

Switched Mode Power Supply

- Excellent Load & Line Regulation
- Universal input voltage range
- Excellent Load Transient Response
- High Noise Immunity & Low Ripple
- High Efficiency of Operation
- Wide operating temperature - 30°C to 70°C
- Overload, Over voltage, Short Circuit & Over Temperature Protection
- High MTBF > 700,000 hrs
- Over Voltage category II
- Pollution degree II
- Small form factor
- Din rail mount
- CE & RoHS compliance



Ordering Information

Cat. No.	Description
PS120W24V	120W, 230VAC, 24VDC, 5A , Switched Mode Power Supply

Switched Mode Power Supply



Cat. No.	PS120W24V
Input Supply Characteristics	
Supply Voltage Range	90V to 264V AC 127V to 375V DC
Frequency Range	47 to 63Hz
Efficiency	87.00%
AC Current	< 1.40 A @ 115 VAC, < 0.80 A @ 230 VAC
Inrush Current	20A/115VAC; 35A/230VAC
No Load Power Consumption	<0.5W @230V AC
Output Characteristics	
Output DC voltage	24V
Output DC voltage adjustment range	22V to 28V DC
Output Current	5A @24V DC
Output Power	120W
Line Regulation	+/- 0.5%
Load Regulation	+/- 0.5%
Ripple & Noise	120mV p-p max
Startup Time	<1000 ms @ nominal input (100% load)
Rise Time	30msec at full load
Hold up time	>35 ms @ 115 VAC, > 70 ms @ 230 VAC (100% load)
Dynamic Response (Overshoot & Undershoot O/P Voltage)	± 5% @ 85 & 264 Vac input, 10-90% load (Slew Rate: 0.1A/μS, 50% duty cycle @ 5Hz & 1KHz)
Start-up with Capacitive Loads	8,000μF Max
Protections	
Over Voltage	28.8V to 33.6V (Output voltage turn off, Restart power to turn on device)
Over load/ Over current	105 to 150% of rated load current, Auto-recovery continuous current limite mode.
Over temperature	Shut down output voltage, re-power ON to recover
Short circuit	Hiccup mode, recovers automatically after fault recovery
Protection against shock	Class 1 with Protection Earth connection, Earthing terminal required
Internal Input Fuse	4A / 250V
Recommended breaker for input	6A ... 16 A (Characteristics B,C,D,K or comparable)
User Interface	
Pot	To set output voltage
LED Indication	
Green LED	ON : DC O/P OK
Environmental	
Operating Temperature	-30°C to +70°C
Storage Temperature / Humidity	-40°C to +85°C
Operating Relative humidity	20 - 90% RH non-condensing
Operating Altitude	Up to 2000 meters
Over voltage Category	II
Pollution degree	2
Vibration Test	Operating & Non-Operating as per : IEC 60068-2-6 20 - 500Hz (5g)
Mechanical	
Case chassis	Aluminium
Dimensions (WxHxD)	40x128.8x128.3 (in mm)
Unit weight	Approx. 510g
Cooling system	Convection

Switched Mode Power Supply



Cat. No.	PS120W24V
Terminal Type	Front facing terminal
Wire	AWG 26 - 10 / 24 - 12
Mounting type	DIN Rail Mount
Reliability	
MTBF	> 700,000 hrs as per IEC 62380
Certification	

EMI / EMC

Harmonic Current Emission	IEC 61000-3-2 CLASS A
Voltage Flicker and Fluctuations	IEC 61000-3-3 CLASS A
ESD	IEC 61000-4-2 LEVEL IV
Radiated Susceptibility	IEC 61000-4-3 LEVEL III
Electrical Fast Transients	IEC 61000-4-4 LEVEL III
Surge	IEC 61000-4-5 LEVEL IV Common Mode- 4kV, Diff Mode- 2kV
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips and Interruptions (AC)	IEC61000-4-11
Voltage Dips and Interruptions (DC)	IEC 61000-4-29
Conducted Emission	CISPR 32 Class B
Radiated Emission	CISPR 32 Class B

Safety Compliance

Test Voltage Between I/P & O/P	UL508 3KV
Test Voltage Between I/P & Earth	UL508 2KV
Test Voltage Between O/P & Earth	UL508 1.25KV
Impulse Voltage Between I/P & O/P	IEC 61204 4KV
Insulation Resistance	UL508 >100MOhm
Leakage Current	UL508 <1mA@240VAC

