

Power Supplies



6.1 General Purpose and Sensor Power Supplies

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6.1

Power Supplies

General-Purpose and Sensor Power Supplies

Power Supplies



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Product Selection Guide

Power Supply Series and Features



PSL Series



PSC Series



PSG Series

Features

Universal AC input range 90–264 Vac (125–375 Vdc)
 10 to 100 W power output at 24 Vdc
 Operating temperature range from –25 to +71 °C
 Output adjustable from 24 to 28 Vdc
 Support up to 3000 microfarads of load capacitance
 Protection Class 2, double Isolation (no earth connection required) resulting in low leakage current
 Short-circuit protection using Hicc-up mode, non-latching and auto-recovery
 MTBF greater than 500,000 hours ensures uptime and reliability
 Protection from overvoltage, short circuit, overcurrent and overtemperature conditions
 Plastic housings provide the durability required to withstand harsh environments
 Finger-safe terminals
 LED indicating light for DC OK simplifies troubleshooting
 Redundancy modules keep loads up and running in the event of a device failure
 NEC® Class 2 rated model
 150% power surge output
 IP20 Protection degree

Ultra-compact size
 Full power from –25 to +71 °C operation
 Universal AC input voltage 100–240 Vac (120–375 Vdc)
 Up to 88.0% efficiency at 230 Vac
 Extreme low temperature cold start at –40 °C
 Overvoltage / overcurrent / overtemperature protections
 Class 1 Protection (with primary earth connection)

General-purpose 12 Vdc and 24 Vdc output for 1.25 A to 40 A loads
 Single-phase and three-phase inputs up to 500 Vac
 150% power surge output
 Redundancy modules
 Buffer module
 DIN rail mount
 Rugged metal and plastic housing options
 Heavy-duty screw and finger-safe terminals
 Hazardous Location Class I, Division 2 rated models
 NEC Class 2 rated model
 Protection from overvoltage, overcurrent and overtemperature conditions

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Power Supply Series and Features, continued



ELC Series



easyRelay Power Series



Sensor Power Supplies

Features	<p>Compact, low cost 24 Vdc control for loads up to 2 A</p> <p>Plastic enclosure can be DIN rail or panel mounted</p> <p>Single-phase (100–240 Vac) input</p>	<p>Low profile power supplies for 12 Vdc or 24 Vdc applications</p> <p>8 W, 30 W, 60 W or 100 W output power</p> <p>easyRelay styling provides optimal panel aesthetics</p> <p>Plastic enclosure can be DIN rail or panel mounted (with optional kit)</p> <p>CSA Class 1, Division 2 qualified</p> <p>Single-phase (100–240 Vac) input</p>	<p>27 Vdc supplies for tough sensor applications</p> <p>Rugged housings with integrated junction box for mounting outside of electrical enclosures</p> <p>Advanced diagnostic features</p>
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PSL Series



PSL Series

Product Description

Eaton's single-phase Low Profile DIN Rail Power Supply series offers double isolated input with no earth connection required, resulting in low leakage current and a longer lifespan. The PSL series provides a universal input voltage range of 90–264 Vac, and a wide temperature range of –25 °C to +71 °C with greater than 80% efficiency. The low-profile series is certified to safety standard according to IEC/EN/UL 62368-1 Audio/Video, Information and Communication Technology Equipment (ITE) and UL 508 Industrial Control Equipment (ICE). The series is also fully compliant with RoHS Directive 2011/65/EU for environmental protection. NEC Class 2 and Limited Power Source (LPS) approvals are available for this product.

Application Description

The Low Profile is part of the PSL DIN Rail Power Supply series, which is designed for use in compact cabinets for home automations and the food and beverage industry. Applications include communication networks, sensors, PLCs and many other electrical systems.

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Features, Benefits and Functions

- Universal input voltage: 90–264 Vac or 125–375 Vdc
- Under 100 W power output at 24 Vdc
- Wide operating temperature range: –25 °C to +71 °C
- MTBF greater than 500,000 hours ensures uptime and reliability
- Protection from overvoltage, short circuit, overcurrent and over-temperature conditions
- Plastic housings provide the durability required to withstand harsh environments
- Finger-safe terminals
- LED indicating light for DC OK simplifies troubleshooting
- Redundancy modules keep loads up and running in the event of a device failure
- NEC Class 2 rated model
- 150% power surge output
- IP20 protection degree
- Protection Class 2, double isolation
- No earth connection required

Standards and Certifications

- UL/cUL 62368
- IEC
- NEC Class 2
- CE marked



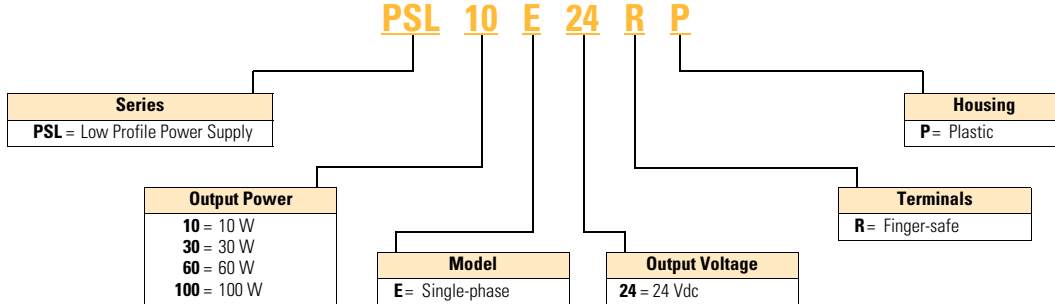
Note: The NEC Class 2 model is certified as an NEC Class 2 power source. This means that after a small startup window, the power supply cannot exceed a maximum of 100 W under any circumstances, including overload, short-circuit or internal failure.

It also reduces wiring, labor and additional system components acting as a short-circuit current limiter. The redundancy modules allow for two or more power supplies to be connected together to perform parallel or redundancy operation. Parallel operation or load sharing is when the load is split evenly between two or more power supplies. Redundancy operation is where *N* (number of power supplies) is required for the load and one additional power supply is connected in the event that one should fail.

Catalog Number Selection

Note: Catalog number selection breakdown shown below is for illustrative purposes only and not to be used to create new catalog number configurations.

PSL Series



Product Selection

PSL10E24RP



PSL Series

Power	Description	Catalog Number
24 Vdc output, single-phase power supplies (100–240 Vac nominal input)	10 W, 0.42 A output, plastic housing	PSL10E24RP
	30 W, 1.25 A output, plastic housing	PSL30E24RP
	60 W, 2.5 A output, plastic housing	PSL60E24RP
	100 W, 3.8 A output, plastic housing	PSL100E24RP

Technical Data and Specifications

PSL Series

	PSL10E24RP	PSL30E24RP	PSL60E24RP	PSL100E24RP
Input				
Nominal voltage	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac / 125–250 Vdc
AC input range	90–264 Vac	90–264 Vac	90–264 Vac	90–264 Vac
DC input range	125–375 Vdc	125–375 Vdc	125–375 Vdc	125–375 Vdc
Input frequency range	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Nominal current	<0.30 A at 115 Vac, <0.20 A at 230 Vac	<0.8 A at 115 Vac, <0.6 A at 230 Vac	<1.5 A at 115 Vac, <1.0 A at 230 Vac	<2.2 A at 115 Vac, <1.0 A at 230 Vac
Inrush current limitation	<15 A at 115 Vac, <30 A at 230 Vac	<25 A at 115 Vac, <50 A at 230 Vac	<30 A at 115 Vac, <60 A at 230 Vac	<30 A at 115 Vac, <60 A at 230 Vac
Mains buffering at nominal load	>10 ms at 115 Vac, >30 ms at 230 Vac	>25 ms at 115 Vac, >30 ms at 230 Vac	>16 ms at 115 Vac, >30 ms at 230 Vac	>10 ms at 115 Vac, >30 ms at 230 Vac
Turn-on time	<3 sec.	<3 sec.	<3 sec.	<1.5 sec. at 115 Vac, <1 sec. at 230 Vac
Internal fuse	T 1 A / 250 V	T 3.15 A / 250 V	T 3.15 A / 250 V	T 3.15 A / 250 V
Leakage current	<0.25 mA at 240 Vac	<0.25 mA at 240 Vac	<0.25 mA at 240 Vac	<0.25 mA at 240 Vac
Output				
Power	10 W	30 W	60 W	91.2W
Nominal output voltage	24 Vdc \pm 2%	24 Vdc \pm 2%	24 Vdc \pm 2%	24 Vdc \pm 2%
Adjustment range	24–28 Vdc	24–28 Vdc	24–28 Vdc	22–24 Vdc
Nominal current	0.42A	1.25 A	2.5 A	3.8 A
Derating	>55 °C (2.5% / °C) in vertical	>55 °C (2.5% / °C) in vertical	>55 °C (2.5% / °C) in vertical	>55 °C (2.5% / °C) in vertical
Power derating—horizontal mounting	N/A	N/A	N/A	N/A
Startup with capacitive loads	Max. 3,000 μ F	Max. 3,000 μ F	Max. 3,000 μ F	Max. 3,000 μ F
Max. power dissipation idling / nominal load approx.	2 W	3.8 W	8.5 W	12 W
Efficiency	>80.0% at 115 Vac and 230 Vac	>83.0% at 115 Vac and 230 Vac	>86.0% at 115 Vac and 230 Vac	>85.0% at 115 Vac, >87.0% at 230 Vac
Residual ripple / peak switching (20 M Hz)	<50mVpp / 150mVpp	<50 mVpp / <150 mVpp	<50 mVpp / <150 mVpp	<50 mVpp / <150 mVpp
Parallel operation	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode
Galvanic isolation				
Input / output	3.0K Vac	3.0K Vac	3.0K Vac	3.0K Vac
Input / ground	N/A	N/A	N/A	N/A
Output / ground	N/A	N/A	N/A	N/A
General / physical data				
Housing material	Plastic (PC), enclosed	Plastic (PC), enclosed	Plastic (PC), enclosed	Plastic (PC), enclosed
Signals	Green LED DC OK	Green LED DC OK	Green LED DC OK	Green LED DC OK
MTBF	>500,000 hr	>500,000 hr	>500,000 hr	>500,000 hr
Dimensions (length)	91 mm	91 mm	91 mm	91 mm
Dimensions (width)	18 mm	53 mm	71 mm	89.9 mm
Dimensions (height)	55.6 mm	55.6 mm	55.6 mm	55.6 mm
Weight (kg)	0.065 kg	0.14 kg	0.24 kg	0.35 kg
Terminals	Finger-safe	Finger-safe	Finger-safe	Finger-safe
Wire size	AWG 26-12	AWG 24-12	AWG 22-12	AWG 22-12 (1 piece) AWG 24-12 (2 pieces)
Operating temperature	–25 °C to +71 °C	–25 °C to +71 °C	–25 °C to +71 °C	–25 °C to +71 °C
Storage temperature	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C
Operating humidity	<95% RH	<95% RH	<95% RH	<95% RH

PSL Series, continued

	PSL10E24RP	PSL30E24RP	PSL60E24RP	PSL100E24RP
General / physical data, continued				
Vibration	IEC60068–2–6, Sine wave: 10–500 Hz at 19.6 m/S ² (2G peak); 10 min per cycle, 60 min for all X, Y, Z directions	IEC60068–2–6, Sine wave: 10–500 Hz at 19.6 m/S ² (2G peak); 10 min per cycle, 60 min for all X, Y, Z directions	IEC60068–2–6, Sine wave: 10–500 Hz at 19.6 m/S ² (2G peak); 10 min per cycle, 60 min for all X, Y, Z directions	IEC60068–2–6, Sine wave: 10–500 Hz at 19.6 m/S ² (2G peak); 10 min per cycle, 60 min for all X, Y, Z directions
Shock (operating)	IEC60068–2–27, Half sine wave: 4 G for a duration of 22 ms, 3 shocks for each 3 directions, 9 times in total	IEC60068–2–27, Half sine wave: 4 G for a duration of 22 ms, 3 shocks for each 3 directions, 9 times in total	IEC60068–2–27, Half sine wave: 4 G for a duration of 22 ms, 3 shocks for each 3 directions, 9 times in total	IEC60068–2–27, Half sine wave: 4 G for a duration of 22 ms, 3 shocks for each 3 directions, 9 times in total
Pollution degree	2	2	2	2
Altitude	2000 m	2000 m	2000 m	2000 m
Certification and protection				
Safety entry low voltage	UL 62368-1	UL 62368-1	UL 62368-1	UL 62368-1
Electrical safety (of information technology equipment)	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1
Industrial control equipment	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508
Class 2 power supply	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1	UL/C–UL recognized to UL 62368-1
CE	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU
Immunity	EN 55024 (EN 61000–4–2, 3, 4, 5, 6, 8,11)	EN 55024 (EN 61000–4–2, 3, 4, 5, 6, 8,11)	EN 55024 (EN 61000–4–2, 3, 4, 5, 6, 8,11)	EN 55024 (EN 61000–4–2, 3, 4, 5, 6, 8,11)
Emissions	EN 55032, EN 61000–3–2 Class A, EN 61000–3–3	EN 55032, EN 61000–3–2 Class A, EN 61000–3–3	EN 55032 Class A, EN 61000–3–2 Class A, EN 61000–3–3,	EN 55032, EN 61000–3–2 Class A, EN 61000–3–3,
RoHS compliant	Yes	Yes	Yes	Yes
Safety and protection				
Current limitation at short-circuits approx.	$I_{\text{surge}} = 150\%$ of P_{OMax} typically	$I_{\text{surge}} = 150\%$ of P_{OMax} typically	$I_{\text{surge}} = 150\%$ of P_{OMax} typically	$I_{\text{surge}} = 150\%$ of P_{OMax} typically
Surge voltage protection against internal surge voltages	Yes	Yes	Yes	Yes
Protection degree	IP20	IP20	IP20	IP20
Safety class	Class II (No primary earth connection is required)	Class II without PE connection	Class II without PE connection	Class II without PE connection

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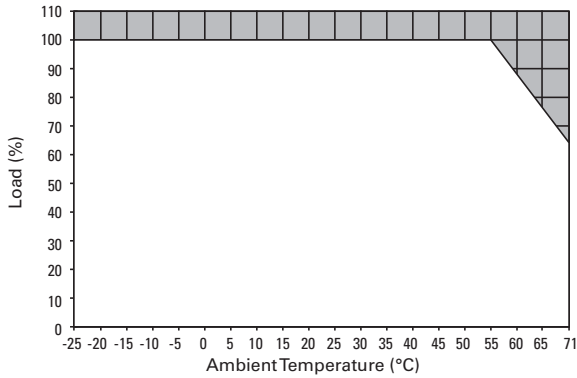
Power Supplies

General-Purpose and Sensor Power Supplies

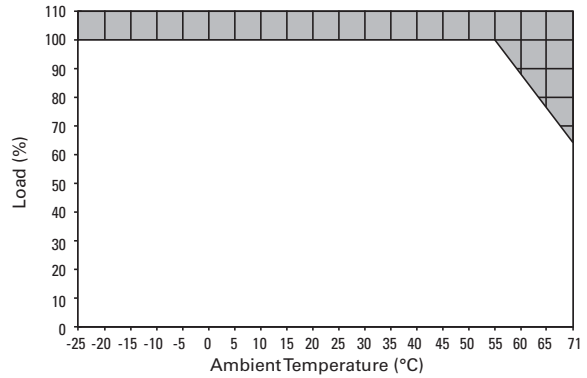
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Power Derating Curves

