

CXLDA120F Series (Single Phase)

Single Output 120W AC-DC DIN Rail



General Description

CXLDA120F Series 120W power supplies feature high reliability and efficiency in a slim DIN Rail enclosure. The power supply has peak power capability, exceptional Electro Magnetic Susceptibility (EMS) and Electro Magnetic Compatibility (EMC) and it fulfills the safety requirements for IEC61010-2-201 as well as IEC62368-1.

Features

- 85 to 264VAC input voltage range with PFC
- High Efficiency up to 92%
- Peak Power capacity to 150% rated power
- -40°C to 70°C wide range operation
- Built-in DC OK relay contact
- Operating altitude up to 5000 meters
- Protections: Short-circuit/
Over-voltage/ Over-current/
Over temperature
- Design to meet SEMI F47
- 5 years warranty
- Made in Vietnam



Applications

- Industrial & Automation
- Security & Surveillance
- Electrical & Mechanical Equipment
- Communication & Networking
- Charging & Energy Solutions
- Test & Measurement Equipment

Model Numbering

CXLDA	120	F	-	XX	-	XX
DIN Rail	Output Power 120W => 120	Input F=>Single phase wide input range		Output Voltage 12V => 12 24V => 24 48V => 48		Options T: Screw interface T2: Spring interface T4: Push-In interface

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Electrical Specification

MODEL	CXLDA120F-12	CXLDA120F-24	CXLDA120F-48	
OUTPUT	DC Voltage	12V	24V	48V
	Rated Current	10A	5A	2.5A
	Rated Power	120W	120W	120W
	Peak Current (Max.) (note#4)	15A	7.5A	3.75A
	Peak Power (note#4)	180W (3 sec.)	180W (3 sec.)	180W (3 sec.)
	Output adj. range (note#4)	12 - 14V	24 - 28V	48 - 55V
	Line Regulation	±0.5%	±0.5%	±0.5%
	Load Regulation	±1%	±1%	±1%
	Startup Time; Rise Time (Max.)	2000ms; 50ms		
	Hold-up Time (Typ.)	20ms at 115Vac, Full Load		
	Ripple & Noise (Max.) (At Full Load) (note#1)	100mVp-p	100mVp-p	120mVp-p
INPUT	Nominal Input Voltage Range	100 to 240Vac, 140 to 340Vdc (note#2)		
	Input Voltage Range	85 to 264Vac, 127 to 375Vdc (note#2)		
	Input Frequency	47 to 63Hz		
	Input Current (Typ.)	1.3A at 115Vac, 0.65A at 230Vac		
	Inrush Current (Typ.)	40A at 230Vac (Cold Start)		
	Power Factor (Min.)	0.9		
	Efficiency (Typ.)	90%	92%	92%
	Leakage Current (Max.)	0.75mA at 240Vac/60Hz		
No Load Power Consumption (Max.)	1.5W			
FUNCTION	DC OK	Relay output (ON: shorted, OFF: Opened) 30Vdc/1A, 30Vac/0.5A		
PROTECTION	Over Voltage Protection	<16V, Auto-recovery	<35V, Auto-recovery	<63V, Auto-recovery
	Over Current Protection	150% to 185% of Rated Current, Hiccup mode, Auto-recovery mode		
	Short Current Protection	No damage, auto-recovery mode protection until fault is removed		
	Over Temperature Protection	No damage, auto-recovery mode protection until fault is removed		
ENVIRONMENT	Working Temperature	-40 to +70°C (Refer to "De-rating Curve")		
	Working Humidity	20% to 95% RH non-condensing		
	Storage Temperature/ Humidity	-40 to +85°C, 5 to 95% RH non-condensing		
	Vibration	10 to 500Hz, 2G, 10minutes non-operating		
	Operating Altitude (Max.) (note#3)	5000m		
Shock	20G			
MECHANICAL	Input wire	AWG 18-10		
	Output wire	AWG 16-10		
	DC OK wire	AWG 22-18		
	Terminal	Screw/Spring/Push-In		

