DATASHEET - PSG120F24SMB

Power supply unit, Three-phase, 320 - 575 V AC / 24 V DC, 5 A, 140 W

Part no. PSG120F24SMB
EP-401398

General specifications	
Product name	Eaton PSG power supply unit
Part no.	PSG120F24SMB
Product Length/Depth	124 millimetre
Product height	125.3 millimetre
Product width	38 millimetre
Product weight	0.54 kilogram
Certifications	EN 55024 EN 61000-3-2 EN 61000-6-1: 2007 RoHS conform IEC/EN 61204-3 REACH EN 61010-1 P65 EN IEC 63000 EN 61000-3-3 IEC 62368-1 EN 55032 EN 61000-4-12: 2017 EN 61000-6-3 TSCA CISPR 35/EN 55035 EN 61010-2-201: 2018
Product Tradename	PSG
Product Type	Power supply unit
Product Sub Type	None
Public Consumption	Yes
PDH Status	Active
Product Family Description	ES-PMCC-ICP-ES-PMCC-ICP-Eaton PSG and PSL Power supplies
Globally Marketable	Yes

Product Specification Details	
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.
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. effects	Meets the product standard's requirements.
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.
Altitude	Max. 2000 m

Ambient operating temperature - max	70 °C
Ambient operating temperature - min	-25 °C
Ambient storage temperature - max	85 °C
Ambient storage temperature - min	-40 °C
Built-in height	124 mm
Built-in width	38 mm
Capacitive load	10000 µF max. Capacitive load starting, Output characteristics
Climatic proofing	< 95 % relative humidity at +25 °C, no condensation
Degree of Protection	IP20
Efficiency	> 85 % (3 x 500 V AC) > 86 % (3 x 400 V AC)
Electric connection type	Screw connection
Enclosure material	Aluminum
Equipment heat dissipation, current-dependent Pvid	20 W
Features	Output voltage stabilized
Fitted with:	Not accessible internal input fuse (T3.15 AH/500 V, 600 V) for device protection
Heat dissipation capacity Pdiss	20 W
Heat dissipation per pole, current-dependent Pvid	6.7 W
Input voltage at AC 50 Hz - max	575 V
Input voltage at AC 50 Hz - min	320 V
Input voltage at AC 60 Hz - max	575 V
Input voltage at AC 60 Hz - min	320 V
Input voltage at DC - max	800 V
Input voltage at DC - min	450 V
Inrush current	< 25 A at 3 x 500 V AC (Inrush current limitation I^2t (+25 °C)) < 20 A at 3 x 400 V AC (Inrush current limitation I^2t (+25 °C))
Insulation resistance	1.5 kV AC (output) 2 kV AC (input) 4 kV AC (input/output)
Leakage current at ground IPE - max	< 3.5 mA (at 3 x 500 V AC)
LED indicator	Status indication of "DC OK": Green LED
Mean time between failures (MTBF)	> 700,000 h
Mounting Method	Rail mounting possible
Nominal output current 1	5 A
Nominal output current 2	0 A
Nominal output current 3	0 A
Nominal Output Voltage 1	24 V
Nominal Output Voltage 2	0 V
Nominal Output Voltage 3	0 V
Number of phases	3
Output current 1 - max	5 A
Output current 2 - max	0 A
Output current 3 - max	0 A
Output current at AC, 50 Hz - max	5 A
Output current at AC, 60 Hz - max	5 A
Output current at DC - max	5 A
Output voltage	24 V
Output voltage 1 - max	28 V
Output voltage 1 - min	24 V
Output voltage 2 - max	0 V
Output voltage 2 - min	0 V
Output voltage 3 - max	0 V
Output voltage 3 - min	0 V
Output voltage at DC - max	28 V
Output voltage at DC - min	24 V
Overvoltage category	III
Phase	Three-phase

Pollution degree	2
Power consumption	140 W
Power output	120 W
Product category	Power supply
Protection class	1 (with PE connection)
Ramp/run-up time	< 500 ms
Rated frequency - max	63 Hz
Rated frequency - min	47 Hz
Rated operational current for specified heat dissipation (In)	0 A
Rated output power	120 W
Relative humidity	5 - 95% RH (non-condensing)
Residual ripple	< 40 mV / < 100 mV
Safety performance level (EN ISO 13849-1)	None
Shock resistance	50 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 3 Impacts
SIL (IEC 61508)	None
Supply frequency	63 Hz, Input, max. Range 50/60 Hz, Input, Rated value 47 Hz, Input, min. Range
Supply voltage at AC, 50 Hz - max	575 V AC
Supply voltage at AC, 50 Hz - min	320 V AC
Supply voltage at AC, 60 Hz - max	575 V AC
Supply voltage at AC, 60 Hz - min	320 V AC
Supply voltage at DC - max	800 V DC
Supply voltage at DC - min	450 V DC
Terminal capacity (flexible with ferrule AWG)	Signal: 20 - 16 Input / output: 18 - 10
Terminal capacity (flexible with ferrule)	Signal: 0.52 - 1.31 mm^2 Input / output: 0.82 - 5.2 mm^2
Tripping characteristic	B
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)
Voltage tolerance	± 2 %, Rated output voltage
Width in number of modular spacings	2.1

Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / DC-power supply (EC002540)

Electric engineering, automation, process control engineering / Power supply devices / Power supply device / Continuous current supply (ecl@ss13-27-04-07-01 [AFX040008])

Voltage type (supply voltage)		
1st secondary output voltage	V	24 - 28
2nd secondary output voltage	V	0 - 0
3rd secondary output voltage	V	0 - 0
Max. output current 1	A	5
Max. output current 2	A	0
Max. output current 3	A	0
Secondary voltage adjustable		No
Nominal value output voltage 1	V	24
Nominal value output voltage 2	V	0
Nominal value output voltage 3	V	0
Nominal value output current 1	A	5
Nominal value output current 2	A	0
Nominal value output current 3	A	0
Short-circuit-proof		No
Rated supply voltage AC 50 Hz	V	320 - 575
Rated supply voltage AC 60 Hz	V	320 - 575
Rated supply voltage DC	V	450 - 800
Output voltage stabilized		Yes
Power consumption	VA	140

Power output		W	120
Stabilized			No
Type of electric connection			Screw connection
Rail mounting possible			Yes
Wall mounting possible			No
Modular version			No
Width in number of modular spacings			2.1
Built-in width		mm	38
Built-in height		mm	124
Direct mounting possible			No
Width		mm	38
Height		mm	125.3
Depth		mm	124
Suitable for safety functions			No
SIL according to IEC 61508			None
Performance level according to EN ISO 13849-1			None
Degree of protection (IP)			IP20
Degree of protection (NEMA)			