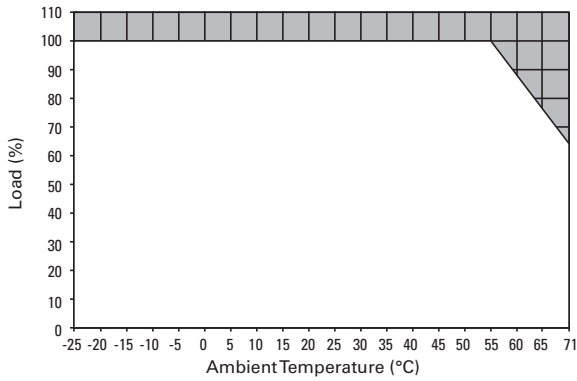
Vertical Mounting Position PSL10E24RP



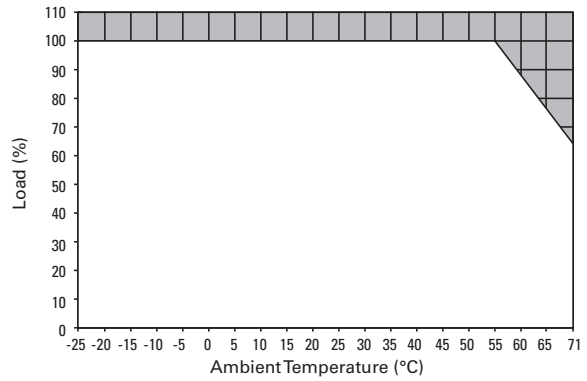
Vertical Mounting Position PSL60E24RP



Vertical Mounting Position PSL30E24RP



Vertical Mounting Position PSL100E24RP

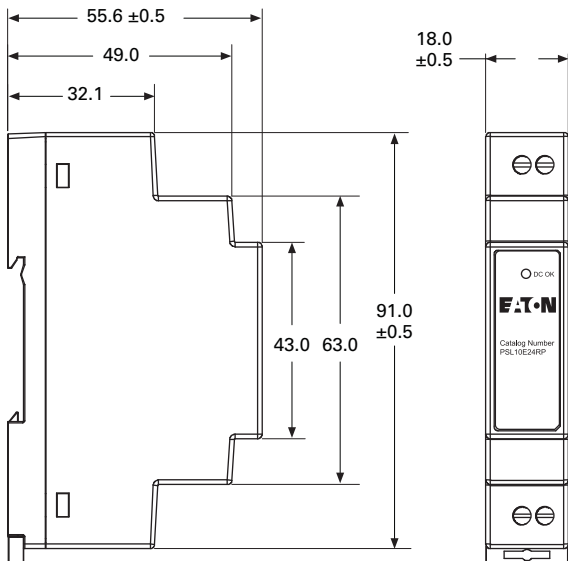


Dimensions

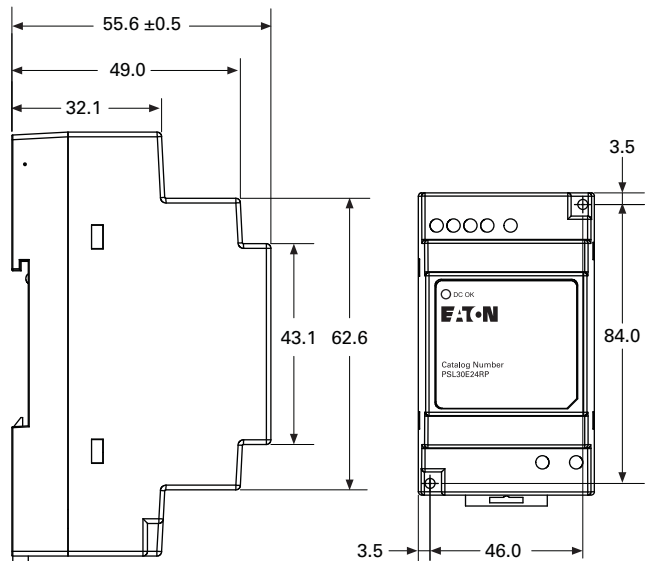
Approximate Dimensions in mm

Note: Dimensions are for reference only.

PSL10E24RP



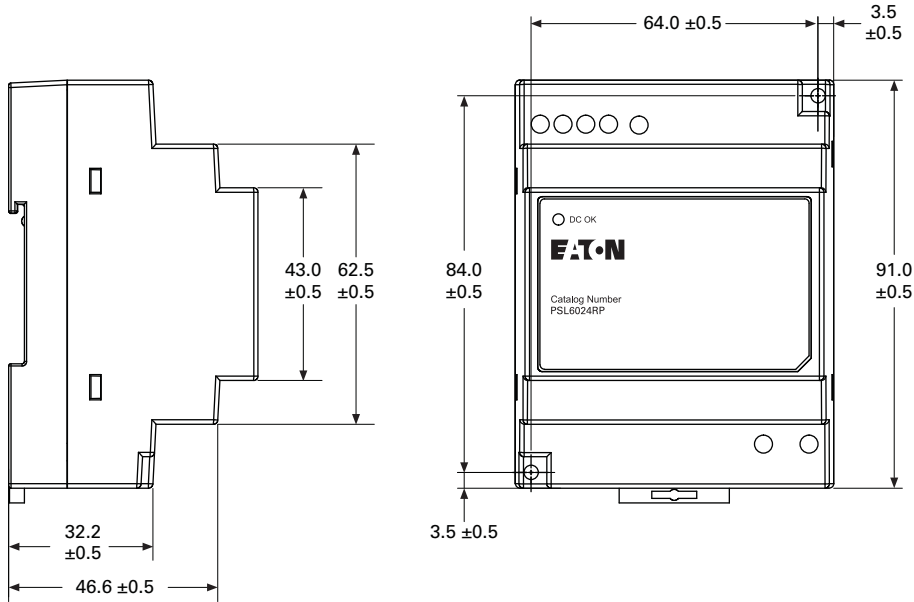
PSL30E24RP



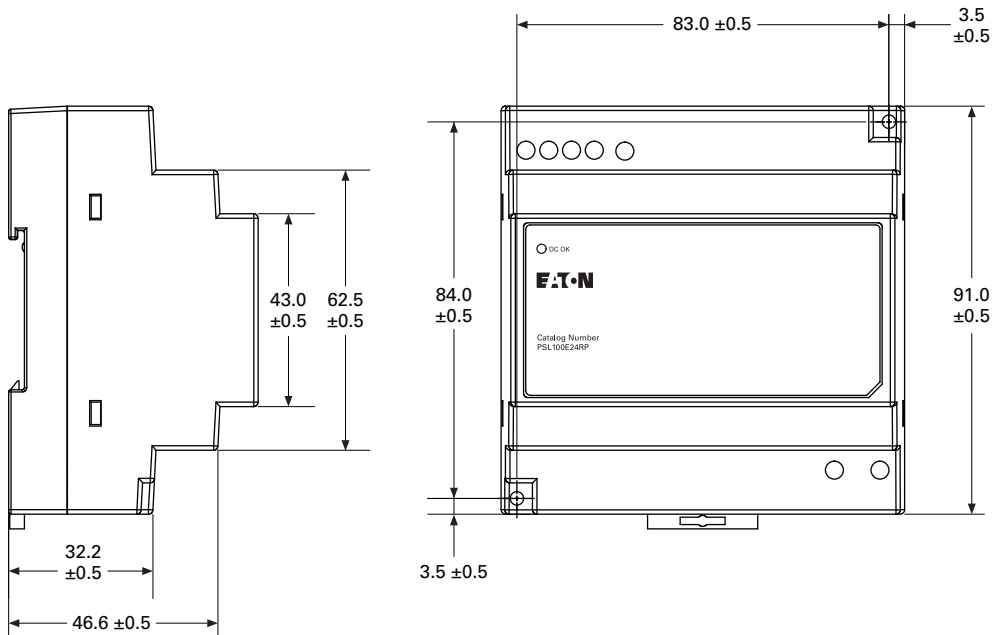
Approximate Dimensions in mm

Note: Dimensions are for reference only.

PSL60E24RP



PSL100E24RP



PSC Series



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Sensor Power Supply	V7-T6-43

PSC Series

Product Description

The PSC Compact series operates with universal AC input range and offers full power up to 55 °C. The output is adjustable from 24 to 28 volts and can support up to 3000 microfarads of load capacitance. All models in the series are certified according to IEC/EN/UL 62328-1 Audio/Video, Information and Communication Technology Equipment (ITE) and UL 508 Industrial Control Equipment (ICE). The series is also fully compliant with RoHS Directive 2011/65/EU for environmental protection. NEC Class 2 and Limited Power Source (LPS) approvals are available for this product.

Application Description

The ultra-compact and competitively priced Eaton Compact DIN Rail Power Supply series is designed for industrial applications requiring highly reliable power supply within a tight space. Simple to operate with HMI displays and industrial ethernet.

Features, Benefits and Functions

- 30 W, 50 W and 100 W ratings
- Ultra-compact size
- Universal AC input voltage 100–240 Vac (120–375 Vdc)
- Up to 87% efficiency at 230 Vac
- Extreme low temperature cold start at –40 °C
- Overvoltage / overcurrent / over-temperature protections
- Under 100 W power output at 24 Vdc
- Wide operating temperature range: –20 °C to +70 °C
- Storage temperature: –20 °C to +85 °C
- MTBF greater than 350,000 hours ensures uptime and reliability
- Protection from overvoltage, short circuit, overcurrent and over temperature conditions
- Plastic housings provide the durability required to withstand harsh environments
- Finger-safe terminals
- LED indicating light for DC OK simplifies troubleshooting
- Redundancy modules keep loads up and running in the event of a device failure
- NEC Class 2 rated model ①
- 150% power surge output
- IP20 protection degree
- Earth connection is required
- A green LED indicates output is present

Standards and Certifications

- UL 508
- NEC Class 2
- CE marked
- RoHS compliant



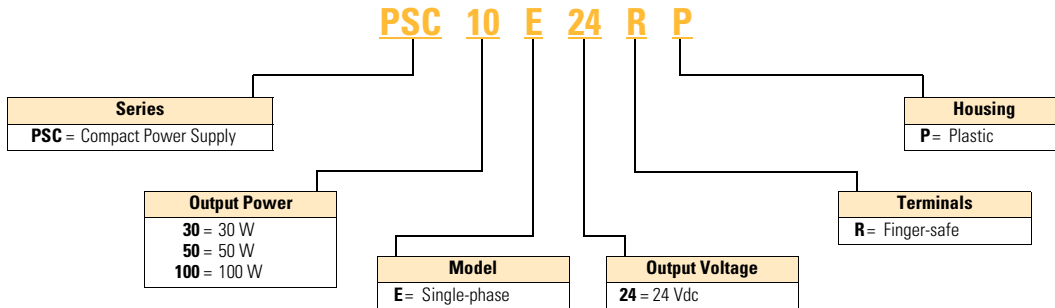
Note

① The NEC Class 2 model is certified as an NEC Class 2 power source. This means that after a small startup window, the power supply cannot exceed a maximum of 100 W under any circumstances, including overload, short-circuit or internal failure.

Catalog Number Selection

Note: Catalog number selection breakdown shown below is for illustrative purposes only and not to be used to create new catalog number configurations.

PSC Series



Product Selection

PSC100E24RP

PSC Series



Power	Description	Catalog Number
24 Vdc output single-phase power supplies (100–240 Vac nominal input)	30 W, 1.25 A output, plastic housing	PSC30E24RP
	50 W, 2.1 A output, plastic housing	PSC50E24RP
	100 W, 4.0 A output, plastic housing	PSC100E24RP

Technical Data and Specifications

PSC Series

	PSC30E24RP	PSC50E24RP	PSC100E24RP
Input			
Nominal voltage	100–240 Vac / 50–60 Hz	100–240 Vac / 50–60 Hz	100–240 Vac / 50–60 Hz
AC input range	85–264 Vac	85–264 Vac	85–264 Vac
DC input range	120–375 Vdc	120–375 Vdc	120–375 Vdc
Input frequency range	47–63 Hz	47–63 Hz	47–63 Hz
Nominal current	<0.8 A at 115 Vac, <0.4 A at 230 Vac	<1.0 A at 115 Vac, <0.6 A at 230 Vac	<1.2 A at 115 Vac, <0.6 A at 230 Vac
Inrush current limitation	<35 A at 115 Vac, <60 A at 230 Vac	<35 A at 115 Vac, <60 A at 230 Vac	<35 A at 115 Vac, <60 A at 230 Vac
Mains buffering at nominal load	20 ms typ. at 115 Vac, 100 ms typ. at 230 Vac	20 ms typ. at 115 Vac, 90 ms typ. at 230 Vac	25 ms typ. at 115 Vac, 50 ms typ. at 230 Vac
Turn-on time	<3 sec. at 115 Vac, <1.6 sec. at 230 Vac	<3 sec. at 115 Vac, <1.5 sec. at 230 Vac	<3 sec. at 115 Vac, <1.5 sec. at 230 Vac
Internal fuse	T 3.15 A / 250 V	T 3.15 A / 250 V	T 3.15 A / 250 V
Leakage current	<1 mA at 240 Vac	<1 mA at 240 Vac	<1 mA at 240 Vac
Output			
Power	30 W	50 W	91.2 / 96 W
Nominal output voltage	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%
Adjustment range	24–28 Vdc (Maximum power ≤ 30 W)	24–28 Vdc (Maximum power ≤ 50 W)	22–24 Vdc (Maximum power ≤ 91.2W)
Nominal current	1.25 A	2.1 A	3.8 A
Derating	–10 °C to –20 °C (2% / °C), >55 °C (3.33% / °C) in Vertical	–10 °C to –20 °C (2% / °C), >55 °C (3.33% / °C) in Vertical	–10 °C to –20 °C (2% / °C), >55 °C (3.33% / °C) in Vertical
Power derating—horizontal mounting	N/A	N/A	N/A
Startup with capacitive loads	Max. 3,000 µF	Max. 3,000 µF	Max. 3,000 µF
Max. power dissipation idling / nominal load approx.	0.5 W / 4.5 W	0.5 W / 7 W	0.4 W / 10 W
Efficiency	87.0% typ. at 115 Vac, 88.0% typ. at 230 Vac	86.0% typ. at 115 Vac, 88.0% typ. at 230 Vac	87.0% typ. at 115 Vac, 89.0% typ. at 230 Vac
Residual ripple/peak switching (20 M Hz)	<75 mVpp	<75 mVpp	<75 mVpp
Parallel operation	PSG480R24RM / PSG960R24RM / With o-ring Diode	PSG480R24RM / PSG960R24RM / With o-ring Diode	PSG480R24RM / PSG960R24RM / With o-ring Diode
Galvanic isolation			
Input/output	3.0K Vac	3.0K Vac	3.0K Vac
Input/ground	3.0K Vac	3.0K Vac	3.0K Vac
Output/ground	0.5K Vac	0.5K Vac	0.5K Vac
General / physical data			
Housing material	Plastic (PC), enclosed	Plastic (PC), enclosed	Plastic (PC), enclosed
Signals	Green LED DC OK	Green LED DC OK	Green LED DC OK
MTBF	>350,000 hr	>350,000 hr	>350,000 hr
Dimensions (length)	75 mm	75 mm	75 mm
Dimensions (width)	21 mm	30 mm	45 mm
Dimensions (height)	89.5 mm	89.5 mm	100 mm
Weight (kg)	0.11 kg	0.18 kg	0.325 kg
Terminals	Finger safe	Finger safe	Finger safe
Wire size	AWG 22-12 / AWG 20-12	AWG 22-12 / AWG 20-12	AWG 22-12 / AWG 20-12
Operating temperature	–20 °C to +70 °C	–20 °C to +70 °C	–20 °C to +70 °C
Storage temperature	–40 °C to +85 °C	–40 °C to +85 °C	–40 °C to +85 °C
Operating humidity	5 to 95% RH	5 to 95% RH	5 to 95% RH