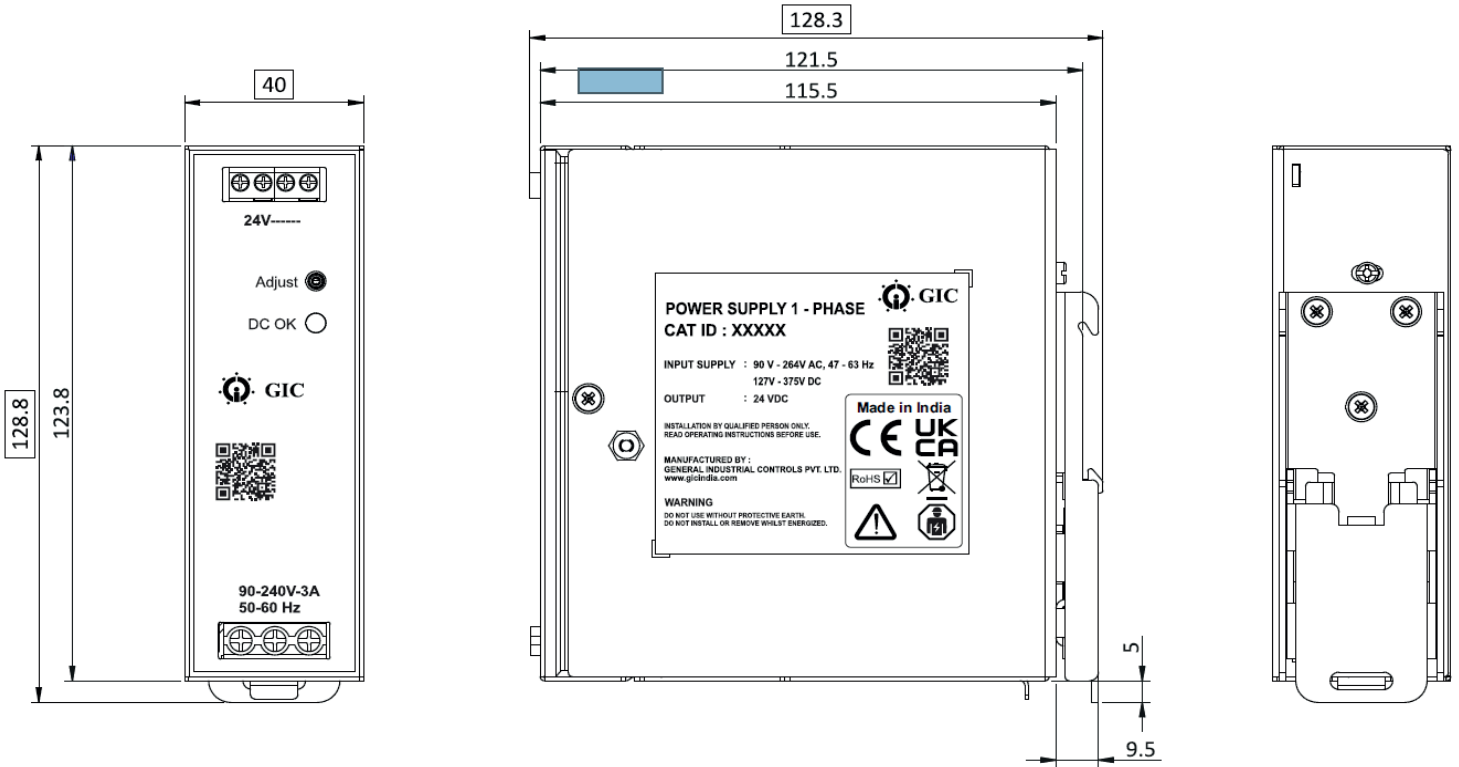
Environmental Compliance

Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C
Relative Humidity	20-90% RH (Non-condensation)
Max. Operating Altitude	2000 meters
Vibration	IEC 60068-2-6 20-500Hz (59)