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EMC & SAFETY	EMI	Conducted Emission	EN/BS EN 55032 (CISPR32), FCC: Class B
		Radiated Emission	EN/BS EN 55032 (CISPR32), FCC: Class B
		Harmonic Current	IEC61000-3-2, Class A
		Voltage Flicker	IEC61000-3-3
	EMS	ESD	IEC61000-4-2, Criteria A
		Radiated Immunity	IEC61000-4-3, Criteria A
		EFT/Burst	IEC61000-4-4, Criteria A
		Surge	IEC61000-4-5, Criteria A
		Conducted Immunity	IEC61000-4-6, Criteria A
		Magnetic Field Immunity	IEC61000-4-8, Criteria A
		Voltage Dips, interruption	IEC61000-4-11, Criteria A SEMI F47, Criteria A
	Safety Standard		
	UL61010-1/61010-2-201, EN61010-1/61010-2-201 (Planned), UL62368-1, EN62368-1 (Planned)		
	Isolation Voltage		I/P-O/P: 3000VAC; I/P-PE: 2000VAC; O/P-PE: 500VAC; O/P-DC OK: 500VAC
Isolation Resistance (Min.)		I/P-O/P: 100MΩ; I/P-PE: 100MΩ; O/P-PE: 100MΩ, at 500VDC, 70%RH	
ENVIRONMENTAL COMPLIANCE	RoHS Compliance	2011/65/EU	
OTHERS	Warranty (Min.)	5 years	
	MTBF (Min.)	2000K hours	
	Dimension (W*H*D)	30 mm*124 mm*117 mm	
	Weight (Max.)	520g	

Notes

All specifications are defined at 230Vac/50Hz, rated power, and 25°C ambient unless otherwise specified.

#1: Ripple and noise are measured with a 0.1 μF ceramic capacitor and a 47 μF electrolytic capacitor connected in parallel, using a 20 MHz bandwidth. Ripple and noise may be higher at light load than at full load.

#2: The safety approval is for only AC input, and the internal fuse is only applicable to AC input. A DC-rated fuse shall be connected to the input when the unit is operated with a DC input. The input has non-polarity for DC input.

#3: When operating altitude is higher than 2000m (6500 feet), the environment temperature de-rating factor is 0.36°C /100m.

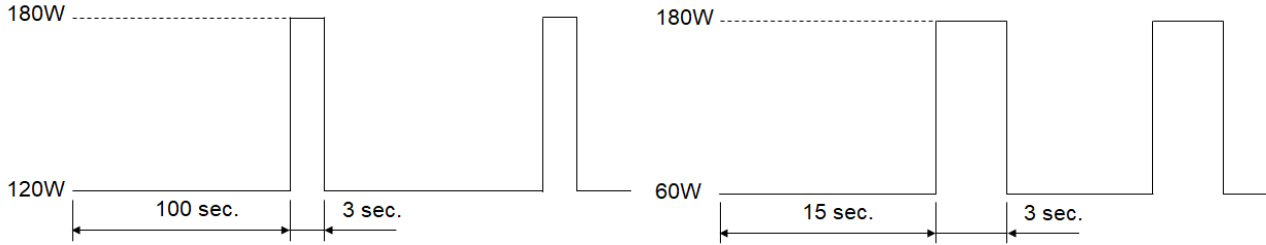
#4: The safety approval is different. Please contact us for details.