PSC Series, continued

	PSC30E24RP	PSC50E24RP	PSC100E24RP
General / physical data, continued			
Vibration			
Operating	IEC60068–2–6, sine wave: 10 Hz to 500 Hz at 19.6 m/s ² ; displacement of 0.35 mm, 60 min. per axis for all X, Y, Z directions	IEC60068–2–6, sine wave: 10 Hz to 500 Hz at 19.6 m/s ² ; displacement of 0.35 mm, 60 min. per axis for all X, Y, Z directions	IEC60068–2–6, sine wave: 10 Hz to 500 Hz at 19.6 m/s ² ; displacement of 0.35 mm, 60 min. per axis for all X, Y, Z directions
Non-operating	IEC60068–2–6, Random: 5 Hz to 500 Hz (2.09 Grms); 20 min. per axis for all X, Y, Z directions	IEC60068–2–6, Random: 5 Hz to 500 Hz (2.09 Grms); 20 min. per axis for all X, Y, Z directions	IEC60068–2–6, Random: 5 Hz to 500 Hz (2.09 Grms); 20 min. per axis for all X, Y, Z directions
Shock (operating)			
Operating	IEC60068–2–27, half sine wave: 10 G for a duration of 11 ms, shock for 1 direction (X axis)	IEC60068–2–27, half sine wave: 10 G for a duration of 11 ms, shock for 1 direction (X axis)	IEC60068–2–27, half sine wave: 10 G for a duration of 11 ms, shock for 1 direction (X axis)
Non-operating	IEC60068–2–27, half sine wave: 50 G for a duration of 11 ms, 3 shocks for each 3 directions	IEC60068–2–27, half sine wave: 50 G for a duration of 11 ms, 3 shocks for each 3 directions	IEC60068–2–27, half sine wave: 50 G for a duration of 11 ms, 3 shocks for each 3 directions
Pollution degree	2	2	2
Altitude	2000 m	2000 m	2000 m
Certification and protection			
Safety entry low voltage	UL 62368-1	UL 62368-1	UL 62368-1
Electrical safety (of information technology equipment)	N/A	N/A	N/A
Industrial control equipment	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508
Class 2 power supply	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508	UL/C–UL listed to UL 508
CE	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU	In conformance with EMC directive 2014/30/EU and low-voltage directive 2014/35/EU
Immunity	EN 55024, EN 61000–6–1, EN 61000–6–2 (EN 61000–4–2, 3, 4, 5, 6, 8, 11)	EN 55024, EN 61000–6–1, EN 61000–6–2 (EN 61000–4–2, 3, 4, 5, 6, 8, 11)	EN 55024, EN 61000–6–1, EN 61000–6–2 (EN 61000–4–2, 3, 4, 5, 6, 8, 11)
Emissions	EN 55032, EN 55011, EN 61000–3–3, EN 61000–6–3, EN 61000–6–4	EN 55032, EN 55011, EN 61000–3–3, EN 61000–6–3, EN 61000–6–4	EN 55032, EN 55011, EN 61000–3–3, EN 61000–6–3, EN 61000–6–4
RoHS compliant	Yes	Yes	Yes
Safety and protection			
Current limitation at short-circuits approx.	N/A	N/A	N/A
Surge voltage protection against internal surge voltages	No	No	No
Protection degree	IP20	IP20	IP20
Safety class	Class I with primary earth connection	Class I with primary earth connection	Class I with primary earth connection

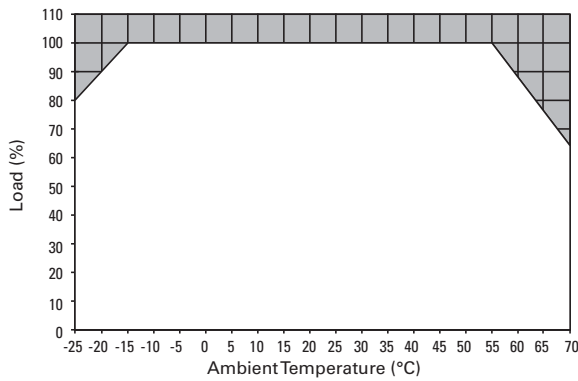
6.1

Power Supplies

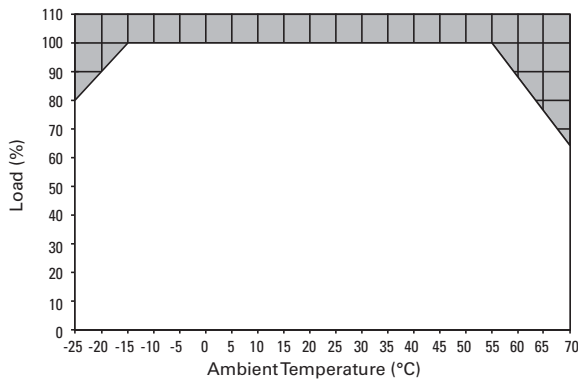
General-Purpose and Sensor Power Supplies

Power Derating Curves

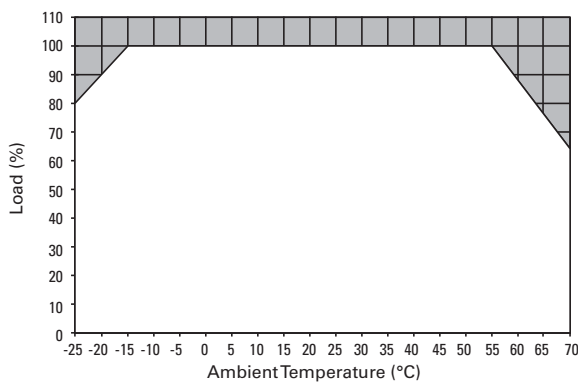
Vertical Mounting Position PSC30E24RP



Vertical Mounting Position PSC50E24RP



Vertical Mounting Position PSC100E24RP

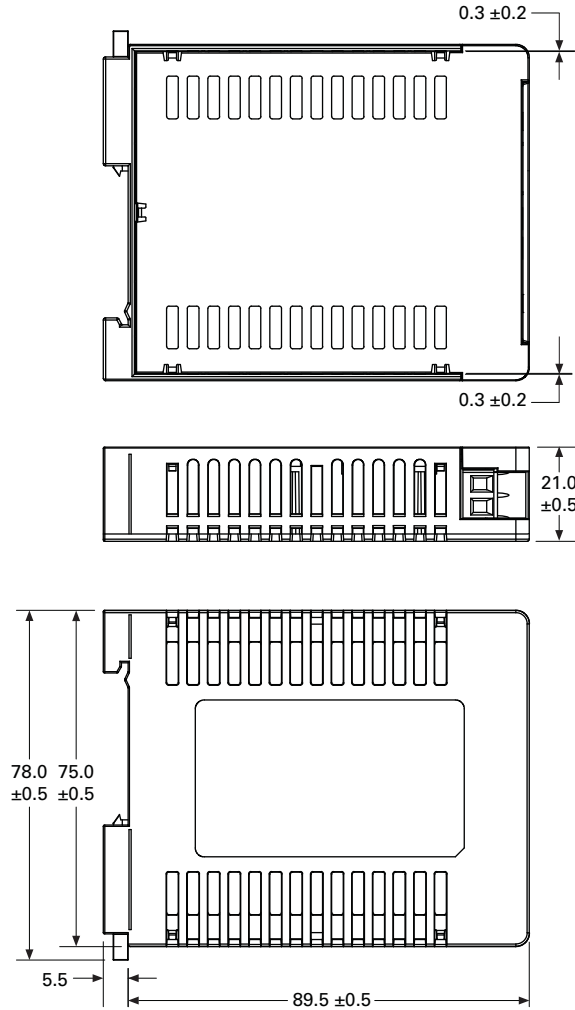


Dimensions

Approximate Dimensions in mm

Note: Dimensions are for reference only.

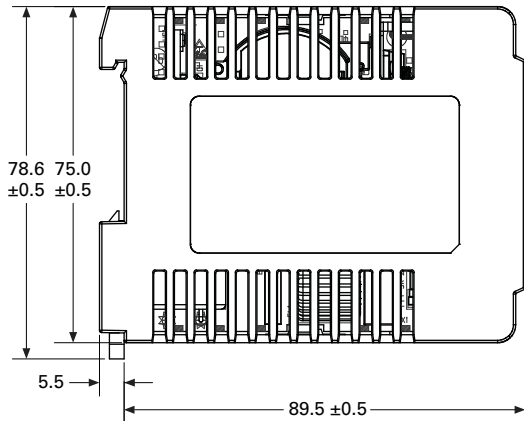
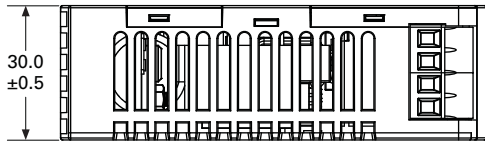
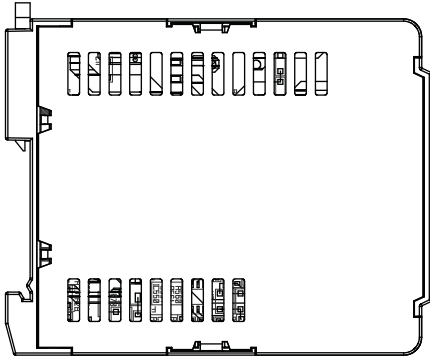
PSC30E24RP



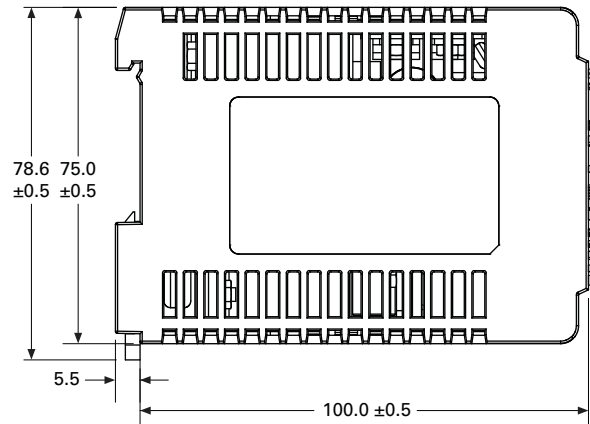
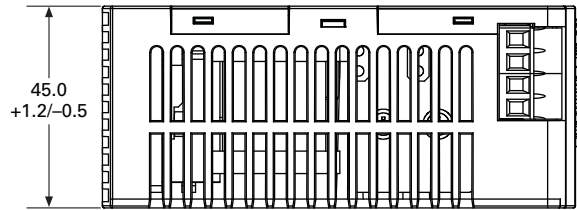
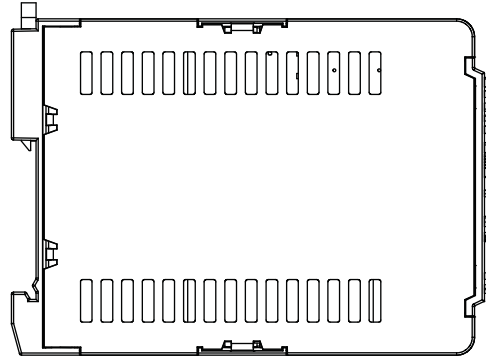
Approximate Dimensions in mm

Note: Dimensions are for reference only.

PSC50E24RP



PSC100E24RP



PSG Series



PSG Series

Product Description

Eaton's PSG Series of power supplies is designed to be a high-performance, high-quality line of products covering a majority of 12 Vdc and 24 Vdc control applications. With global certifications, a compact size and an impressive operating temperature range, the PSG Series fits a wide variety of applications at a competitive price.

Our expansive 22 model offering is able to provide solutions for most applications with PSG outputs ranging from 12 Vdc at 1.25 A up to 24 Vdc at 40 A, plus redundancy and buffer modules to ensure uptime.

Application Description

The PSG Series is a line of general-purpose power supplies for use in a wide variety of industrial control applications. Applications include communication networks, sensors, PLCs and many other electrical systems. Each model is equipped with the options of a rugged metal or plastic housing, heavy-duty screw or finger-safe terminals and a variety of protection features, making the PSG one of the most versatile industrial power supply lines on the market.

Contents

Description	Page
PSL Series	V7-T6-4
PSC Series	V7-T6-10
PSG Series	
Catalog Number Selection	V7-T6-17
Product Selection	V7-T6-18
Technical Data and Specifications	V7-T6-19
Power Derating Curves	V7-T6-27
Dimensions	V7-T6-30
ELC Series	V7-T6-36
easyRelay Power Supply	V7-T6-39
Sensor Power Supply	V7-T6-43

Features, Benefits and Functions

- Universal input voltages: 100–240 Vac for single-phase units, 400–500 Vac for three-phase units
- General-purpose 12 Vdc and 24 Vdc adjustable output
- 150% power surge output
- Wide operating temperature range: –25 °C to +80 °C
- MTBF up to 1,000,000 hours ensures uptime and reliability
- Protection from overvoltage, overcurrent and over-temperature conditions
- Rugged aluminum and plastic housings provide the durability required to stand up to harsh environments
- All-metal DIN rail mounting hardware
- Heavy-duty screw and finger-safe terminals
- LED indicating light for DC OK simplifies troubleshooting
- Conformal coated electronics
- Hazardous Location Class I, Division 2 rated models
- UL/NEC® Class 2 rated model
- Redundancy modules keep loads up and running in the event of a device failure
- Buffer module has the stored power needed to keep loads running through a short duration power failure
- Three-year standard warranty

Standards and Certifications

- cULus listed—UL 508
- CSA listed—CSA 22.2 No. 107.1-01
- Hazardous Location, Class I, Div. 2, Groups A, B, C, D
- IEC
- EN
- NEC Class 2
- UL Class 2
- CE marked
- RoHS compliant

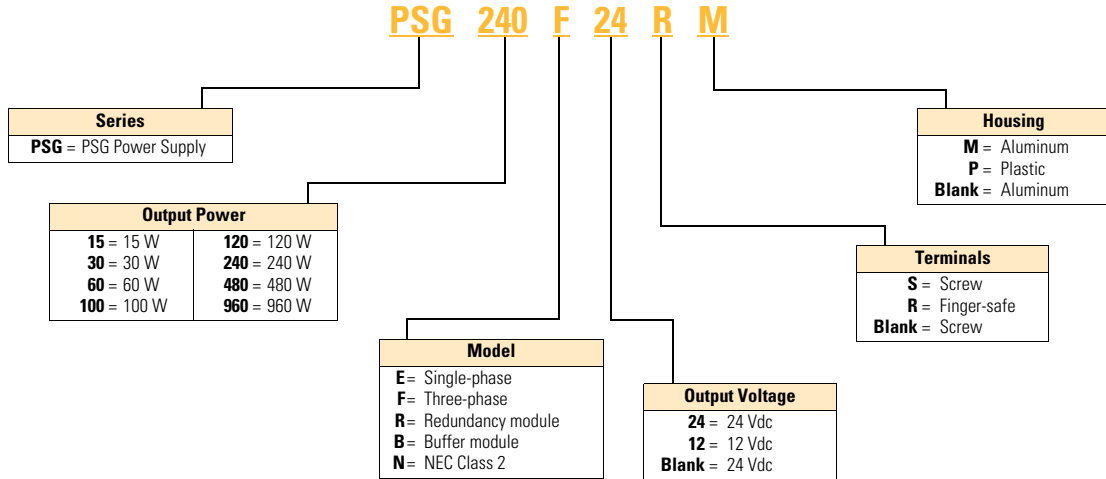


Note: Some models may not carry all certifications listed.

Catalog Number Selection

Note: Catalog number selection breakdown shown below is for illustrative purposes only and not to be used to create new catalog number configurations.

PSG Series



Note: Not all combinations are available. See Pages **V7-T6-19–V7-T6-26** for all available combinations.

Product Selection

PSG Series

Screw Type Terminals—Connections for those that require multiple types of terminations and lug connections.

