

Power supply unit, Three-phase, 320 - 575 V AC / 24 V DC, 20 A, 511 W

Part no. **PSG480F24SMB**
EP-401400

General specifications		
Product name		Eaton PSG power supply unit
Part no.		PSG480F24SMB
Product Length/Depth		124 millimetre
Product height		127.3 millimetre
Product width		65 millimetre
Product weight		1.2 kilogram
Certifications		EN 61000-6-3 EN 61000-4-12: 2017 IEC/EN 61204-3 EN 61010-2-201: 2018 IEC 62368-1 RoHS conform EN 61010-1 EN 61000-3-3 EN 61000-3-2 EN 55024 TSCA REACH EN 61000-6-1: 2007 EN 55032 CISPR 35/EN 55035 P65 EN IEC 63000
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		65 mm
Capacitive load		20000 µF max. Capacitive load starting, Output characteristics
Climatic proofing		< 95 % relative humidity at +25 °C, no condensation
Degree of Protection		IP20
Efficiency		> 94% (3 x 500 V AC) > 94% (3 x 400 V AC)
Electric connection type		Screw connection
Enclosure material		Aluminum
Equipment heat dissipation, current-dependent Pvid		31 W
Features		Output voltage stabilized
Fitted with:		Not accessible internal input fuse (T3.15 AH/500 V) for device protection
Heat dissipation capacity Pdis		31 W
Heat dissipation per pole, current-dependent Pvid		10.3 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		< 35 A at 3 x 500 V AC (Inrush current limitation I ² t (+25 °C)) < 35 A at 3 x 400 V AC (Inrush current limitation I ² t (+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)		> 600,000 h
Mounting Method		Rail mounting possible
Nominal output current 1		20 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		20 A
Output current 2 - max		0 A
Output current 3 - max		0 A
Output current at AC, 50 Hz - max		20 A
Output current at AC, 60 Hz - max		20 A
Output current at DC - max		20 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			511 W
Power output			480 W
Product category			Power supply
Protection class			1 (with PE connection)
Ramp/run-up time			< 1000 ms
Rated frequency - max			63 Hz
Rated frequency - min			47 Hz
Rated operational current for specified heat dissipation (In)			0 A
Rated output power			480 W
Relative humidity			5 - 95% RH (non-condensing)
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 Output: 12 - 10 Input: 18 - 10
Terminal capacity (flexible with ferrule)			Signal: 0.52 - 1.31 mm ² Output: 3.3 - 5.2 mm ² Input: 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			3.6

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		20
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		20
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	511
Power output	W	480
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		3.6
Built-in width	mm	65
Built-in height	mm	124
Direct mounting possible		No
Width	mm	65
Height	mm	127.3
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)		