominal network frequency	5060 Hz
Network system compatibility	TN
	TT
	IΤ
Maximum leakage current	2 mA 500 V AC
Input protection type	Integrated fuse (not interchangeable) 3.15 A
	External protection (recommended)
Inrush current	25 A 380 V
	25 A 500 V
Power factor	0.40 at 380 V AC
	0.40 at 500 V AC
Efficiency	86.5 % 380 V AC
	86.5 % 500 V AC
Output voltage adjustment	2428 V
Power dissipation in W	18.5 W
Current consumption	< 0.5 A 380 V AC
	< 0.4 A 500 V AC
Turn-on time	<1s
Holding time	> 20 ms 380 V AC
	> 40 ms 500 V AC
Startup with capacitive loads	200000 μF
Residual ripple	< 100 mV

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Meantime between failure [MTBF]	BF] 2168900 h at 77 °F (25 °C), full load conforming to SR 332 816200 h at 131 °F (55 °C), 80 % load conforming to SR 332	
Output protection type	Against overload and short-circuits, protection technology: manual or automatic reset by switch	
	Against over temperature, protection technology: automatic reset Against overvoltage, protection technology: manual reset	
Connections - terminals	Screw connection 0.756 mm², AWG 18AWG 10) without wire end ferrule output Screw connection 0.754 mm², AWG 18AWG 12) with wire end ferrule output Screw connection 0.756 mm², AWG 18AWG 10) without wire end ferrule input Screw connection 0.754 mm², AWG 18AWG 10) with wire end ferrule input Cage clamp 0.21.5 mm², AWG 22AWG 16) without wire end ferrule diagnostic relay Cage clamp 0.20.75 mm², AWG 22AWG 18) with wire end ferrule diagnostic relay Cage clamp 0.20.75 mm², AWG 22AWG 18) with wire end ferrule shut down input	
Line and load regulation	< 0.17 % network 100 % load in line at 77 °F (25 °C) < 0.6 % +/- 0.5 % network 150 % load at 77 °F (25 °C)	
Status LED	LED (green and red) product status LED (Green) input voltage	
Depth	4.9 in (125.3 mm)	
Height	4.9 in (124 mm)	
Width	1.5 in (38 mm)	
Net Weight	1.32 lb(US) (0.60 kg)	
Marking	CE UKCA	
Mounting support	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 Double-profile DIN rail	
Supply	SELV IEC 60950-1 SELV IEC 60204-1 SELV IEC 60364-4-41	
Dielectric strength	4000 V AC with input to output 2000 V AC with input to ground 1500 V AC with output to ground 4000 V AC with input to diagnostic relay 500 V AC with output to diagnostic relay 1500 V AC with diagnostic relay to ground with shutdown input not isolated from output	
Diagnostic relay	Electromechanical relay 1000.0 mA 30 V	
Service life	10 year(s) 104 °F (40 °C) 80 % load	
Overvoltage category	III 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	
	CSA C22.2 No. 107.1	

Product certifications	CE	
	CUL Listed	
	CUL Recognized	
	RCM	
	CB Scheme	
	EAC	
	KC	
	UKCA	
	CURus	
Operating altitude	< 5000 m overvoltage category III	
	overvoltage category II	
Shock resistance	150 m/s² 11 ms	
IP degree of protection	IP20	
Ambient air temperature for operation	-13131 °F (-2555 °C) without current derating mounting position A < 6561.68 ft (2000 m)	
	131158 °F (5570 °C) with current derating of 3.3 % per °C mounting position A <	
	6561.68 ft (2000 m)	
Electrical shock protection class	Class I	
Pollution degree	2	
Vibration resistance	3.5 mm (f= 311.9 Hz) conforming to IEC 60068-2-6	
	20 m/s² (f= 11.9150 Hz) conforming to IEC 60068-2-6	
Electromagnetic immunity	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 MHz2 GHz) conforming to IEC 61000-4-3	
	Immunity to conducted RF disturbances - test level: 5 V/m (22.7 GHz) conforming to IEC 61000-4-3	
	Immunity to conducted RF disturbances - test level: 5 V/m (2.76 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 (0.1580 MHz) conforming	
	to IEC 61000-4-6	
	Immunity to magnetic fields - test level: 30 A/m (5060 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 IEC 61000-6-3	

Ordering and shipping details

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Category	US1CP1222524
Discount Schedule	CP12
GTIN	3606482185234
Returnability	Yes
Country of origin	TH

Radiated emissions IEC 61000-6-4

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	2 756 in (7 000 cm)