6

PSG100E12SM



12 Vdc output single-phase power supplies (100–240 Vac nominal input)

Power	Description	Catalog Number
Screw Type Terminals		
	15 W 1.25 A output, plastic housing	PSG15E12SP
	30 W 2.5 A output, plastic housings	PSG30E12SP
	60 W 5 A output, aluminum housing	PSG60E12SM
	100 W 8.33 A output, aluminum housing	PSG100E12SM

PSG60E



24 Vdc output single-phase power supplies (100–240 Vac nominal input)

	60 W 2.5 A output, aluminum housing	PSG60E
	60 W 2.5 A output, plastic housing	PSG60E24SP
	120 W 5 A, aluminum housing	PSG120E
	240 W 10 A, aluminum housing	PSG240E
	480 W 20 A, aluminum housing	PSG480E

Finger-Safe Terminals—Connections for those that require IP20 terminals for all your safety solutions

PSG60E24RM



24 Vdc output single-phase power supplies (100–240 Vac nominal input)

Power	Description	Catalog Number
Finger-Safe Terminals		
	60 W 2.5 A output, aluminum housing	PSG60E24RM
	120 W 5 A, aluminum housing	PSG120E24RM
	240 W 10 A, aluminum housing	PSG240E24RM
	480 W 20 A, aluminum housing	PSG480E24RM
	60 W 2.5 A output, plastic housing, UL/NEC Class 2	PSG60N24RP

PSG480F24RM



24 Vdc output, three-phase power supplies (400–500 Vac nominal input)

	60 W 2.5 A, aluminum housing	PSG60F24RM
	120 W 5 A, aluminum housing	PSG120F24RM
	240 W 10 A, aluminum housing	PSG240F24RM
	480 W 20 A, aluminum housing	PSG480F24RM
	960 W 40 A, aluminum housing	PSG960F24RM

PSG480B24RM



Module power supplies (24 Vdc input)

	Buffer module, 480 W 20 A output, aluminum housing	PSG480B24RM
	Redundancy module, 480 W <20 A output, aluminum housing	PSG480R24RM
	Redundancy module, 960 W <40 A output, aluminum housing	PSG960R24RM

Technical Data and Specifications

PSG Series

	Single-Phase PSG15E12SP	PSG30E12SP	PSG60E12SM	PSG100E12SM	PSG60E	PSG60E24SP	PSG60E24RM
Input							
Nominal voltage	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac
AC input range	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac
DC input range	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Nominal current ^①	<0.37 A	<0.7 A	<1.35 A	<2.5 A	1.1 A	<1.10 A	<1.4 A
Inrush current limitation ^①	<30 A	<30 A	<50 A	<100 A	30 A	<40 A	<20 A
Internal fuse	T3.15 AH / 250 V	T3.15 AH / 250 V	T3.15 AH / 250 V	T3.15 AH / 250 V	T3.15 AH / 250 V	T3.15 AH / 250 V	T3.15 AH / 250 V
External fusing	4 A or 6 A	4 A or 6 A	6 A, 10 A or 16 A	6 A, 10 A or 16 A	6 A, 10 A or 16 A	6 A, 10 A or 16 A	6 A, 10 A or 16 A
Leakage current	<1 mA	<1 mA	<1 mA	<1 mA	<1 mA	<1 mA	<1 mA
Output							
Power	15 W	30 W	60 W	100 W	60 W	60 W	60 W
Nominal output voltage	12 Vdc ±2%	12 Vdc ±2%	12 Vdc ±2%	12 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%
Adjustment range	11–14 Vdc	11–14 Vdc	11–14 Vdc	11–14 Vdc	22–28 Vdc	22–28 Vdc	24–28 Vdc
Nominal current	1.25 A	2.5 A	5 A	8.33 A	2.5 A	2.5 A	2.5 A
Startup with capacitive loads	Max. 5000 µF	Max. 6600 µF	Max. 8000 µF	Max. 10,000 µF	Max. 8000 µF	Max. 8000 µF	Max. 8000 µF
Efficiency	>84% at 115 Vac, >83% at 230 Vac	>85% at 115 Vac and 230 Vac	>85% at 115 Vac and 230 Vac	>85.5% at 115 Vac, >87.5% at 230 Vac	>85% typ	>86% at 115 Vac, >87% at 230 Vac	>90% at 115 Vac and 230 Vac
Current surge	1.875 A	3.75 A	7.5 A	12.495 A	3.75 A	3.75 A	3.75 A
Current surge time	3 s	3 s	3 s	3 s	1 s (at 10 s intervals)	3 s	5 s
Residual ripple/peak switching (20 MHz)	<100 mVpp	<100 mVpp	<100 mVpp	<100 mVpp	<50 mV / <240 mVpp	<50 mV / <240 mVpp	<50 mVpp / <150 mVpp
Turn-on time	<2.5 s	<2.5 s	<2.5 s	<0.6s	<2.5 s	<3 s	<2s
Mains buffering at nominal load (typ.) ^①	>22 ms	>22 ms	>22 ms	>22 ms	>20 ms	>20 ms	>20 ms
Parallel operation	With o-ring diode	With o-ring diode	With o-ring diode	With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode
Galvanic Isolation							
Input/output	4 k Vac	4 k Vac	4 k Vac	4 k Vac	4 k Vac (type test) / 3 k Vac (routine test)	4 k Vac	4 k Vac
Input/ground	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac (type test) / 1.5 k Vac (routine test)	1.5 k Vac	1.5 k Vac
Output/ground	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac (type test) / 500 Vac (routine test)	1.5 k Vac	1.5 k Vac
General/Physical Data							
Housing material	Plastic	Plastic	Aluminum	Aluminum	Aluminum	Plastic	Aluminum
Signals	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK
MTBF	>1,000,000 hr	>1,000,000 hr	>800,000 hr	>800,000 hr	>800,000 hr	>800,000 hr	>1,000,000 hr
Dimensions (L)	100 mm	100 mm	121 mm	121 mm	121 mm	120.6 mm	121 mm
Dimensions (W)	32 mm	32 mm	32 mm	50 mm	32 mm	32 mm	32 mm
Dimensions (H)	100.6 mm	100.6 mm	120 mm	118.7 mm	120 mm	113 mm	125 mm
Weight (kg)	0.18	0.2	0.33	0.64	0.37	0.33	0.37
Terminals	Screw	Screw	Screw	Screw	Screw	Screw	Finger-safe, removable
Wire size	AWG 22–14	AWG 22–14	AWG 22–14	AWG 18–24	AWG 22–14	AWG 22–14	AWG 22–12
Operating temperature	–20 °C to +75 °C	–20 °C to +75 °C	–20 °C to +75 °C	–20 °C to +75 °C	–20 °C to +75 °C	–20 °C to +75 °C	–20 °C to +80 °C
Storage temperature	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C

Note

^① Ratings for single-phase models are at 115 Vac; three-phase models are at 400 Vac.

6.1

Power Supplies

General-Purpose and Sensor Power Supplies

PSG Series, continued

	Single-Phase PSG15E12SP	PSG30E12SP	PSG60E12SM	PSG100E12SM	PSG60E	PSG60E24SP	PSG60E24RM
General/Physical Data, continued							
Power derating— vertical mounting	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C	>50 °C derate power by 2.5% / °C	<0 °C to –20 °C derate power by 1% / °C, >50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C
Power derating— horizontal mounting	N/A	N/A	N/A	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	N/A	N/A	>50 °C derate power by 2.5% / °C
Operating humidity	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing
Vibration	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6						
Pollution degree	2	2	2	2	2	2	2
Climatic class	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721
Safety and Protection							
Transient surge voltage	Varistor	Varistor	Varistor	Varistor	Varistor	Varistor	Varistor
Surge voltage protection against internal surge	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Safety class	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection
Shock	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27

General-Purpose and Sensor Power Supplies

PSG Series, continued

	Single-Phase, continued						
	PSG60N24RP	PSG120E	PSG120E24RM	PSG240E	PSG240E24RM	PSG480E	PSG480E24RM
Input							
Nominal voltage	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac
AC input range	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac
DC input range	N/A	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc	120–375 Vdc
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Nominal current ^①	<1.5 A at 100 Vac	1.4 A	<2.2 A	2.9 A	<2.5 A	5.7 A	<5 A
Inrush current limitation ^①	<40 A	<80 A	<35 A	N/A	<35 A	N/A	<35 A
Internal fuse	T3.15 AH / 250 V	T3.15 AH / 250 V	T4 AH / 250 V	T6.3 AH / 250 V	T6.3 AH / 250 V	F10H / 250 A	T8 AH / 250 V
External fusing	6 A, 10 A or 16 A	6 A, 10 A or 16 A	6 A, 10 A or 16 A	10 A or 16 A	10 A or 16 A	10 A or 16 A	10 A or 16 A
Leakage current	<1 mA	<1 mA	<1 mA	<3.5 mA	<1 mA	<1 mA	<3 mA
Output							
Power	60 W	120 W	120 W	240 W	240 W	480 W	480 W
Nominal output voltage	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%
Adjustment range	22–28 Vdc	22–28 Vdc	24–28 Vdc	22–28 Vdc	24–28 Vdc	22–28 Vdc	22–28 Vdc
Nominal current	2.5 A	5 A	5 A	10 A	10 A	20 A	20 A
Startup with capacitive loads	Max. 8000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF
Efficiency	>86% at 115 Vac, >87% at 230 Vac	>84% typ	>89% at 115 Vac, >90% at 230 Vac	>84% typ	>90% at 115 Vac and 230 Vac	>86% typ	>90% at 115 Vac and 230 Vac
Current surge	N/A	7.5 A	7.5 A	15 A	15 A	30 A	30 A
Current surge time	N/A	1 s (at 10 s intervals)	5 s	1 s (at 10 s intervals)	5 s	1 s (at 10 s intervals)	5 s
Residual ripple/peak switching (20 MHz)	<50 mVpp / <240 mVpp	<50 mV / <240 mVpp	<50 mVpp / <150 mVpp	<50 mV / <240 mVpp	<50 mVpp / <150 mVpp	<50 mV / <240 mVpp	<50 mVpp
Turn-on time	<3 s	<1 s	<1 s	<1 s	<1 s	<1 s	<1 s
Mains buffering at nominal load (typ.) ^①	>20 ms	>35ms	>20 ms	>20 ms	>20 ms	>20 ms	>20 ms
Parallel operation	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode
Galvanic Isolation							
Input/output	4 k Vac	4 k Vac (type test) / 3 k Vac (routine test)	4 k Vac	4 k Vac (type test) / 3 k Vac (routine test)	4 k Vac	4 k Vac (type test) / 3 k Vac (routine test)	4 k Vac
Input/ground	1.5 k Vac	1.5 k Vac (type test) / 1.5 k Vac (routine test)	1.5 k Vac	1.5 k Vac (type test) / 1.5 k Vac (routine test)	1.5 k Vac	1.5 k Vac (type test) / 1.5 k Vac (routine test)	1.5 k Vac
Output/ground	1.5 k Vac	1.5 k Vac (type test) / 500 Vac (routine test)	1.5 k Vac	1.5 k Vac (type test) / 500 Vac (routine test)	1.5 k Vac	1.5 k Vac (type test) / 500 Vac (routine test)	1.5 k Vac
General/Physical Data							
Housing material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Signals	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK
MTBF	>800,000 hr	>800,000 hr	>800,000 hr	>300,000 hr	>500,000 hr	>300,000 hr	>500,000 hr
Dimensions (L)	120.6 mm	121 mm	121 mm	121 mm	121 mm	121 mm	121 mm
Dimensions (W)	32 mm	32 mm	50 mm	85 mm	85 mm	160 mm	144 mm
Dimensions (H)	119.3 mm	120 mm	123.1 mm	118.5 mm	124.1 mm	115 mm	118.6 mm
Weight (kg)	0.33	0.54	0.72	1.04	1.1	1.8	1.37
Terminals	Finger-safe, fixed	Screw	Finger-safe, removable	Screw	Finger-safe, removable	Screw	Finger-safe, fixed
Wire size	AWG 22–10	AWG 22–14	AWG 20–12	AWG 22–14	AWG 16–12	AWG 16–14 (input) AWG 12–10 (output)	AWG 18–10
Operating temperature	–20 °C to +80 °C	–20 °C to +75 °C	–20 °C to +80 °C	–20 °C to +75 °C	–20 °C to +80 °C	–20 °C to +75 °C	–25 °C to +75 °C
Storage temperature	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C

Note

^① Ratings for single-phase models are at 115 Vac; three-phase models are at 400 Vac.

6.1

Power Supplies

General-Purpose and Sensor Power Supplies

PSG Series, continued

Single-Phase, continued

PSG60N24RP PSG120E PSG120E24RM PSG240E PSG240E24RM PSG480E PSG480E24RM

General/Physical Data, continued

Power derating— vertical mounting	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C	>50 °C derate power by 2.5% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	>50 °C derate power by 2.5% / °C	>50 °C derate power by 2.5% / °C	>50 °C derate power by 2.5% / °C, >70 °C to 75 °C derate power by 5% / °C
Power derating— horizontal mounting	>50 °C derate power by 2.5% / °C, >70 °C derate power by 4% / °C	N/A	>50 °C derate power by 2.5% / °C	N/A	N/A	N/A	N/A
Operating humidity	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing
Vibration	10 to 500 Hz, 0.35 mm acc. 30 m/s ² , single amplitude (3 G max.) for 60 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 150 Hz, 0.35 mm acc. 50 m/s ² , single amplitude (5G max.) for 90 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6
Pollution degree	2	2	2	2	2	2	2
Climatic class	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721

Safety and Protection

Transient surge voltage	Varistor	Varistor	Varistor	Varistor	Varistor	Varistor	Varistor
Surge voltage protection against internal surge	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Safety class	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection	Class I with ground connection
Shock	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27
UL 1310	Class 2	—	—	—	—	—	—

