

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

General-Purpose and Sensor Power Supplies

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	SELV (EN 60950)	SELV (EN 60950)	SELV (EN 60950)	SELV (EN 60950)
Electrical safety (of information technology equipment)	UL/C–UL recognized to UL 60950–1	UL/C–UL recognized to UL 60950–1	UL/C–UL recognized to UL 60950–1	UL/C–UL recognized to UL 60950–1
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 60950–1	UL/C–UL recognized to UL 60950–1	UL/C–UL recognized to UL 60950–1	UL/C–UL recognized to UL 60950–1
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