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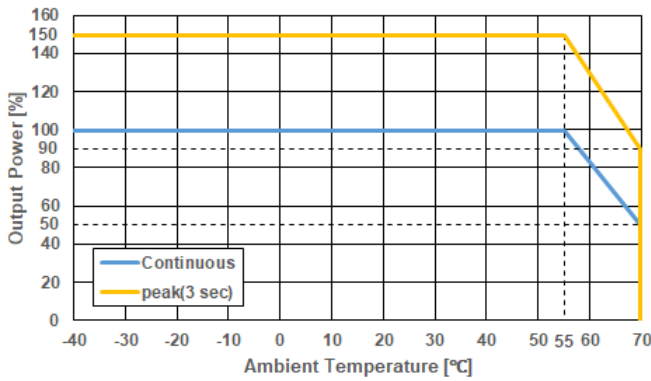


Peak Load

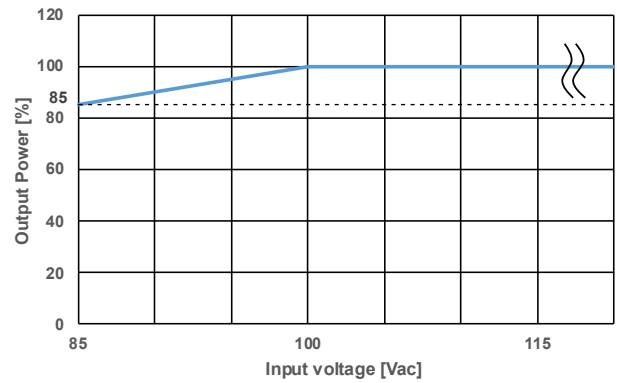


De-rating Curve

Output Power VS Ambient Temperature



Output Power VS Input Voltage



*The safety approval is different. Please contact us for details.

At -40°C, the unit may require additional time to start under full load. To avoid this delay, start the unit under no-load conditions and begin drawing load current after 5 seconds. Alternatively, the unit can be started under full load at temperatures above -25°C.

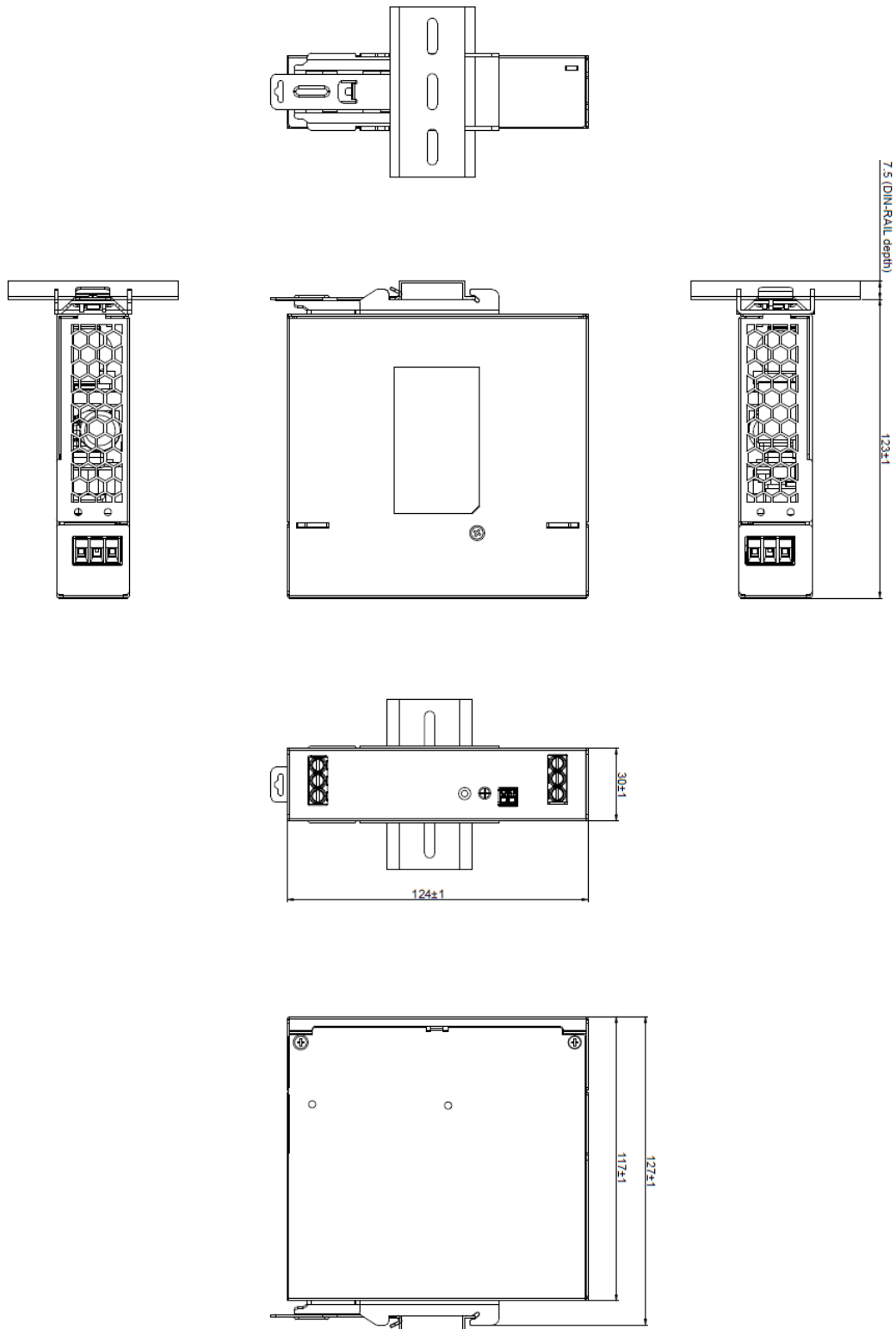
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Mechanical and Connector Information