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PSG Series, continued

	Three-Phase PSG60F24RM	PSG120F24RM	PSG240F24RM	PSG480F24RM	PSG960F24RM
Input					
Nominal voltage	3 x 400–500 Vac	3 x 400–500 Vac	3 x 400–500 Vac	3 x 400–500 Vac	3 x 400–500 Vac
AC input range ^①	3 x 320–600 Vac	3 x 320–600 Vac	3 x 320–600 Vac	3 x 320–600 Vac	3 x 320–600 Vac
DC input range	450–800 Vdc	450–800 Vdc	450–800 Vdc	450–800 Vdc	450–800 Vdc
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Nominal current ^②	<0.3 A	<0.5 A	<0.75 A	<1 A	<1.7 A
Inrush current limitation ^②	<30 A	<30 A	<40 A	<50 A	<40 A
Internal fuse	T 3.15 AH / 500 V, 600 V	T 3.15 AH / 500 V, 600 V	T 3.15 AH / 500 V, 600 V	T 3.15 AH / 500 V	T 4 AH / 500 V
External fusing	3 x circuit breakers 6 A, 10 A or 16 A	3 x circuit breakers 6 A, 10 A or 16 A	3 x circuit breakers 6 A, 10 A or 16 A	3 x circuit breakers 6 A, 10 A or 16 A	3 x circuit breakers 10 A or 16 A
Leakage current	<3.5 mA	<3.5 mA	<3.5 mA	<3.5 mA	<3.5 mA
Output					
Power	60 W	120 W	240 W	480 W	960 W
Nominal output voltage	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%	24 Vdc ±2%
Adjustment range	24–28 Vdc	24–28 Vdc	24–28 Vdc	24–28 Vdc	24–28 Vdc
Nominal current	2.5 A	5 A	10 A	20 A	40 A
Startup with capacitive loads	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF	Max. 10,000 µF
Efficiency	>86% at 3 x 400 Vac and 3 x 500 Vac	>88% at 3 x 400 Vac and 3 x 500 Vac	>92% at 3 x 400 Vac and 3 x 500 Vac	>91% at 3 x 400 Vac and 3 x 500 Vac	>92% at 3 x 400 Vac and 3 x 500 Vac
Current surge	3.75 A	7.5 A	15 A	30 A	60 A
Current surge time	5 s	5 s	5 s	5 s	5 s
Residual ripple/peak switching (20 MHz)	<50 mVpp	<50 mVpp	<150 mVpp	<150 mVpp	<240 mVpp
Turn-on time	<1 s	<1 s	<1 s	<1 s	<1.5 s
Mains buffering at nominal load (typ.) ^②	>20 ms	>20 ms	>20 ms	>20 ms	>20 ms
Parallel operation	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG480R24RM / PSG960R24RM / With o-ring diode	PSG960R24RM / With o-ring diode
Galvanic Isolation					
Input/output	4 k Vac	4 k Vac	4 k Vac	4 k Vac	4 k Vac
Input/ground	2 k Vac	2 k Vac	2 k Vac	2 k Vac	2 k Vac
Output/ground	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac	1.5 k Vac
General/Physical Data					
Housing material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Signals	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK	Green LED for DC OK
MTBF	>500,000 hr	>500,000 hr	>300,000 hr	>500,000 hr	>300,000 hr
Dimensions (L)	121 mm	121 mm	121 mm	121 mm	121 mm
Dimensions (W)	50 mm	50 mm	70 mm	140 mm	255 mm
Dimensions (H)	117.3 mm	117.3 mm	117.3 mm	117.3 mm	117.3 mm
Weight (kg)	0.66	0.66	0.89	1.35	2.6
Terminals	Finger-safe, fixed	Finger-safe, fixed	Finger-safe, fixed	Finger-safe, fixed	Finger-safe, fixed
Wire size	AWG 18–12	AWG 18–12	AWG 18–12 (input) AWG 16–12 (output)	AWG 18–8 (input) AWG 12–10 (output)	AWG 18–8 (input) AWG 12–10 (output)
Operating temperature	–25 °C to +75 °C	–25 °C to +75 °C	–25 °C to +75 °C	–25 °C to +80 °C	–25 °C to +65 °C
Storage temperature	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C	–25 °C to +85 °C

Notes

① PSG is only intended to be run continuously within its nominal voltage range. Short fluctuations in voltage can be tolerated providing they do not rise above the AC input range.

② Ratings for single-phase models are at 115 Vac; three-phase models are at 400 Vac.

6.1

Power Supplies

General-Purpose and Sensor Power Supplies

PSG Series, continued

Three-Phase, continued					
	PSG60F24RM	PSG120F24RM	PSG240F24RM	PSG480F24RM	PSG960F24RM
General/Physical Data, continued					
Power derating— vertical mounting	>50 °C derate power by 2.5% / °C, >70 °C derate power by 5% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 5% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 5% / °C	>50 °C derate power by 2.5% / °C, >70 °C derate power by 5% / °C	>50 °C derate power by 2.5% / °C
Power derating— horizontal mounting	>45 °C derate power by 2.5% / °C, >55 °C derate power by 1.66% / °C, >70 °C derate power by 5% / °C	>40 °C derate power by 2.5% / °C, >60 °C derate power by 5% / °C	>40 °C derate power by 2.5% / °C, >60 °C derate power by 5% / °C	N/A	N/A
Operating humidity	<95% RH, noncondensing	<95% RH, noncondensing	<95% RH, noncondensing	5 to 95% RH, noncondensing	5 to 95% RH, noncondensing
Vibration	10 to 500 Hz, 0.35 mm acc. 30 m/s ² , single amplitude (3 G max.) for 60 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6				
Pollution degree	2	2	2	2	2
Climatic class	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721	3K3 according to EN 60721
Safety and Protection					
Transient surge voltage	Varistor	Varistor	Varistor	Varistor	Varistor
Surge voltage protection against internal surge	Yes	Yes	Yes	Yes	Yes
Safety class	Class I with ground connection				
Shock	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27	30 G (300 m/s ²) in all directions according to IEC 60068-2-27

PSG Series, continued

	Redundancy Modules	
	PSG480R24RM	PSG960R24RM
Input		
Nominal voltage	24–48 Vdc	24–48 Vdc
DC input range	22–60 Vdc	22–60 Vdc
Nominal current	<20 A	<40 A
Inrush current limitation	<25 A	<50 A
Output		
Nominal output voltage	Vin–0.65 V (typ.)	Vin–0.65 V (typ.)
Nominal current	<20 A	<40 A
Efficiency	>97% typ.	>97% typ.
Galvanic Isolation		
Input/ground	1.5 k Vac	1.5 k Vac
Output/ground	1.5 k Vac	1.5 k Vac
General/Physical Data		
Housing material	Aluminum	Aluminum
Signals ^①	Green LED for DC Vin1 OK and DC Vin2 OK	Green LED for DC Vin1 OK and DC Vin2 OK
MTBF	>800,000 hr	>800,000 hr
Dimensions (L)	121 mm	121 mm
Dimensions (W)	50 mm	50 mm
Dimensions (H)	122.1 mm	122.1 mm
Weight (kg)	0.375	0.515
Terminals	Finger safe—fixed	Finger safe—fixed
Wire size	AWG 12–10	AWG 12–10
Operating temperature	–40 °C to +80 °C	–40 °C to +80 °C
Storage temperature	–40 °C to +85 °C	–40 °C to +85 °C
Power de-rating—vertical mounting	> 50 °C de-rate power by 2.5% / °C	> 50 °C de-rate power by 2.5% / °C
Power de-rating—horizontal mounting	N/A	N/A
Operating humidity	< 95% RH, noncondensing	< 95% RH, noncondensing
Vibration	10 to 500 Hz, 0.35 mm acc. 30m/s ² , single amplitude (3 G max.) for 60 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6	10 to 500 Hz, 0.35 mm acc. 30m/s ² , single amplitude (3 G max.) for 60 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6
Pollution degree	2	2
Climatic class	3K3 according to EN 60721	3K3 according to EN 60721
Safety and Protection		
Safety class	Class 2 with ground connection	Class III with ground connection
Shock	30 G (300 m/S ²) in all directions according to IEC 60068-2-27	30 G (300 m/S ²) in all directions according to IEC 60068-2-27

Note

^① The LED will turn on when the Vin1 and Vin2 > 18 V ±5% (for 24 V system) or > 36 V ±5% (for 48 V system) and not more than 30 V (for 24 V system) or not more than 60 V (for 48 V system), the relay contacts will be closed. If Vin1 and Vin2 is under or over this range, the LED will be turned off.

PSG Series, continued

**Buffer Module
PSG480B24RM****Input**

Nominal voltage	24 Vdc
DC input range	22.8–28.8 Vdc
Maximum voltage	35 Vdc
Current	Charging mode: <0.6 A Discharging mode: 20 A max.
Power (standby mode)	2.5 W average
Maximum signal (inhibit)	35 V / 10 mA
Max inrush current	< 20 A
Charging time	< 30s

Output

Nominal voltage	24 Vdc typ.
DC adjustment range	Switch = "Fix 22V": Buffering starts if terminal voltage falls below 22 V Switch = "Vin-1V" (Factory Setting): Buffering starts if terminal voltage is decreased by >1 V
Maximum voltage	35 Vdc
Current	20 A max.
buffering time	250 ms min. at 24 V/20 A load, 5 s min. at 24 V/1 A load
Maximum signal	35 V / 10 mA
PARD (20MHz)	<200 mVpp
Galvanic isolation	
Input/ground	1.5 k Vac
Output/ground	1.5 k Vac
Signal/ground	1.5 k Vac

General/Physical Data

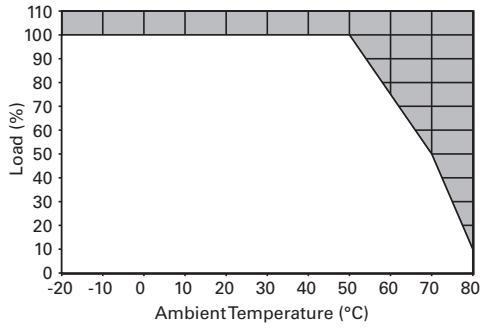
Housing material	Aluminum
Signals	Green LED off: unit is discharged or Vin < 22 Vdc Green LED on: unit is fully charged Green LED blinking slowly: unit is charging Green LED blinking quickly: unit is discharging
MTBF	>800,000 hr
Parallel connection	Yes
Series connection	No
Dimensions (L)	121 mm
Dimensions (W)	70 mm
Dimensions (H)	120.1 mm
Weight (kg)	0.76
Terminals	Finger safe-fixed
Wire Size	Input / Output: AWG 12–10 Signal: AWG 24–10
Operating temperature	–25 °C to +75 °C
Storage temperature	–25 °C to +85 °C
Power de-rating—vertical mounting	>70 °C de-rate power by 5% / °C
Operating humidity	< 95% RH, noncondensing
Vibration	10 to 500 Hz, 0.35 mm acc. 30 m/s ² , single amplitude (3 G max.) for 60 min. in each X, Y and Z directions, in accordance with IEC 60068-2-6
Pollution degree	2

Safety and Protection

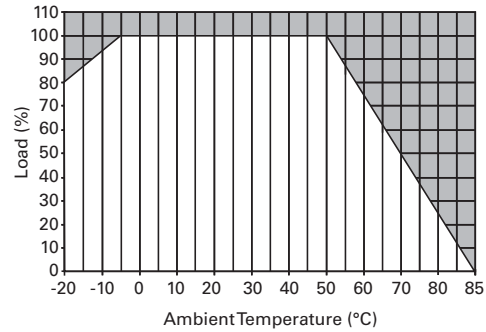
Shock	30 G (300 m/S ²) in all directions according to IEC60068-2-27
Safety class	Class I with ground connection

Power Derating Curves

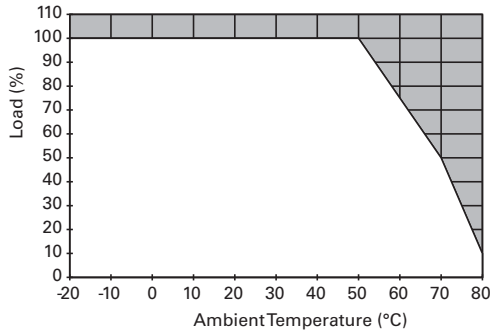
Vertical Mounting Position PSG15E12SP



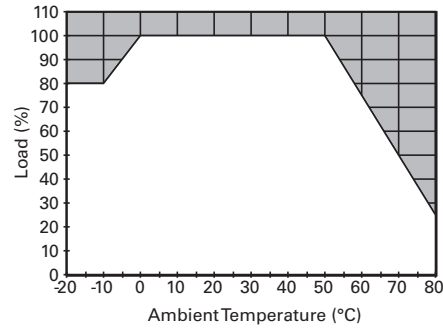
Vertical Mounting Position PSG60E



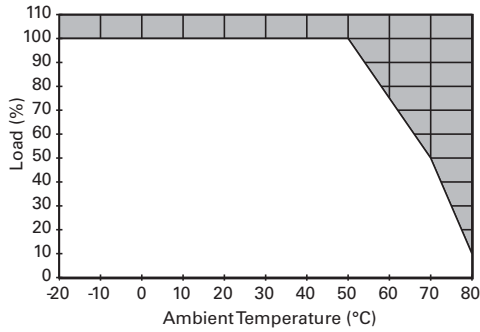
Vertical Mounting Position PSG30E12SP



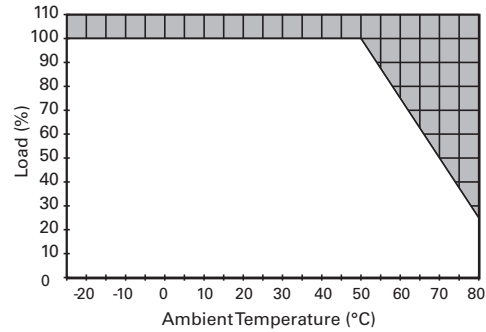
Vertical Mounting Position PSG60E24SP



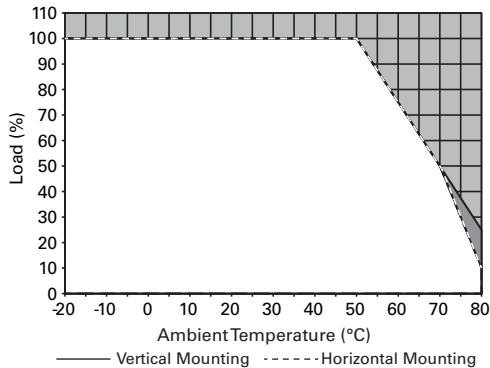
Vertical Mounting Position PSG60E12SM



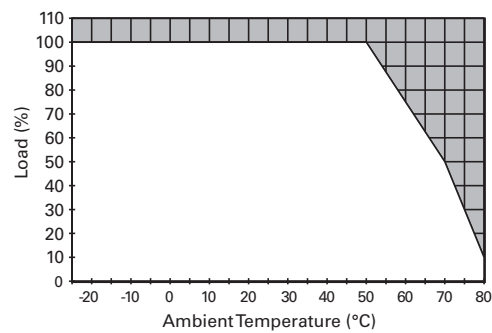
Vertical and Horizontal Mounting Position PSG60E24RM



Vertical and Horizontal Mounting Position PSG100E12SM



Vertical and Horizontal Mounting Position PSG60N24RP



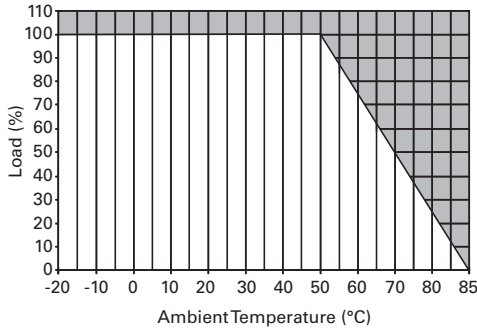
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Power Supplies

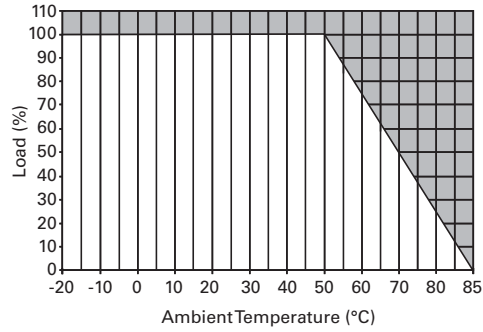
General-Purpose and Sensor Power Supplies

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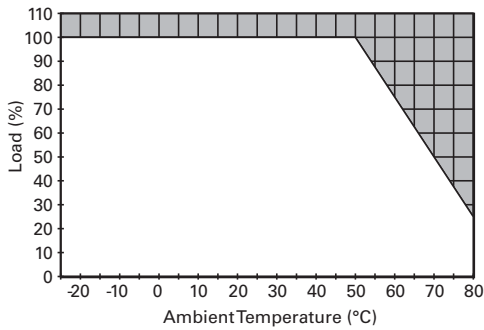
Vertical Mounting Position PSG120E



