



Buffer module for PSG power supply unit, 20 A

Part no. PSG480B24RM
Catalog No. 172887
Eaton Catalog No. PSG480B24RM
EL-Nummer (Norway) 4560885

Delivery program

Product range			Power supplies PSG
Subrange			Buffer module
Description			For maintaining operation during brief power failures; the backup time can be multiplied by connecting in parallel
Backup time depends on load current			250 ms (20 A) to max. 5 s (1 A)
Input voltage range			22,8 - 28,8 V DC
Nominal input voltage			24 V DC
Rated output voltage			Typically 24 VDC (depends on V_{in})
Rated output current		A	20
Setting range for the output voltage			22 - 28 V DC Switch = "Fixed 22 V" : Back-up starts when the terminal voltage falls below 22 V Switch = "Vin - 1 V" (default setting): Back-up starts when the terminal voltage drops by more than 1 V

Technical data

Input characteristics

Nominal input voltage			24 V DC
Input voltage range		V	22.8 - 28.8 V DC
Maximum input voltage		V DC	35
Input current		A	Charging mode: < 0.6 A Discharging mode: Max. 20 A
Maximum input signal (Inhibit = Blocking)			35 V 10 mA
Maximum inrush current		A	< 20 A
Charging time		sec	< 30 sec
Back-up fuse			3 x 6, 10, 16 A (recommended)

Output characteristics

Rated output voltage			Typically 24 VDC (depends on V_{in})
Setting range for the output voltage			22 - 28 V DC Switch = "Fixed 22 V" : Back-up starts when the terminal voltage falls below 22 V Switch = "Vin - 1 V" (default setting): Back-up starts when the terminal voltage drops by more than 1 V
Maximum output voltage			35 V DC
Nominal current		A	max. 20
Back-up time		ms	> 250 ms with 24 V / 20 A load > 5 sec with 24 V / 1 A load
Maximum signal output			35 V DC 10 mA
Signals			Inhibit signal (I) = "Low": Switches off the buffer module Ready signal (R) = "High": Buffer module is fully charged or in standby mode Buffering signal (B) = "High": Buffer module is discharging or is in buffer mode Supply voltage (+Vs): 10 - 35 VDC
Heat dissipation		W	3
Residual ripple (20 MHz)			< 200 mVpp
Can be switched in parallel			Yes
Series connection capability			No

General characteristics

Housing			Aluminium
Status indication			Green LED off: Device is out of charge or V_{in} < 22 V Green LED on: Device is fully charged Green LED flashing slowly (1 Hz): Device currently charging Green LED flashing quickly (10 Hz): Device currently discharging
MTBF (mean time between failures)			> 800,000 h
Height		mm	121

Width	mm	70
Depth	mm	120.1
Weight	kg	0.76
Terminations		Screw connection
Stripping length	mm	7
Terminal capacity		
flexible with ferrules/solid	mm ²	Input / output: 3.3 - 5.3 mm ² (AWG 12 - 10) Signal: 0.1 - 5.3 mm ² (AWG 24 - 10)
Tightening torque	Nm	0.7
Ambient air temperature range	°C	
Operation	°C	-25 - +75
damp heat		< 95 % relative humidity at +25 °C, no condensation
Vibrations (IEC/EN 60068-2-6)		10 - 500 Hz at 30 m/s ² (3 G max) for 60 min. in X-axis, Y-axis, Z-axis directions
Mechanical shock resistance (IEC 60068-2-27)		30 g (300 m/s ²) in all directions

Safety and safety features

Insulation voltage		
Input/PE		1.5 kV AC
Output/PE		1.5 kV AC
Signal/PE		1.5 kV AC
Degree of Protection		IP20
Protection class		Class I with PE connection

Standards

		<p>Electrical equipment of machines: IEC 60204-1 Electronic devices for use in electrical systems: EN 50178/IEC 62103 Safety extra-low voltage: PELV (EN 60204), SELV (EN 60950) Protection against electric shock: DIN 57100-410 CE: In conformance with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC RoHS-compliant: RoHS Directive 2011/65/EU ITE: EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024 Industrial: EN 55011 Mains harmonics limitation: EN 601000-3-2 Electrical safety (of IT equipment) : UL/c-UL recognized as per UL 60950-1 and CSA C22.2 No. 60950-1, SIQ BG as per EN 60950-1, CB test report as per IEC 60950-1 and CE Industrial control equipment: UL/c-UL listed as per UL 508 and CSA C22.2 Component power supply unit for general use: EN61204-3</p>
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Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	0
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	3
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	75
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties		
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.