Screw type (Model Numbering: T): Unit: mm

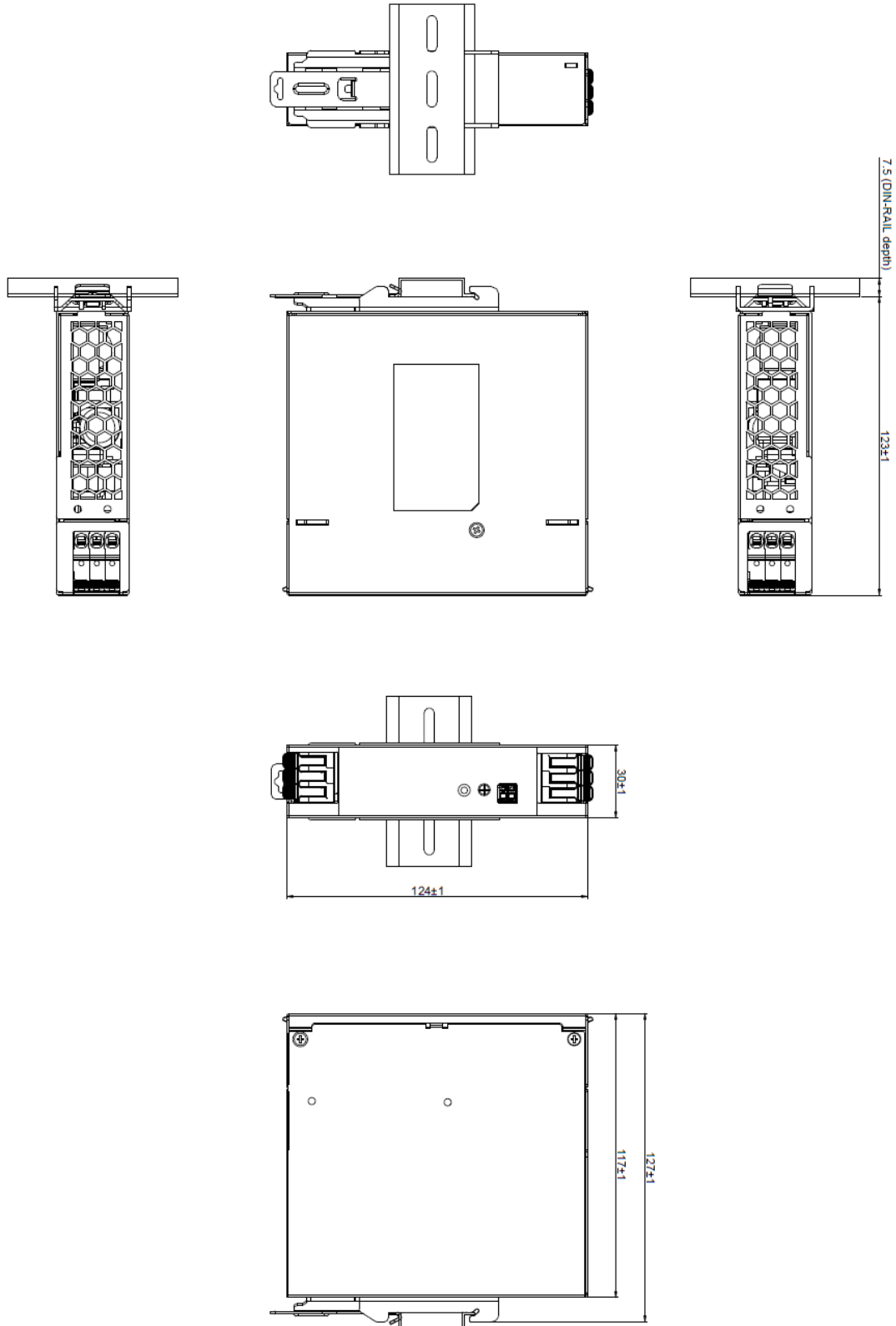


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Spring type (Model Numbering: T2): Unit: mm