Switched Mode Power Supply

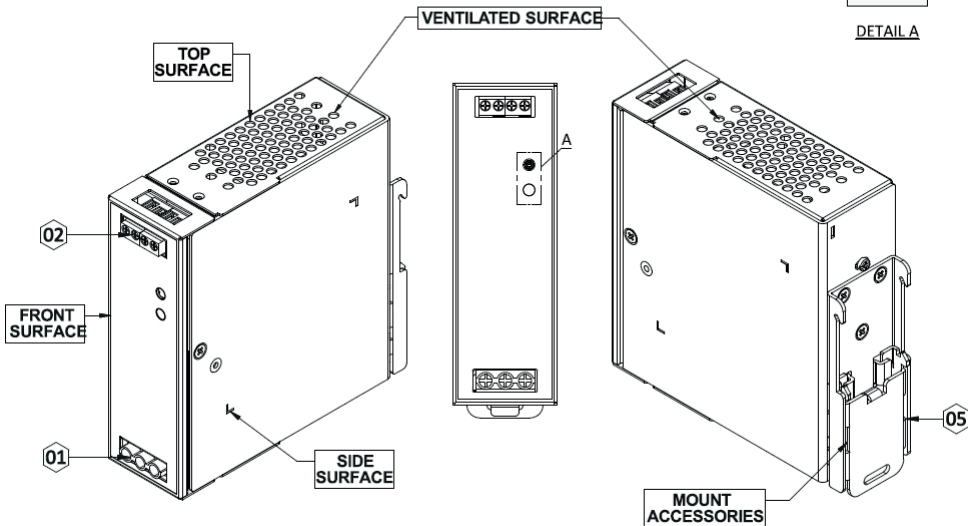
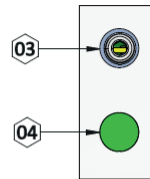
Overall Dimensions of PS120W24V and PS240W24V :

WXHxD= 40 X 128.8 X 128.3 MM (1.574 X 5.070 X 5.051 INCH)



DEVICE DESCRIPTION :

- 1) INPUT TERMINAL BLOCK CONNECTOR
- 2) OUTPUT TERMINAL BLOCK CONNECTOR
- 3) DC VOLTAGE ADJUSTMENT POTENTIOMETER
- 4) DC OK CONTROL LED (GREEN)
- 5) UNIVERSAL MOUNTING RAIL SYSTEM



Switched Mode Power Supply

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- Universal input voltage range
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- High Efficiency of Operation
- Wide operating temperature - 30°C to 70°C
- Overload, Over voltage, Short Circuit & Over Temperature Protection
- High MTBF > 700,000 hrs
- Over Voltage category II
- Pollution degree II
- Small form factor
- Din rail mount
- CE & RoHS compliance



Ordering Information

Cat. No.	Description
PS240W24V	240W, 230VAC, 24VDC, 10A , Switched Mode Power Supply

Switched Mode Power Supply






Cat. No. PS240W24V

Input Supply Characteristics	
Supply Voltage Range	90V to 264V AC 127V to 375V DC
Frequency Range	47 to 63Hz
Efficiency	90.00%
AC Current	2.5 A typ. @ 115 VAC, 1.3 A typ. @ 230 VAC
Inrush Current	20 A typ. @ 115 VAC, 40 A typ. @ 230 VAC
No Load Power Consumption	<2W @230V AC
Output Characteristics	
Output DC voltage	24V
Output DC voltage adjustment range	22V to 28V DC
Output Current	10A @24VDC
Output Power	240W
Line Regulation	+/- 0.5%
Load Regulation	+/- 0.5%
Ripple & Noise	150mV p-p max
Startup Time	500ms typ. @ 115 VAC & 230 VAC
Rise Time	20ms typ. @ 115 VAC (100% load)
Hold up time	30ms typ. @ 115 VAC & 230 VAC
Dynamic Response (Overshoot & Undershoot O/P Voltage)	± 10% @ 115 & 230Vac input, 10-100% load (Slew Rate: 2.5A/μS, 50% duty cycle @ 5Hz & 10KHz)
Start-up with Capacitive Loads	8,000μF Max
Protections	
Over Voltage	28.8V to 33.6V (Output voltage turn off, Restart power to turn on device).vv
Over load/ Over current	105 to 150% of rated load current, Auto-recovery continuous current limite mode.
Over temperature	Shut down output voltage, re-power ON to recover
Short circuit	Hiccup mode, recovers automatically after fault recovery
Protection against shock	Class 1 with Protection Earth connection, Earthing terminal required
Internal Input Fuse	4A / 250V
Recommended breaker for input	6A ... 16 A (Characteristics B,C,D,K or comparable)
User Interface	
Pot	To set output voltage
LED Indication	
Green LED	ON : DC O/P OK
Environmental	
Operating Temperature	-30°C to +70°C
Storage Temperature / Humidity	-40°C to +85°C
Operating Relative humidity	20 - 90% RH non-condensing
Operating Altitude	Up to 2000 meters
Over voltage Category	II
Pollution degree	2
Vibration Test	Operating & Non-Operating as per : IEC 60068-2-6 20 - 500Hz (5g)
Mechanical	
Case chassis	Aluminium
Dimensions (LxWxH)	40x128.8x128.3. (in mm)
Unit weight	Approx. 620g
Cooling system	Convection

