

Specifications

Photo is representative

Eaton EP-401403

Eaton PSL Power supply unit, Single-phase,
90 - 264 V AC / 24 V DC, 1.25 A, 30 W

General specifications

PRODUCT NAME	Eaton PSL power supply unit
CATALOG NUMBER	EP-401403
MODEL CODE	PSL30E24RP
UPC	786676040235
PRODUCT LENGTH/DEPTH	91 mm
PRODUCT HEIGHT	55.6 mm
PRODUCT WIDTH	53 mm
PRODUCT WEIGHT	0.14 kg

CERTIFICATIONS

IEC 62368-1
EN 55032
CISPR 35/EN 55035
EN 61000-3-2
EN 61000-3-3
IEC/EN 61000-4-2
IEC/EN 61000-4-3
IEC 61000-4-4
IEC 61000-4-5
IEC 61000-4-6
IEC 61000-4-8: 2010
EN 61000-4-11
EN IEC 63000
RoHS conform
REACH
TSCA
P65
SELV (EN 60950)
CE: In conformance with
EMC Directive 2014/30/EU
and Low Voltage Directive
2006/95/EC
BS EN 62368-1
UL 62368-1
EN 61000-4-12: 2017
EN 61000-6-1: 2007
EN 61000-6-3
EN 61010-1
EN 61010-2-201: 2018
IEC/EN 61204-3
UL 61010-2-201
CSA C22.2 No. 61010-2-



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CATALOG NOTES	Power supply can operate at DC input voltage, please connect +pole to L, -pole to N and PE terminal to an earth wire or to the machine ground.

Features & Functions	
ELECTRIC CONNECTION TYPE	Screw connection
ENCLOSURE MATERIAL	Plastic
FEATURES	Output voltage stabilized
NUMBER OF PHASES	1

Ambient conditions, mechanical	
SHOCK RESISTANCE	4 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 22 ms, 9 Impacts
VIBRATION RESISTANCE	10 - 500 Hz at 30 m/s ² (3 G max) for 60 min. in X-axis, Y-axis, Z-axis directions, (IEC/EN 60068-2-6)

Electro magnetic compatibility	
BURST IMPULSE	1 kV, according to IEC/EN 61000-4-4, Level 3
CONTACT DISCHARGE	4 kV, according to IEC/EN 61000-4-2, Level 3, ESD

Safety	
PROTECTION CLASS	2 (IEC/EN 60536)
INSULATION RESISTANCE	3 kV AC (input/output)
MEAN TIME BETWEEN FAILURES (MTBF)	> 500,000 h

General	
DEGREE OF PROTECTION	IP20 NEMA 1
POLLUTION DEGREE	2
PRODUCT CATEGORY	Power supply
LED INDICATOR	Status indication of "DC OK": Green LED
POWER CONSUMPTION	34 W

Climatic environmental conditions	
ALTITUDE	Max. 2000 m
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	71 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	85 °C
CLIMATIC PROOFING	< 95 % relative humidity at +25 °C, no condensation

Terminal capacities	
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	Input / output: 0.2 - 3.3 mm ²
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE AWG)	Input / output: 24 - 12

Input characteristics	
INPUT VOLTAGE AT AC 50 HZ - MIN	90 V
INPUT VOLTAGE AT AC 50 HZ - MAX	264 V
INPUT VOLTAGE AT DC - MIN	125 V

INPUT VOLTAGE AT DC - MAX	375 V
INRUSH CURRENT	< 25 A at 115 V AC (Inrush current limitation I ² t (+25 °C)) < 50 A at 230 V AC (Inrush current limitation I ² t (+25 °C))
LEAKAGE CURRENT AT GROUND IPE - MAX	< 0.25 mA (at 240 V AC)
RAMP/RUN-UP TIME	< 2000 ms
SUPPLY FREQUENCY	50/60 Hz, Input, Rated value 47 Hz, Input, min. Range 63 Hz, Input, max. Range
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	90 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	264 VAC
SUPPLY VOLTAGE AT DC - MIN	125 VDC
SUPPLY VOLTAGE AT DC - MAX	375 VDC
TRIPPING CHARACTERISTIC	B

Output characteristics

RESIDUAL RIPPLE	< 100 mVpp (PARD at 20 MHz)
CAPACITIVE LOAD	3000 µ F max. Capacitive load starting, Output characteristic
EFFICIENCY	> 87 % (115 V AC) > 87 % (230 V AC)
OUTPUT CURRENT AT AC, 50 HZ - MAX	1.25 A
OUTPUT VOLTAGE	24 V
OUTPUT VOLTAGE AT DC - MIN	24 V
OUTPUT VOLTAGE AT DC - MAX	24 V
RATED OUTPUT POWER	30 W
VOLTAGE TOLERANCE	± 2 %, Rated output voltage

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	4 W
HEAT DISSIPATION CAPACITY PDISS	4 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	4 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT.	Meets the product standard's requirements.

EFFECTS	
10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	Meets the product standard's requirements.
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Meets the product standard's requirements.
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to be evaluated.
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to be evaluated.
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
10.10 TEMPERATURE RISE	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility.
10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility.
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Resources

CATALOGUES [eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

DECLARATIONS OF CONFORMITY [eaton-power-supply-unit-declaration-of-conformity-uk251147en.pdf](#)
[eaton-power-supply-unit-declaration-of-conformity-eu250664en.pdf](#)

FLYERS [eaton-psg-psl-power-supplies-fl049002-en-us.pdf](#)

INSTALLATION INSTRUCTIONS [eaton-psl-power-supply-1-phase-psl30e24rp-il125028zu.pdf](#)

MCAD MODEL [eaton-psl30e24rp-drawing.dwg](#)
[eaton-psl30e24rp-3d-model.stp](#)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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