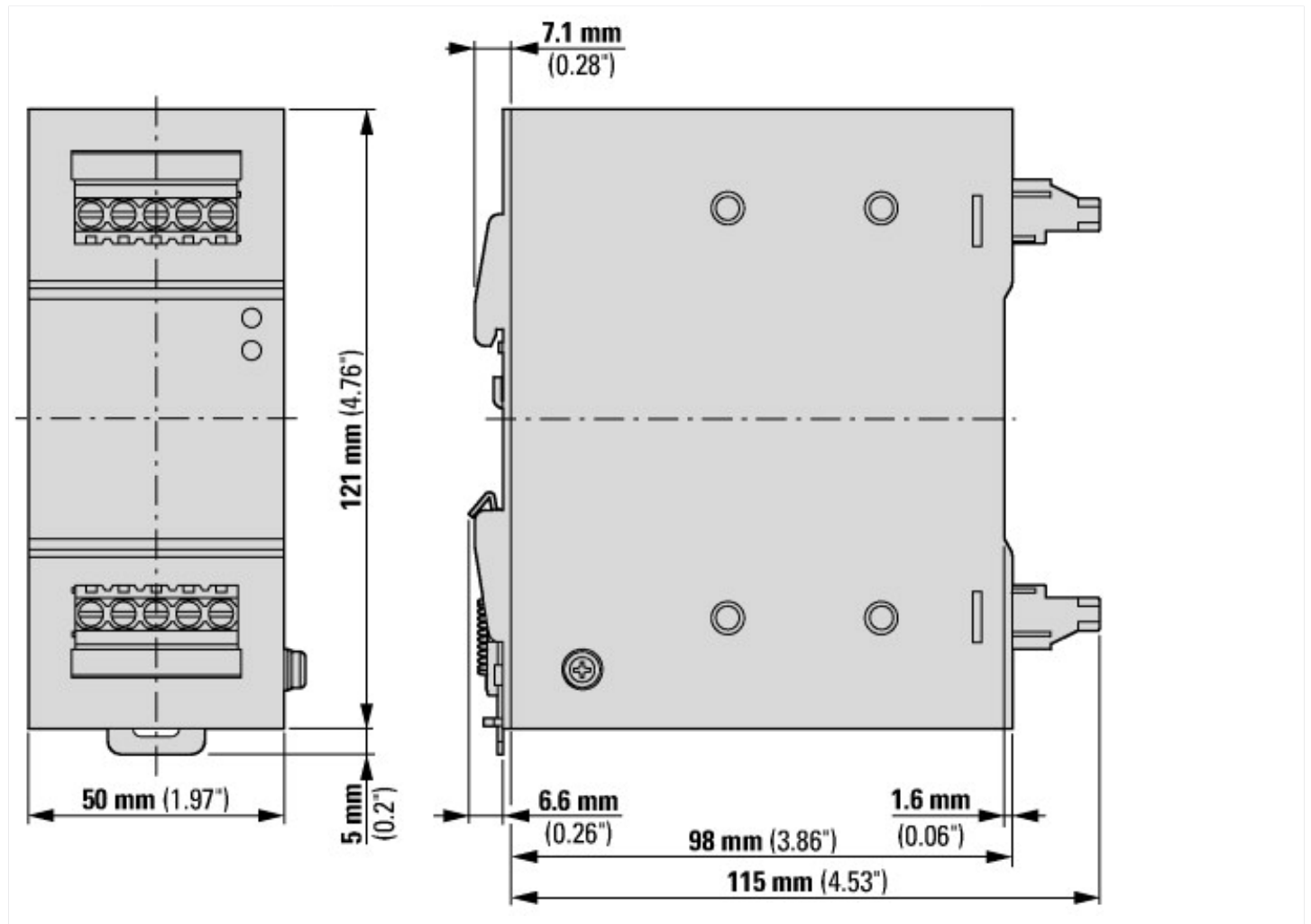
Technical data ETIM 6.0

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

Electric engineering, automation, process control engineering / Power supply / Power supply (other) / DC-power supply (ecl@ss8.1-27-04-90-02 [AFZ644012])

Voltage type of supply voltage		DC
1st secondary output voltage	V	22 - 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		Yes
Rated supply voltage at AC 50 Hz	V	0 - 0
Rated supply voltage at AC 60 Hz	V	0 - 0
Rated supply voltage at DC	V	22.8 - 28.8
Output voltage stabilized		No
Power consumption	VA	0
Power output	W	480
Stabilized		No
Type of electric connection		Screw connection
Rail mounting possible		Yes
Wall mounting possible		No
Modular version		Yes
Width in number of modular spacings		0
Built-in width	mm	70
Built-in height	mm	121
Direct mounting possible		No
Width	mm	70
Height	mm	121
Depth	mm	120.1
Suitable for safety functions		No
SIL according to IEC 61508		None
Performance level acc. to EN ISO 13849-1		None
Degree of protection (IP)		IP20

Dimensions



Additional product information (links)

IL125001EN Installation Instructions for PSG480B24RM BUFFER MODULE

IL125001EN Installation Instructions for
PSG480B24RM BUFFER MODULE

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL125001EN2014_06.pdf