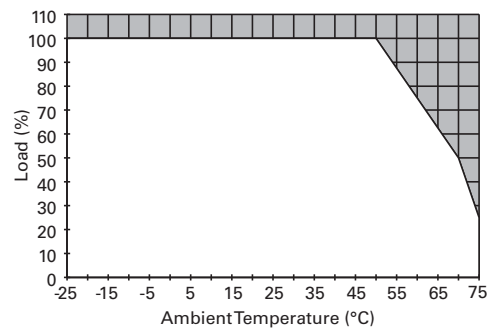
Vertical Mounting Position PSG480E



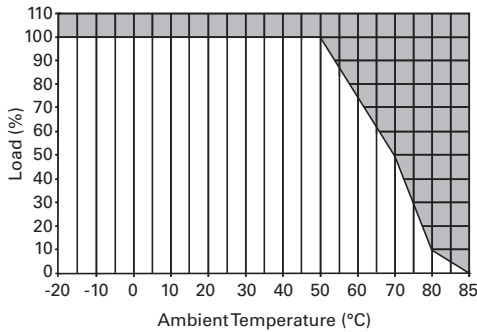
Vertical and Horizontal Mounting Position PSG120E24RM



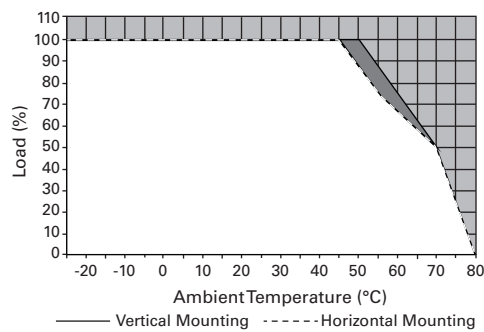
Vertical Mounting Position PSG480E24RM



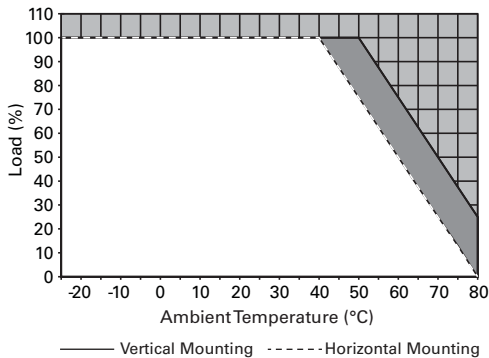
Vertical Mounting Position PSG240E



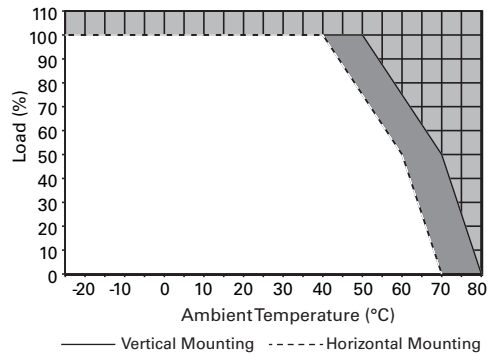
Vertical and Horizontal Mounting Position PSG60F24RM



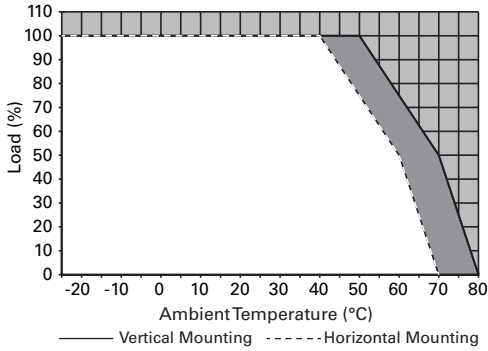
Vertical and Horizontal Mounting Position PSG240E24RM



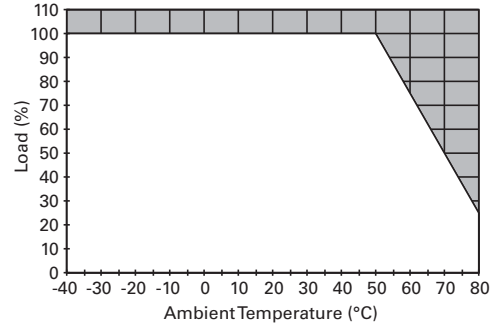
Vertical and Horizontal Mounting Position PSG120F24RM



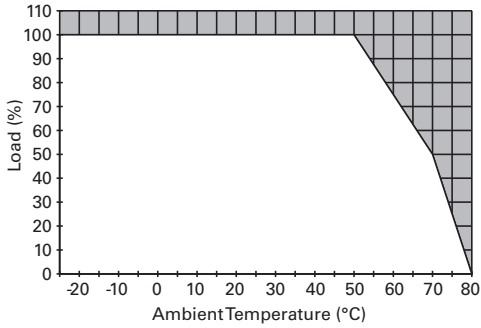
Vertical and Horizontal Mounting Position PSG240F24RM



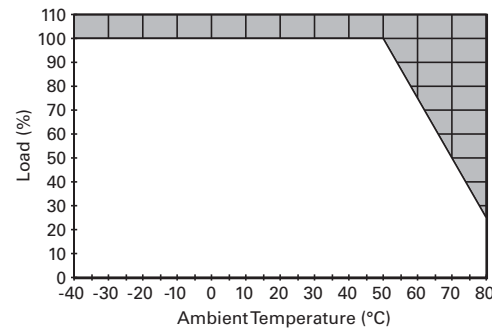
Vertical Mounting Position PSG480R24RM



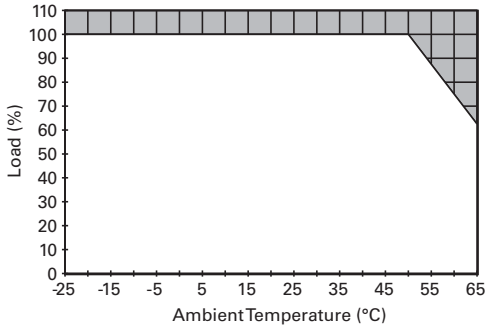
Vertical Mounting Position PSG480F24RM



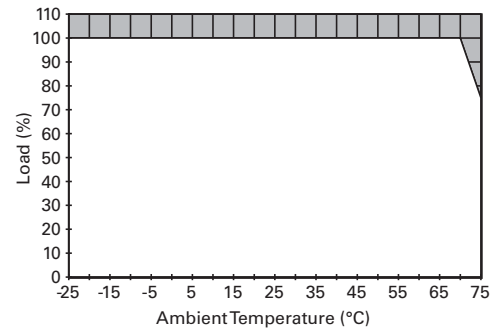
Vertical Mounting Position PSG960R24RM



Vertical Mounting Position PSG960F24RM



Vertical Mounting Position PSG480B24RM



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Power Supplies

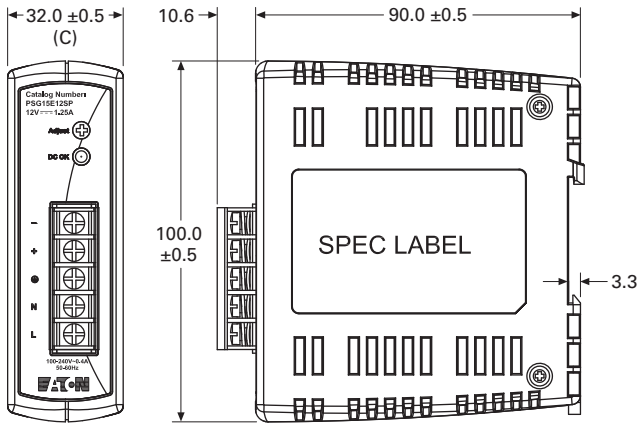
General-Purpose and Sensor Power Supplies

Dimensions

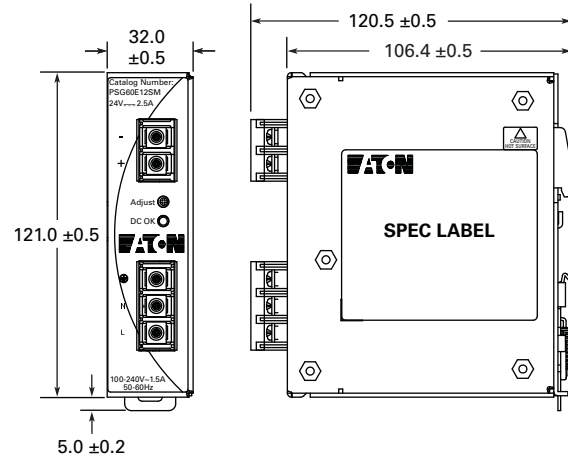
Approximate Dimensions in mm

Note: Dimensions are for reference only.

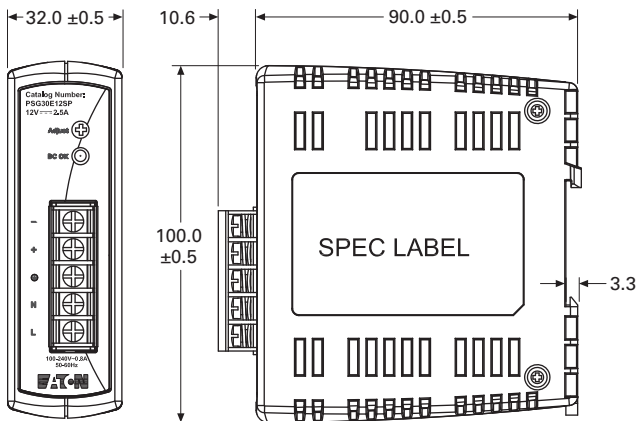
PSG15E12SP



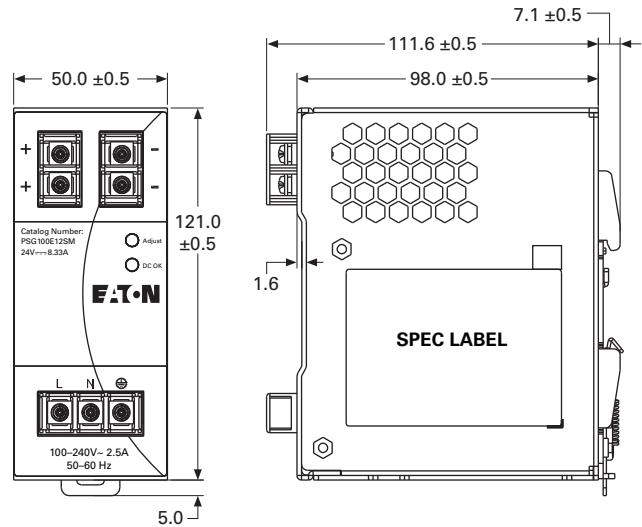
PSG60E12SM



PSG30E12SP



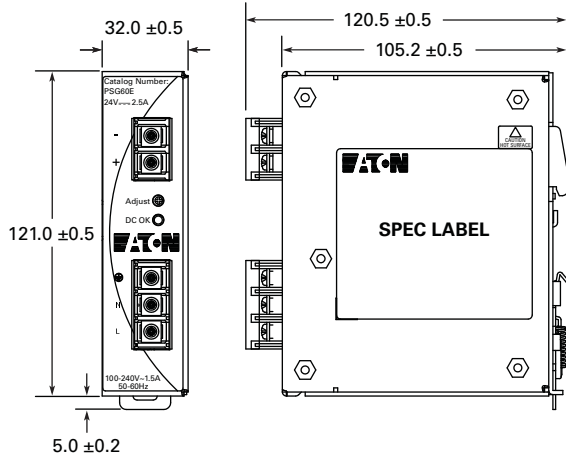
PSG100E12SM



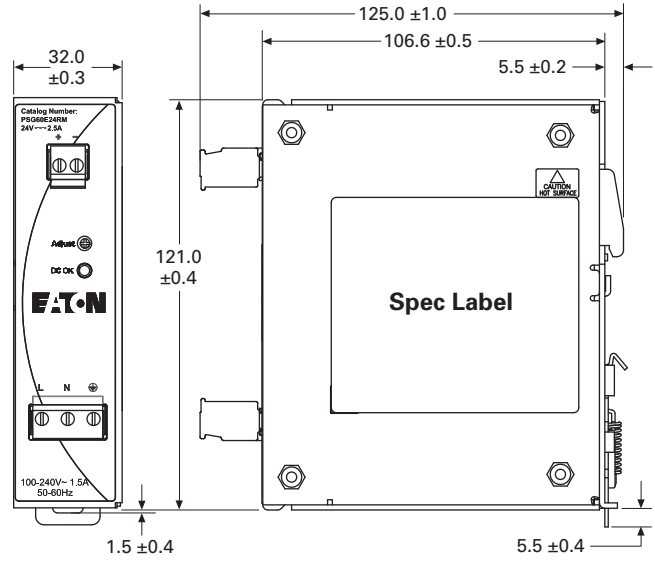
Approximate Dimensions in mm

Note: Dimensions are for reference only.

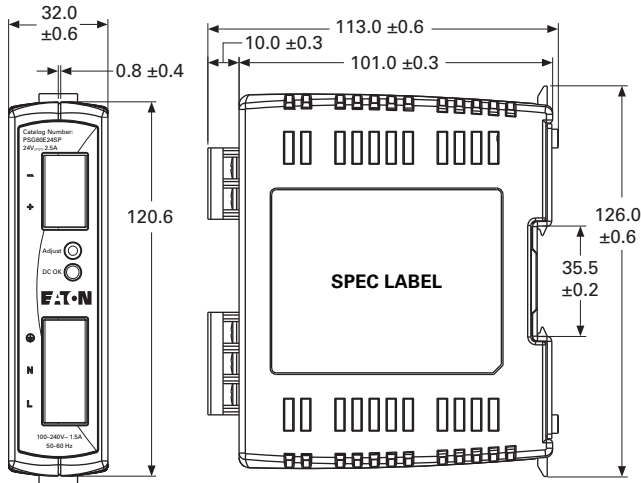
PSG60E



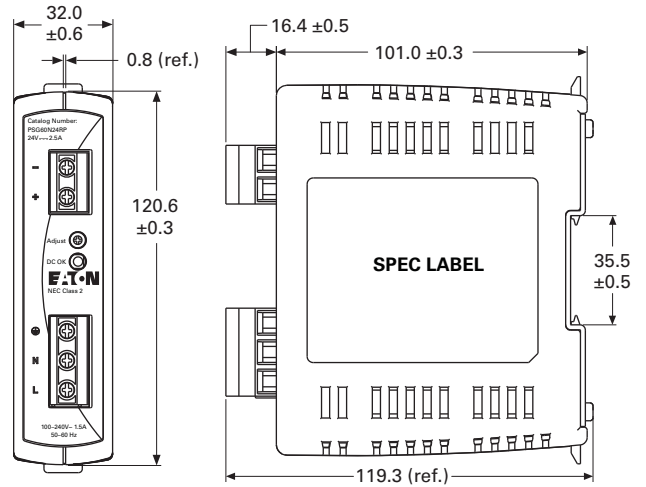
PSG60E24RM



PSG60E24SP



PSG60N24RP



6.1

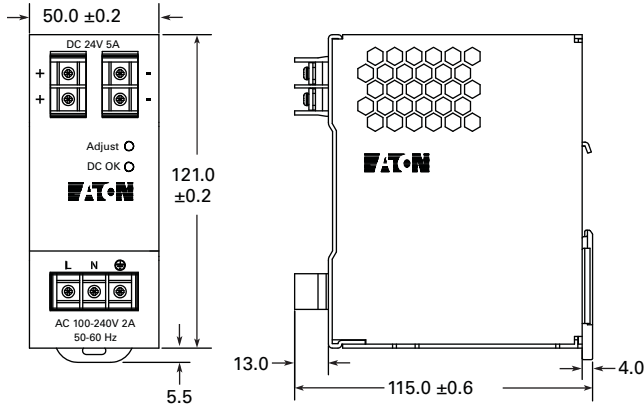
Power Supplies

General-Purpose and Sensor Power Supplies

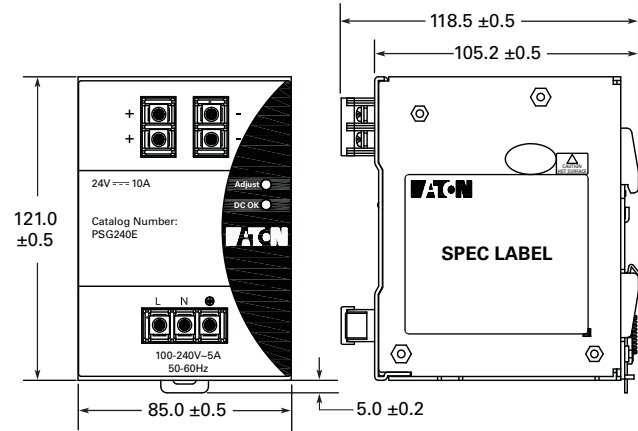
Approximate Dimensions in mm

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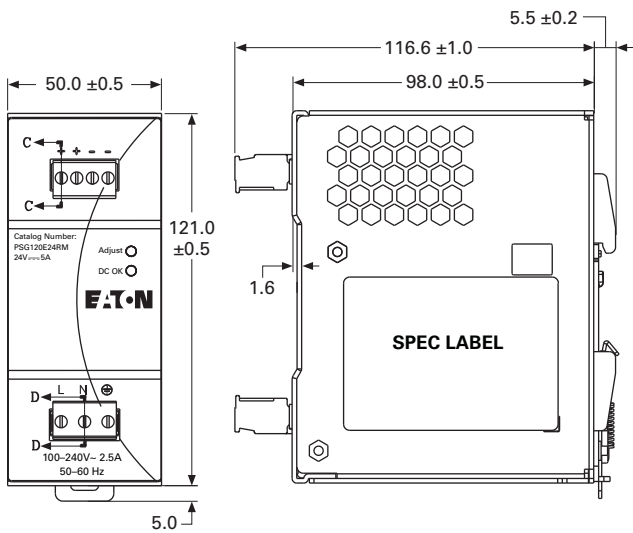
PSG120E