Package 1 Width	7.087 in (18.000 cm)
Package 1 Length	7.480 in (19.000 cm)
Package weight(Lbs)	31.958 oz (906.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	10
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	21.081 lb(US) (9.562 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	80
Package 3 Height	29.528 in (75.000 cm)
Package 3 Width	23.622 in (60.000 cm)
Package 3 Length	31.496 in (80.000 cm)
Package 3 Weight	185.180 lb(US) (83.996 kg)



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability

Environmental Disclosure Product Environmental Profile

Use Better

Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
REACh Regulation	REACh Declaration

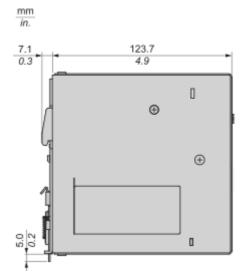
Use Again

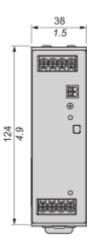
○ Repack and remanufacture	
Circularity Profile	End of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

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Dimensions Drawings

Dimensions



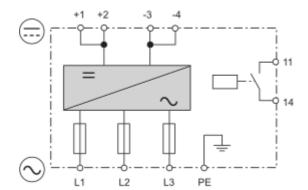


Product data sheet

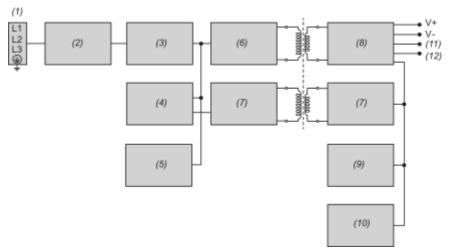
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Connections and Schema

Wiring



Block Diagram



(1): Input

(2): EMI filter, inrush current limit

(3): AC/DC converter
(4): Start-up circuit
(5): PWM controller
(6): Flyback converter
(7): Auxillary bias circuit

(9): Opto coupler & feedback controller

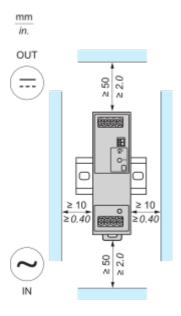
(10): OVP & OTP circuit (11): DC OK LED (12): DC OK relay contact

(8): Output rectifier

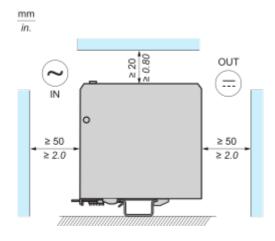
Mounting and Clearance

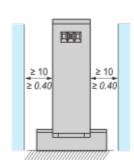
Mounting

Mounting Position A

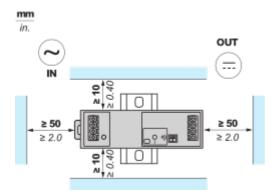


Mounting Position B





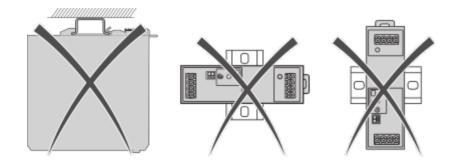
Mounting Position C



Product data sheet

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Incorrect Mounting

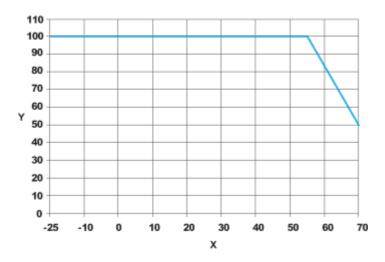


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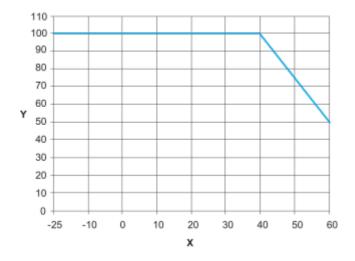
Performance Curves

Performance Curve

Mounting Position A

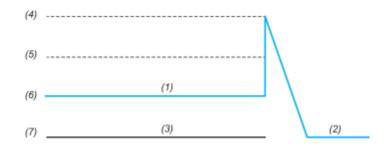


Mounting Position B and C



X : Surrounding Air Temperature (°C)
Y : Percentage of Maximum Load (%)

Overvoltage Protection Behavior



Overvoltage range: 26...36 VDC, Latch Mode

- (1): Variable output voltage range
- (2): Latch
- (3): Typical overvoltage condition as seen at the output
- (4): Maximum overvoltage protection level

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(5) : Overvoltage protection(6) : Norminal output voltage

(7) : Zero output