

Switched-mode power supply unit, 100-240VAC/24VDC, 1.25A, 1-phase, controlled

Part no. **EASY400-POW**Catalog No. **212319**EL-Nummer **4520907**
(Norway)

Delivery program

Product range		Control relays easyE4 Control relay easyRelay Multi-function-display MFD-Titan
Product range		Switched-mode power supply units easyPOW
Description		primary chopper controlled
Phases		Single-phase
Input voltage range		85 - 264 V AC
Nominal input voltage		100 - 240 V AC
Rated output voltage		24 V DC (± 3%)
Rated output current	A	1.25
For use with		easy500 easy700 easy800 MFD-CP8 EC4P ES4P easyE4
Description		for DMI module

Technical data

General

Standards		EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27
Dimensions (W x H x D)	mm	71.5 (4 PE) x 90 x 58
Weight	kg	0.25
Mounting		Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)

Terminal capacities

Solid	mm ²	0.2/4 (AWG 22 - 12)
Flexible with ferrule	mm ²	0.2/2.5 (AWG 22 - 12)
Standard screwdriver	mm	0.8 x 3.5
Max. tightening torque	Nm	0.6

Climatic environmental conditions

Operating ambient temperature	°C	-25 to 55, cold as per IEC 60068-2-1, heat as per IEC 60068-2-2
Condensation		Take appropriate measures to prevent condensation
Storage	°C	-40 - 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)	%	
Air humidity, non-condensing, min.	%	5
Air humidity, non-condensing, max.	%	95
Air pressure (operation)	hPa	795 - 1080
Max. installation altitude above sea level, observe derating with higher altitudes	m	2000

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN 50178, VBG 4)		IP20
Vibrations (IEC/EN 60068-2-6)	Hz	
Constant amplitude 0.15 mm	Hz	10 - 57
Constant acceleration 2 g	Hz	57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	18
Drop to IEC/EN 60068-2-31	Drop height	mm
Free fall, packaged (IEC/EN 60068-2-32)		50
Mounting position		m
		1
		Vertical or horizontal

Electromagnetic compatibility (EMC)

Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)	kV	
Air discharge	kV	8
Contact discharge	kV	6
Electromagnetic fields (RFI) to IEC EN 61000-4-3	V/m	10
Radio interference suppression		EN 55011 Class B, EN 55022 Class B
Burst pulses (IEC/EN 61000-4-4, level 3)	kV	2
Power pulses (surge) (IEC/EN 61000-4-5)	kV	2 (supply cables, symmetrical)
High-energy pulses (surge) (IEC/EN 61000-4-5, level 2), 24 V	kV	0.5 (outgoer cables symmetrical, EASY...DC)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)	V	10
Surge voltage (EN 50178), 24 V	kV	6

Insulation resistance

Clearance in air and creepage distances		EN 50178
Insulation resistance		EN 50178
Protection class U_{out} to U_{in}		Class II to IEC 60536
Potential isolation primary/secondary		Yes, SELV (VDE 0100 Part 410; IEC 60364-4-41, HD 384.4.41 S2) EN 60950, EN 50178

Input voltage

Rated voltage	V	100/120/230/240 (-15/+10 %)
Protective switches AC		FAZ-C2/1 or FAZ-B6/1
Voltage range	V AC	85 - 264
Frequency range	Hz	47 - 63
Mains failure bridging 115/230 V (IEC/EN 61000-4-11)	ms	> 20/> 40
Fuse 115/230 V	A	2/1 slow

Rating data

Efficiency	%	> 83
Power consumption	W	Normally 35
Power loss	P	W

Input current

Input current nominal 115/240 V	A	Approx. 0.6/0.3
Inrush current at 25 °C 230 V	A	< 18

Output voltage

24 V DC		
Rated value	V DC	24
Tolerance	%	± 3
Switching peaks 115/230	mV _{PP}	< 5
Effect of input voltage	%	± 1
Effect with 25 - 100 % load change	%	± 2
Can be connected in parallel to increase power		Yes

Output current

24 V DC		
Output current	A	0 - 1.25
Effectiveness of current limitation	A	> 1.5
Reduction of output voltage after current limitation	V	< 18
Overload proof		Yes, by current limitation
Proof against sustained short circuit		Yes, hiccup mode, approx. 2 Hz

Special load conditions

Lamp load, cold, 24 V DC	W	10
Base load present	W	5
Behaviour on emergency-stop in 24 V circuit, disconnection with contactor (contactor load, no damage)	W	30

Displays

Indication of output voltage (LED, continuous green light = OK)	V DC	24
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Design verification as per IEC/EN 61439

Technical data for design verification		
Static heat dissipation, non-current-dependent	P _{vs}	W
Operating ambient temperature min.		°C

Operating ambient temperature max.	°C	55
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 8.0

Programmable logic controllers PLC (EG000024) / PLC system power supply (EC000599)

Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / SPS system power supply (ecl@ss10.0.1-27-24-22-09 [AKE532014])

Input voltage at AC 50 Hz	V	85 - 264
Input voltage at AC 60 Hz	V	85 - 264
Input voltage at DC	V	0 - 0
Type of voltage (input voltage)		AC
Max. input current AC 50 Hz	A	0.6
Max. input current AC 60 Hz	A	0.6
Max. input current DC	A	0
Type of output voltage		AC
Output voltage at AC 50 Hz	V	0 - 18
Output voltage at AC 60 Hz	V	0 - 0
Output voltage at DC	V	0 - 24
Max. output current AC 50 Hz	A	1.25
Max. output current AC 60 Hz	A	0
Max. output current DC	A	1.25
Power output	W	30
Redundancy		No
Suitable for safety functions		No
Width	mm	72
Height	mm	90
Depth	mm	58