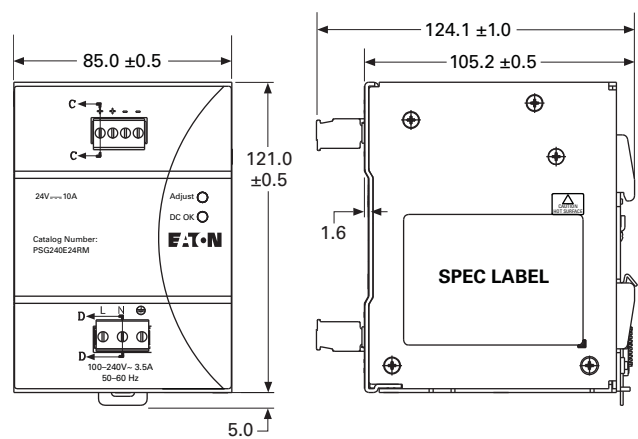
PSG240E



PSG120E24RM



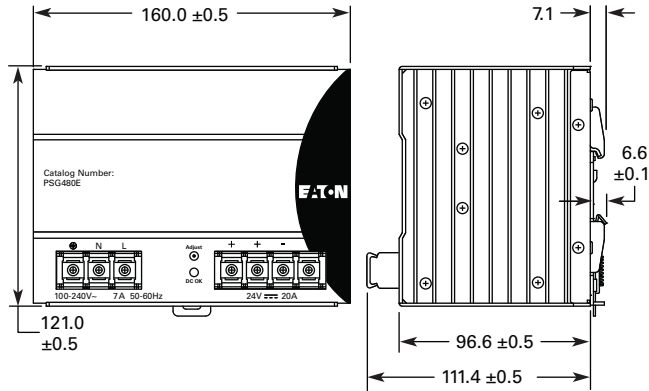
PSG240E24RM



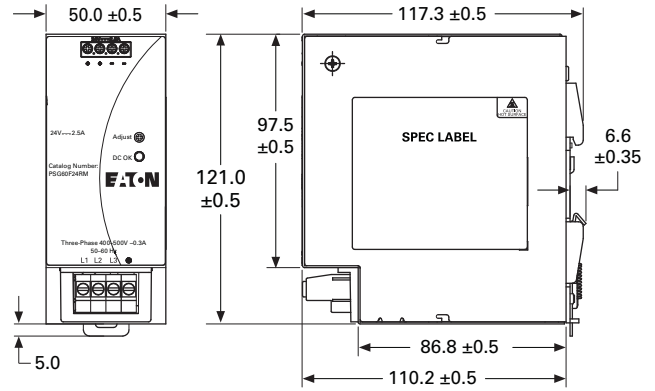
Approximate Dimensions in mm

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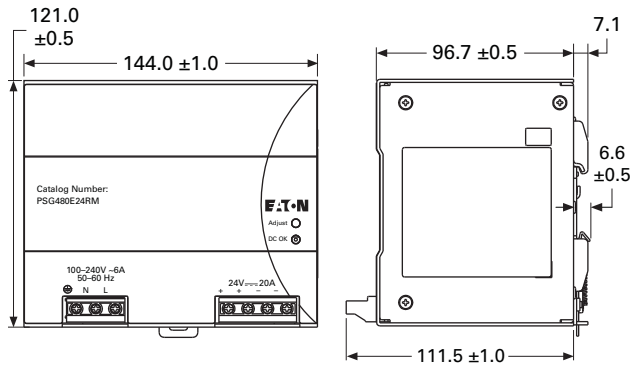
PSG480E



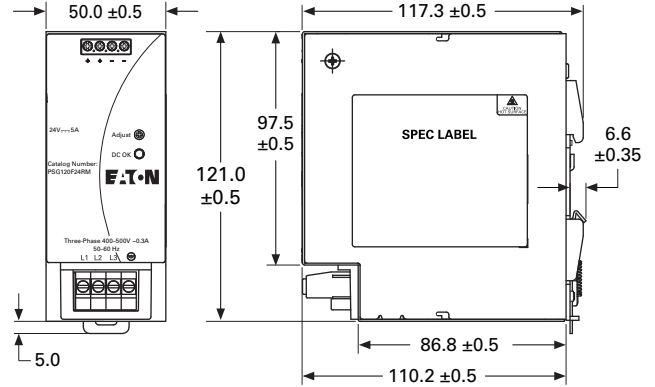
PSG60F24RM



PSG480E24RM



PSG120F24RM



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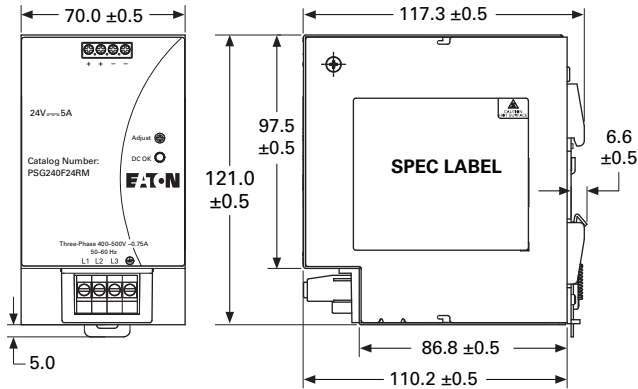
Power Supplies

General-Purpose and Sensor Power Supplies

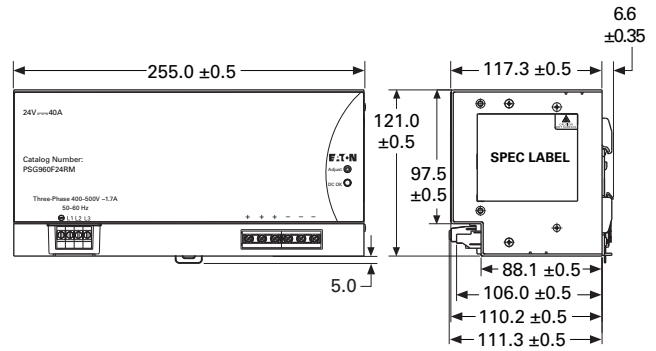
Approximate Dimensions in mm

Note: Dimensions are for reference only.

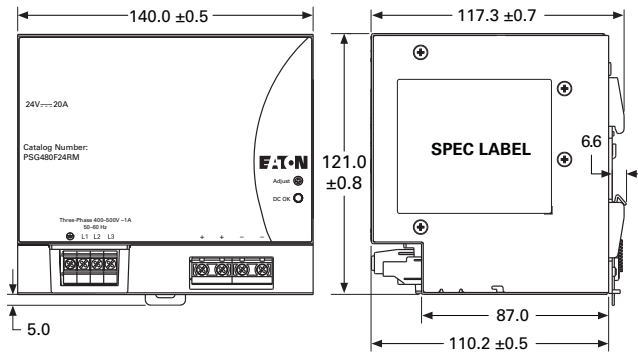
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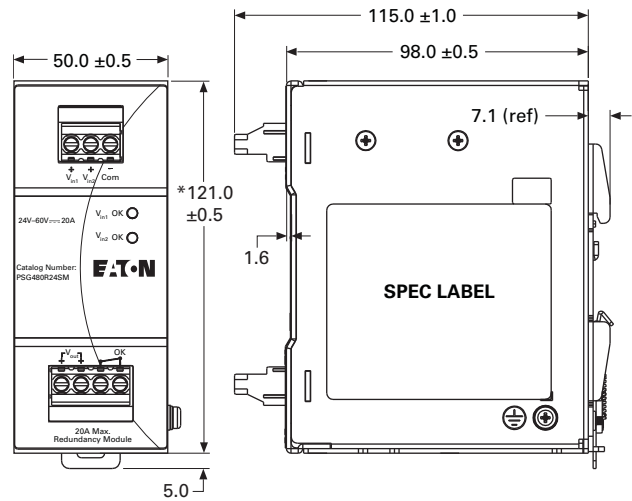
PSG960F24RM



PSG480F24RM



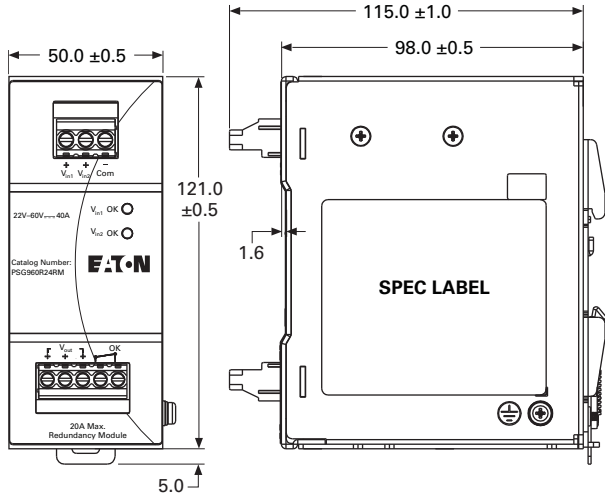
PSG480R24RM



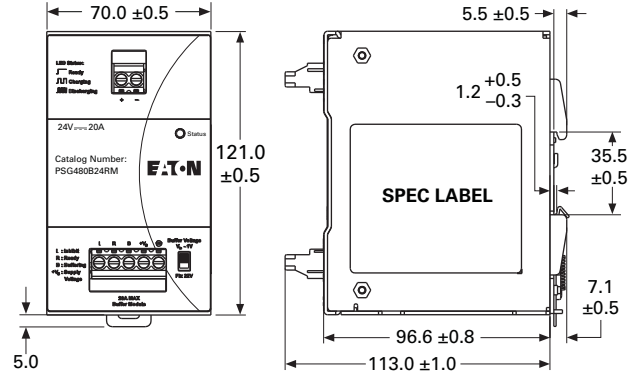
Approximate Dimensions in mm

Note: Dimensions are for reference only.

PSG960R24RM



PSG480B24RM



ELC Series



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ELC Series

Product Description

Eaton's ELC power supplies are the perfect products for those applications requiring a very compact and low-cost source for 24 Vdc power. While these products were developed to be a perfect match for our Eaton Logic Controllers, they can be used in a variety of applications.

The lightweight, DIN rail mounted enclosures, wide input voltage range and robust screw terminals make these power supplies easy to install and use. They are available in 1 A and 2 A models.

Features, Benefits and Functions

- Universal input voltage: 85–264 Vac
- Compact size, with common depth and height across models allows for common panel depths and family consistency
- ELC styling provides maximum aesthetic appeal when used with Eaton Logic Controllers
- Front-mounted pressure plate screw terminals for a robust connection
- Removable finger-safe protective cover for terminals
- Power ON indication LED
- Integrated mounting hardware for panel mounting or DIN rail mounting

Standards and Certifications

- cULus listed
- CE marked
- RoHS compliant



Product Selection

ELC-PS01

ELC Series



Description	Catalog Number
24 watt, 1 amp power supply	ELC-PS01
48 watt, 2 amp power supply	ELC-PS02

Technical Data and Specifications

ELC Series

Capacity	ELC-PS01 24 W	ELC-PS02 48 W
Input		
Nominal voltage	100–240 Vac	100–240 Vac
Voltage range	85–264 Vac	85–264 Vac
Frequency	47–63 Hz	47–63 Hz
Output		
Nominal output voltage	24 Vdc ± 3%	24 Vdc ± 3%
Nominal current	1 A	2 A
Efficiency	78% to 87% typical at full load	78% to 87% typical at full load
Residual ripple/peak switching (20 MHz)	< 100 mV typical at full load	< 240 mV typical at full load
General/Physical Data		
Housing material	Plastic	Plastic
Dimensions (D)	60 mm	60 mm
Dimensions (W)	36.5 mm	55 mm
Dimensions (H)	90 mm	90 mm
Weight (g)	158	250
Operating temperature	0 °C to +55 °C	0 °C to +55 °C
Storage temperature	–25 °C to +70 °C	–25 °C to +70 °C
Operating humidity	50% to 95% RH, noncondensing	50% to 95% RH, noncondensing
Pollution degree	2	2
Approvals/Certifications		
	UL 508, CE, RoHS, EMC directive 89/336/EEC, low voltage directive 73/23/EEC	UL 508, CE, RoHS, EMC directive 89/336/EEC, low voltage directive 73/23/EEC
Safety and Protection		
Overload/short circuit protection	Auto recovery	Auto recovery

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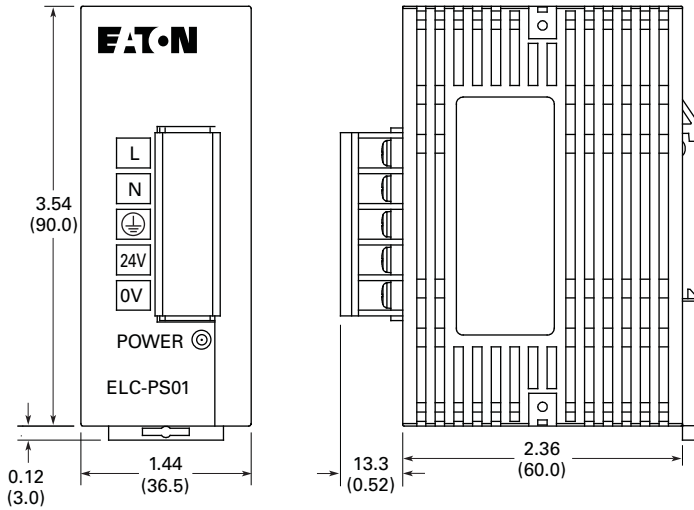
Power Supplies

General-Purpose and Sensor Power Supplies

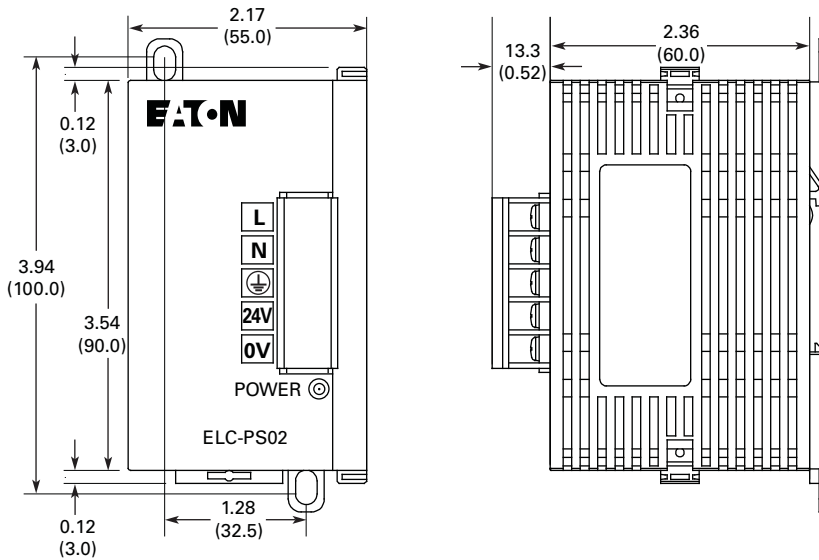
Dimensions

Approximate Dimensions in Inches (mm)

ELC-PS01 Power Supply



ELC-PS02 Power Supply



easyRelay Power Supply



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easyRelay Power Supply

Product Description

Eaton’s easyRelay power supplies are the perfect products for those applications requiring a low amperage 24 Vdc power source. While these products were developed to be a perfect match for our easyRelay products, they can be used in a variety of applications.