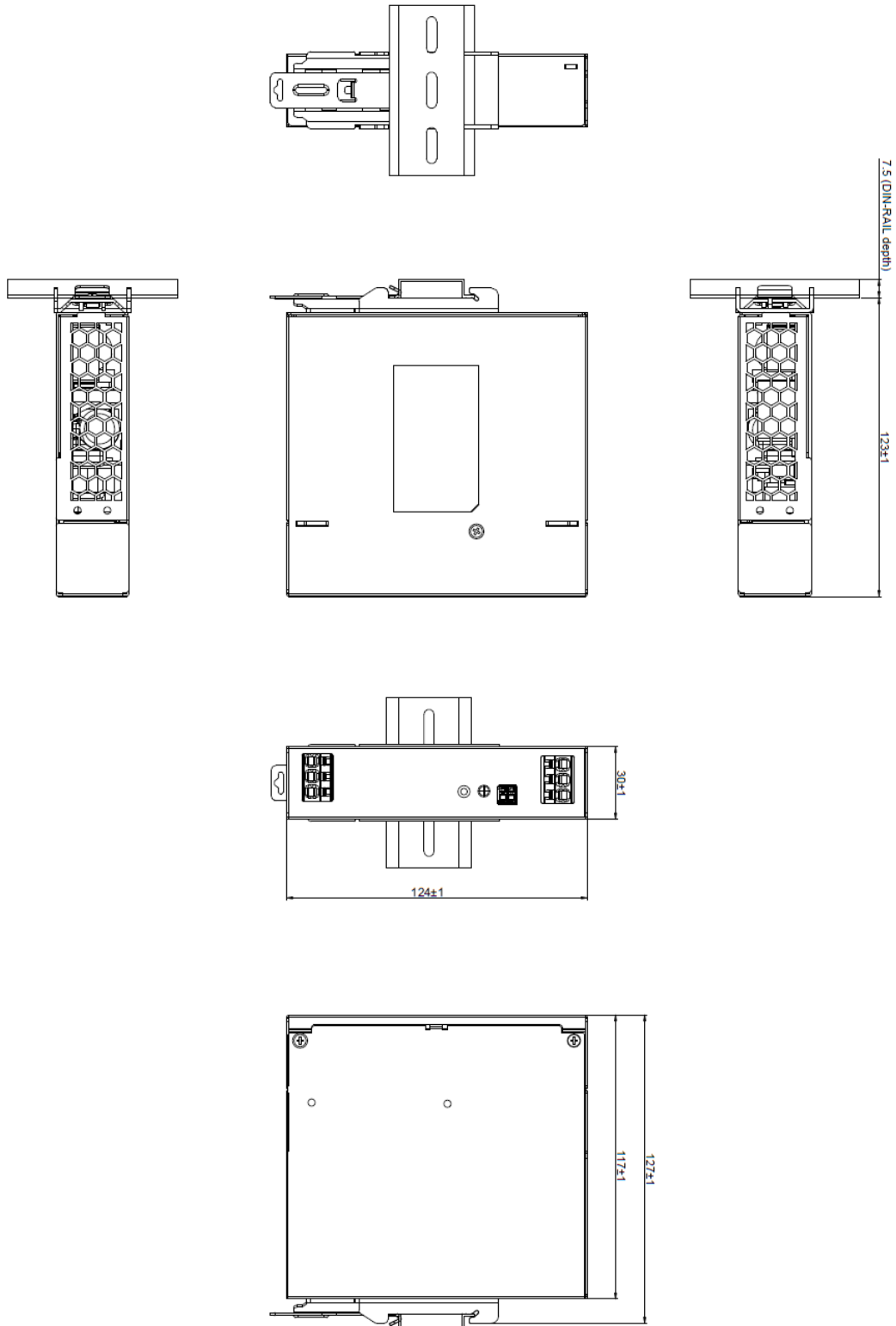


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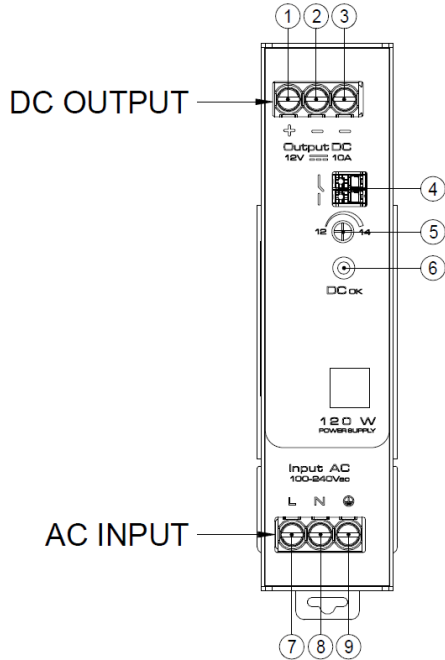


Push in type (Model Numbering: T4): Unit: mm



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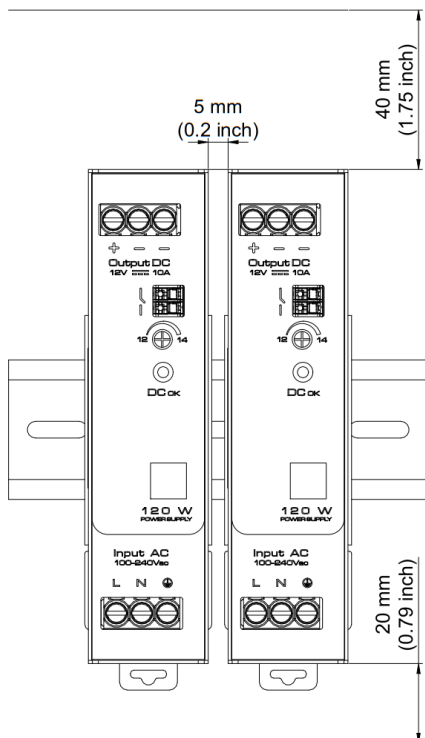
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Terminal Number	Terminal Name	Function
1	+VOUT	+Output terminal
2	-VOUT	-Output terminal
3	-VOUT	-Output terminal
4	DC OK relay	DC OK relay contact Rating : 30 Vdc, 1 A (Resistive load)
5	TRM	Adjustment of output voltage
6	DC OK LED	DC OK Power on light
7	AC(L)	Input terminal
8	AC(N)	
9	PE	Protective earth terminal