Switched Mode Power Supply



Cat. No.	PS240W24V
Terminal Type	Front facing terminal
Wire	AWG 26 - 10 / 24 - 12
Mounting type	DIN Rail Mount
Reliability	
MTBF	> 700,000 hrs as per IEC 62380
Certification	  

EMI / EMC

Harmonic Current Emission	IEC 61000-3-2	CLASS A
Voltage Flicker and Fluctuations	IEC 61000-3-3	CLASS A
ESD	IEC 61000-4-2	LEVEL IV
Radiated Susceptibility	IEC 61000-4-3	LEVEL III
Electrical Fast Transients	IEC 61000-4-4	LEVEL III
Surge	IEC 61000-4-5	LEVEL IV
	Common Mode- 4kV, Diff Mode- 2kV	
Conducted Susceptibility	IEC 61000-4-6	
Voltage Dips and Interruptions (AC)	IEC61000-4-11	
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Conducted Emission	CISPR 32 Class B	
Radiated Emission	CISPR 32 Class B	

Safety Compliance

Test Voltage Between I/P & O/P	UL508	3KV
Test Voltage Between I/P & Earth	UL508	2KV
Test Voltage Between O/P & Earth	UL508	1.25KV
Impulse Voltage Between I/P & O/P	IEC 61204	4KV
Insulation Resistance	UL508	>100MΩ
Leakage Current	UL508	<1mA@240VAC