Features, Benefits and Functions

- Universal input voltage: 85–264 Vac, 50/60 Hz
- Wide operating temperature range (–25 °C to +55 °C)
- Power ON / diagnostics LED: continuous light on—fault-free operation; flashing LED—short circuit overload on voltage output
- Optional mounting hardware for panel mounting (EZB4-101-GF1) or standard DIN rail mounting
- Finger-safe, side-entry screw clamp terminals for clean wiring
- Primary switched-mode power supplies
- Output voltages can be connected in parallel to increase power output or for redundant operation to achieve greater system availability
- Safety extra low voltage (SELV to EN 55 022)
- Radio interference Class B to EN 55 011 and EN 55 022 for use in industrial and public networks

Standards and Certifications

- UL listed
- CSA certified
- CE marked
- RoHS compliant
- CSA Class I, Division 2 rated for groups A, B, C, D



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Power Supplies

General-Purpose and Sensor Power Supplies

Product Selection

easyRelay Power Supply Units

Rated input voltage 100–240 Vac, single-phase.

	Input Voltage Range	Rated Output Voltage	Output Voltage Setting Range	Rated Output Power	Rated Output Current	Catalog Number
EASY200-POW	100–240 Vac	24 Vdc/12 Vdc	—	8 W	0.35 A / 20 mA	EASY200-POW
						
EASY400-POW	100–240 Vac	24 Vdc	—	30 W	1.25 A	EASY400-POW
						
EASY500-POW	100–240 Vac	24 Vdc	—	60 W	2.5 A	EASY500-POW
						
EASY600-POW	100–240 Vac	24 Vdc	—	100 W	4.2 A	EASY600-POW
						

Technical Data and Specifications

easyRelay Series

Capacity	EASY200-POW 8 W	EASY400-POW 30 W	EASY500-POW 60 W	EASY600-POW 100 W
Input				
Nominal voltage	100–240 Vac	100–240 Vac	100–240 Vac	100–240 Vac
Voltage range	85–264 Vac	85–264 Vac	85–264 Vac	85–264 Vac
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Output				
24 Vdc				
Nominal output voltage	24 Vdc ± 3%	24 Vdc ± 3%	24 Vdc ± 3%	24 Vdc ± 3%
Nominal current	0.35 A	1.25 A	2.5 A	4.2 A
12 Vdc				
Nominal output voltage	12 Vdc	—	—	—
Nominal current	20 mA	—	—	—
General/Physical Data				
Housing material	Plastic	Plastic	Plastic	Plastic
Dimensions (D)	2.22 in (56.5 mm)	2.22 in (56.5 mm)	2.22 in (56.5 mm)	2.22 in (56.5 mm)
Dimensions (W)	1.40 in (35.5 mm)	2.81 in (71.5 mm)	2.81 in (71.5 mm)	4.23 in (107.5 mm)
Dimensions (H)	3.54 in (90 mm)	3.54 in (90 mm)	3.54 in (90 mm)	3.54 in (90 mm)
Operating temperature	–25 °C to +55 °C	–25 °C to +55 °C	–25 °C to +55 °C	–25 °C to +55 °C
Storage temperature	–40 °C to +70 °C	–40 °C to +70 °C	–40 °C to +70 °C	–40 °C to +70 °C
Pollution degree	2	2	2	2
Connection cables				
Solid	0.2–4.0 mm ² (AWG 22–12)	0.2–4.0 mm ² (AWG 22–12)	0.2–4.0 mm ² (AWG 22–12)	0.2–4.0 mm ² (AWG 22–12)
Flexible	0.2–2.5 mm ² (AWG 22–12)	0.2–2.5 mm ² (AWG 22–12)	0.2–2.5 mm ² (AWG 22–12)	0.2–2.5 mm ² (AWG 22–12)
Approvals/Certifications				
	UL, CE, RoHS, CSA, EN 50178m IEC/EN 60947	UL, CE, RoHS, CSA, EN 50178m IEC/EN 60947	UL, CE, RoHS, CSA, EN 50178m IEC/EN 60947	UL, CE, RoHS, CSA, EN 50178m IEC/EN 60947
Safety and Protection				
Overload/short circuit protection	Yes	Yes	Yes	Yes
Overcurrent limitation form	0.3 A	1.4 A	2.8 A	4.6 A
Degree of protection	IP20	IP20	IP20	IP20
RFI suppression	EN 55011, EN 55022 Class B, IEC 61000-6-1, 2, 3, 4	EN 55011, EN 55022 Class B, IEC 61000-6-1, 2, 3, 4	EN 55011, EN 55022 Class B, IEC 61000-6-1, 2, 3, 4	EN 55011, EN 55022 Class B, IEC 61000-6-1, 2, 3, 4
Potential isolation (prim./sec.)	Yes, SELV, (to EN 600950, VDE 805)	Yes, SELV, (to EN 600950, VDE 805)	Yes, SELV, (to EN 600950, VDE 805)	Yes, SELV, (to EN 600950, VDE 805)

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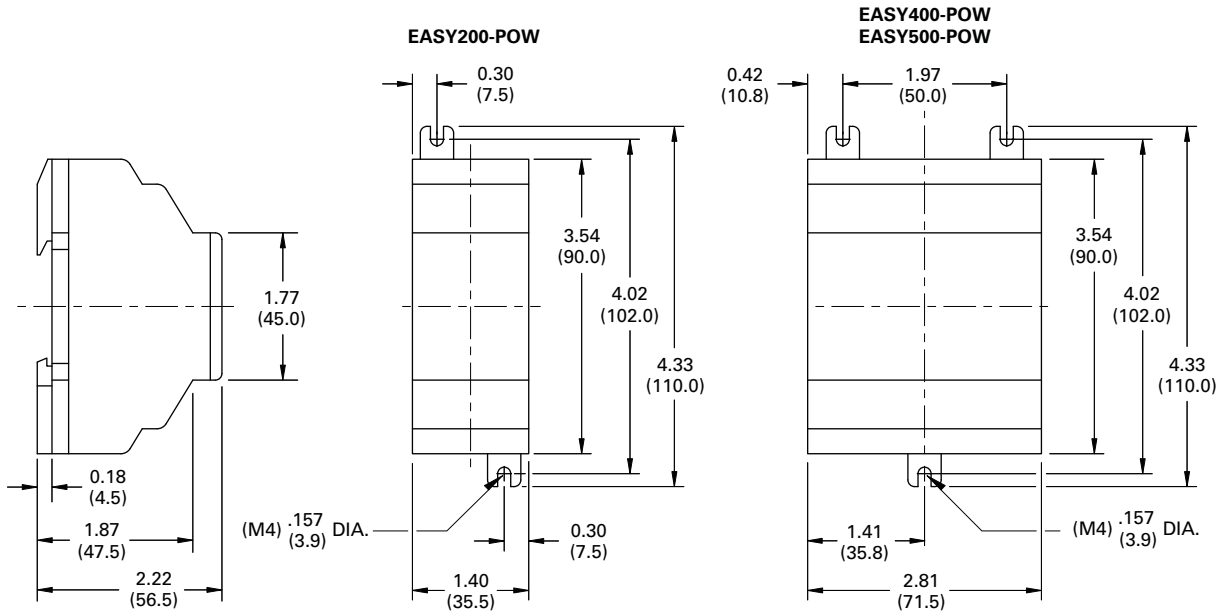
Power Supplies

General-Purpose and Sensor Power Supplies

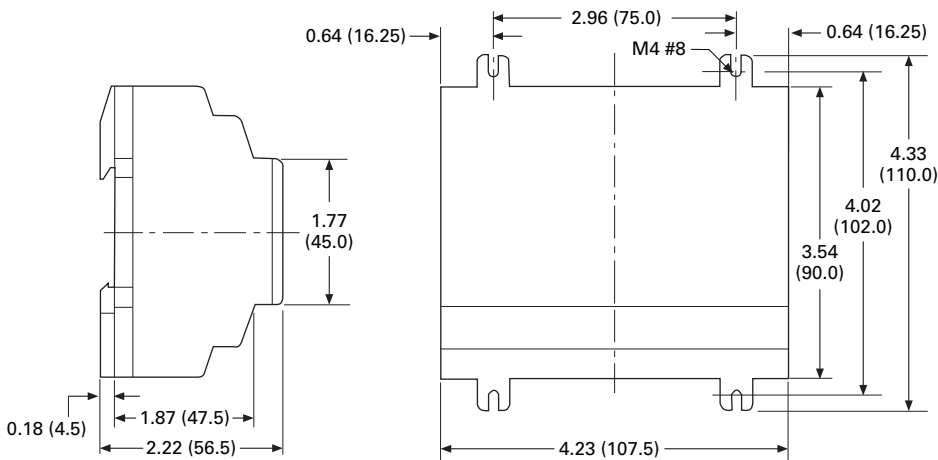
Dimensions

Approximate Dimensions in Inches (mm)

EASY200-POW, EASY400-POW and EASY500-POW Series



EASY600-POW Series



Sensor Power Supply



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Sensor Power Supply

Product Description

Eaton’s sensor power supply was specially designed to be used with the 200 Series and E68 Series zero pressure accumulation systems, but is also suitable for use in a wide variety of applications. The unit delivers 100 W output at 27 Vdc and supports easy, Class II wiring. The power supply is a tamper-proof, rugged component easily mounted to a conveyor side-channel or support. Internal components are fully encapsulated in a strong die-cast housing to stand up to rugged handling, ensuring flawless performance in any material handling environment.

Features, Benefits and Functions

- Integrated AC junction box for one-step mounting and wiring without the need for additional accessories
- Built-in DC power health contact allows easy monitoring of power supply status
- Unitized design features a tamper-proof encapsulated construction to reduce the risk of damage associated with conventional open control-panel type construction
- Built-in slug-release input converts an AC or DC input to the appropriate DC signal for integration with the 200 Series and E68 Series zero pressure accumulation systems
- Dual output connection terminals to make it easy and convenient to locate the power supply at the center of the cable run
- Power switch protected against accidental operation
- Power in and out indicators show status at a glance
- Conduit entry box for NEC compliance
- Simple mounting with two 1/4-inch bolts
- Rugged die-cast housing
- Fully encapsulated electronics

Standards and Certifications

- UL listed
- CSA approved



Product Selection

PS256 A

Sensor Power Supply



Output	Slug Input	Type	Slug Output	Catalog Number
Operating Voltage 105–132 Vac				
27 Vdc, 100 W; short circuit, overload and overvoltage protection (cycle power to reset)	15–132 Vac/Vdc 3 mA minimum	Standard For use with 200 Series and E68 systems	Sinking or sourcing, switch selectable; 80 mA maximum; short circuit protection for loads less than 32 Vac or Vdc (auto reset)	PS256 A-01B1 ②
	15–132 Vac/Vdc 3 mA minimum	High current slug For use with solenoid valve systems requiring full current slug signals	Sinking only; 100 W output; short circuit, overload and overvoltage protection (cycle power to reset) ①	PS256 A-04B1 ②

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Technical Data and Specifications

Sensor Power Supply

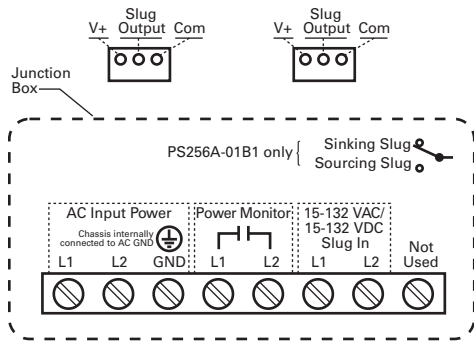
Description	PS256 A-01B1	PS256 A-04B1
Input power	144 W, maximum inrush 30 A from cold start	144 W, maximum inrush 30 A from cold start
Input voltage	105–132 Vac	105–132 Vac
Input current (full load)	105 Vac–1.92 A, 115 Vac–1.65 A, 132 Vac–1.5 A	105 Vac–1.92 A, 115 Vac–1.65 A, 132 Vac–1.5 A
Output power	100 W	100 W
Output voltage	27 Vdc	27 Vdc
Output protection	Short circuit, overload and overvoltage protection (cycle power to reset), diode protected	Short circuit, overload and overvoltage protection (cycle power to reset), diode protected
Regulation	± 3%	± 3%
Slug input	15–132 Vac/Vdc	15–132 Vac/Vdc
Slug output	Sinking or sourcing, switch selectable; 80 mA maximum; short circuit protection for loads less than 32 Vac or Vdc (auto reset)	Sinking only; 100 W output; short circuit, overload and overvoltage protection (cycle power to reset) ①
Indicators	Red LED: AC In; Green LED: DC Out	Red LED: AC In; Green LED: DC Out
DC fail indication output	NO contact, solid-state relay, 80 mA maximum	NO contact, solid-state relay, 80 mA maximum
Temperature range	–13 ° to 131 °F (–25 ° to 55 °C)	–13 ° to 131 °F (–25 ° to 55 °C)
Vibration	20 g	20 g
Enclosure material	Die-cast aluminum	Die-cast aluminum
Enclosure rating	NEMA 1	NEMA 1
Connections	Main output/slug output: Two three-position finger protected barrier strips; AC line input, DC fail indication and slug input: 8-position screw terminal strip inside conduit entry box	Main output/slug output: Two three-position finger protected barrier strips; AC line input, DC fail indication and slug input: 8-position screw terminal strip inside conduit entry box

Notes

- ① Total output power of supply is 100 W. Total supply output power (100 W) = main output power + slug output power.
 ② Stocked product, typical order quantities guaranteed in stock.

Wiring Diagram

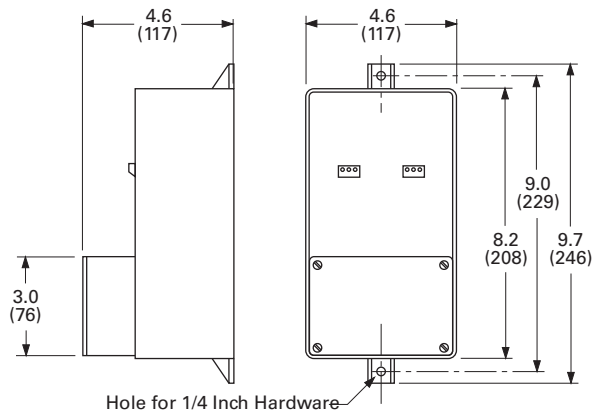
Sensor Power Supply



Dimensions

Approximate Dimensions in Inches (mm)

Sensor Power Supply



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Power Supplies