Mounting information

Vertical Mounting



Applicable DIN rail

Admissible DIN-rail: TS35/7.5 or TS35/15



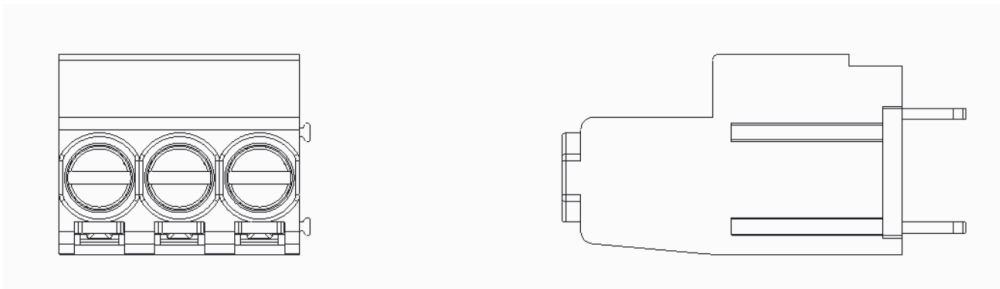
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Terminal Connector

Screw type (Model Numbering: T):

Input/Output terminal block



Number of positions: 3P

Pitch: 6.35mm

Rated Voltage: 600V

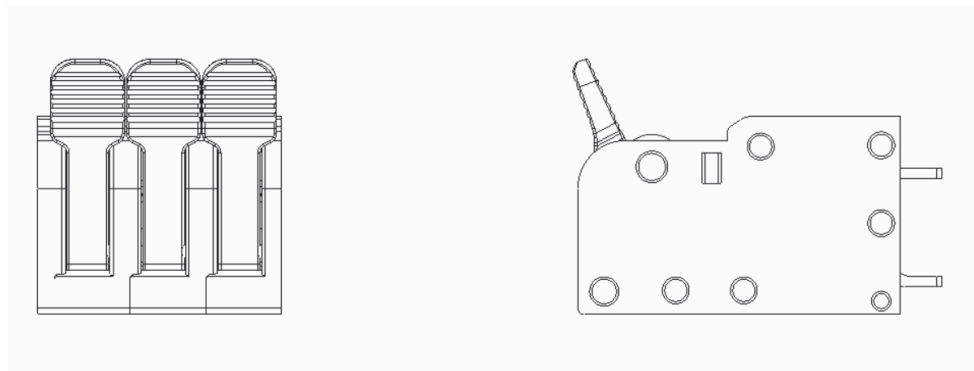
Rated Current: 30A

Connection type: Screw Connection

Flammability: UL94 V0

Spring type (Model Numbering: T2):

Input/Output terminal block



Number of positions: 3P

Pitch: 6.35mm

Rated Voltage: 600V

Rated Current: 30A

Connection type: Spring Connection

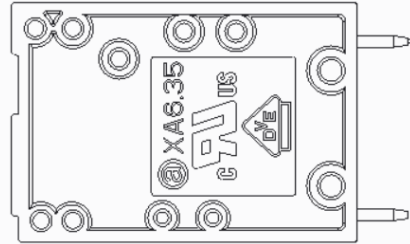
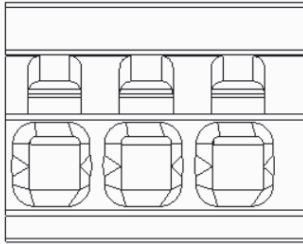
Flammability: UL94 V0

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Push in type (Model Numbering: T4):

Input/Output terminal block



Number of positions: 3P

Pitch: 6.35mm

Rated Voltage: 600V

Rated Current: 30A

Connection type: Push in Connection

Flammability: UL94 V0