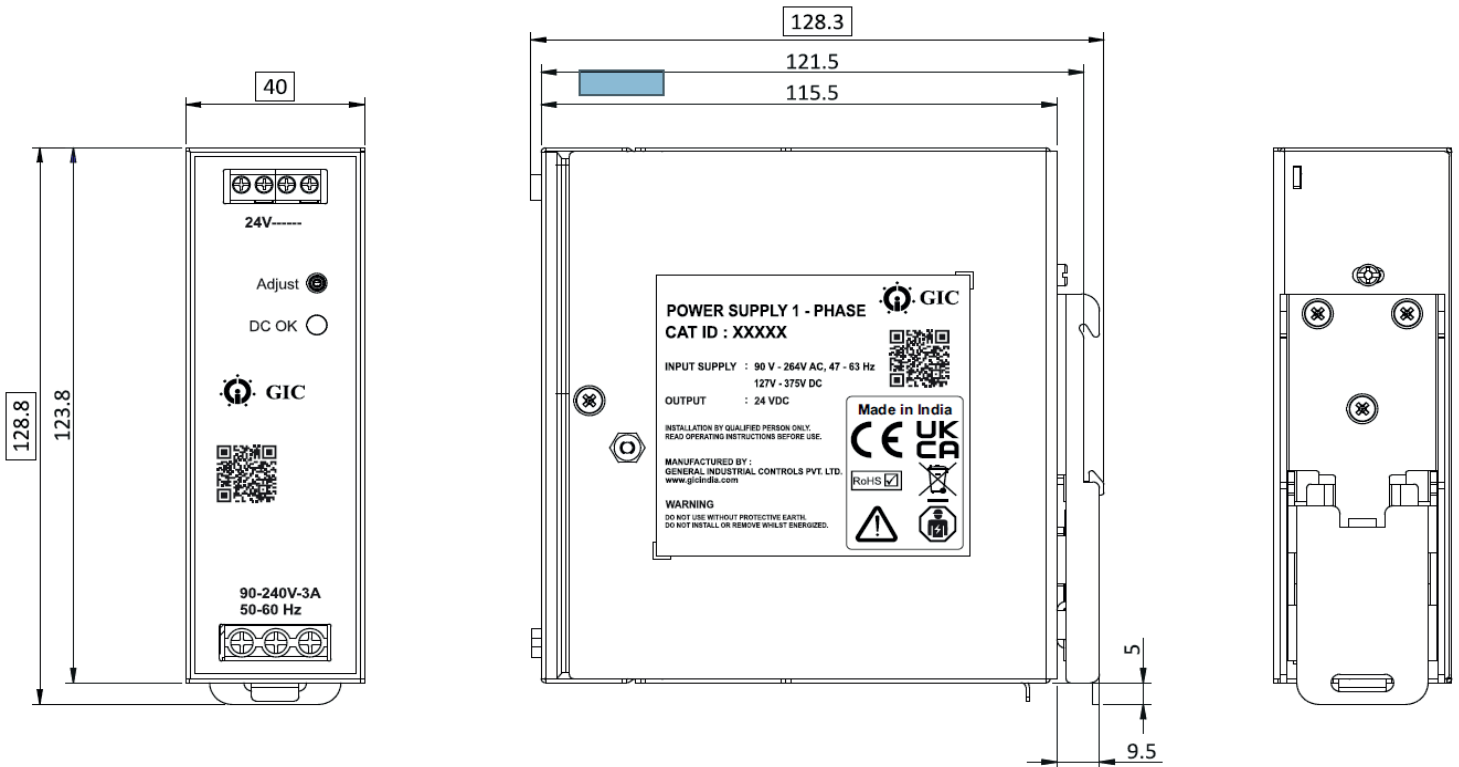
Environmental Compliance

Operating Temperature	-30°C to +70°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity	20-90% RH (Non-condensation)	
Max. Operating Altitude	2000 meters	
Vibration	IEC 60068-2-6	20-500Hz (59)

Switched Mode Power Supply

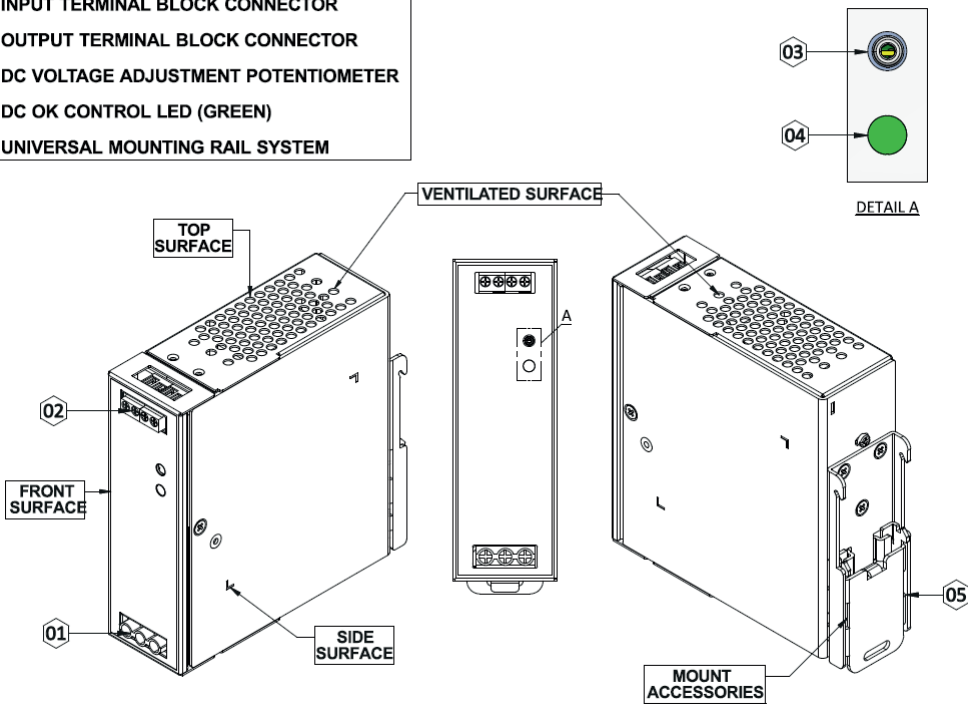
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WXHxD= 40 X 128.8 X 128.3 MM (1.574 X 5.070 X 5.051 INCH)



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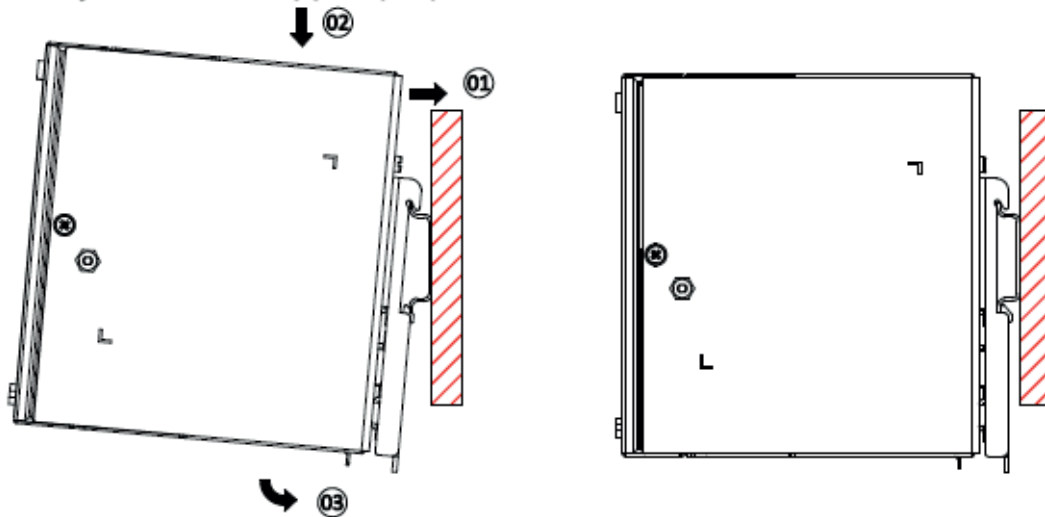
- 1) INPUT TERMINAL BLOCK CONNECTOR
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Switched Mode Power Supply

MOUNTING & INSTALLATION

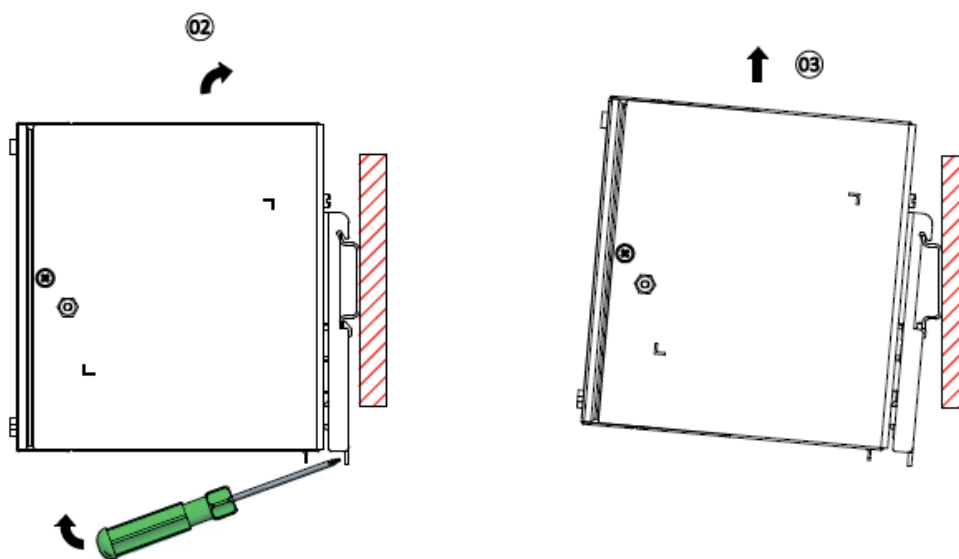
The power supply unit can be installed in compliance with EN 60715, using 35 mm DIN rails. Installation of the device should be done with the input terminal block at the bottom. Every device is shipped prepared for installation.



As seen in the above figure, snap on the DIN rail.

1. Place the device on the DIN rail by tilting it upward.
2. Press down until the movement stops.
3. To lock, press against the front bottom side.
4. To ensure that sure the device is attached, give it a little shake.

DISMOUNTING



- 01 As seen in the above Fig., GIC offers a simple method for uninstalling that involves using a screwdriver to pull or slide down the latch. Next, release the latch and pull the power supply unit in the other direction.
The power supply unit is removed from the rail.

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