

Control relay, 24 V DC, SmartWire-DT

Part no. EASY802-DC-SWD
Article no. 152901
Catalog No. EASY802-DC-SWD

Powering Business Worldwide

Delivery programme

Basic function			easy800 with SmartWire-DT
Description			Combines the functionality of an easy800 with direct connection to SmartWire-DT communication system Up to 99 SmartWire-DT modules with a total of up to 166 digital inputs/outputs and/or up to 128 analog inputs/outputs can be connected via a SmartWire-DT line
Inputs			
SmartWire-DT			83
Outputs			
SmartWire-DT			83
Additional features			
Display			without display, without keypad
Supply voltage			24 V DC

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	35 x 110 x 125.5 (2 PE)
Weight		kg	0.16
Mounting			Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)

Terminal capacities

Solid		mm^2	0.2/1.5 (AWG 24 - 16)
Flexible with ferrule		mm^2	0.2/1.5 (AWG 24 - 16)

Climatic environmental conditions

Operating ambient temperature		°C	In accordance with IEC 60068-2-1, -25 - +55
Condensation			Take appropriate measures to prevent condensation
Storage	ϑ	°C	In accordance with IEC 60068-2-1, -2, -14 -40 - +70
relative humidity		%	in accordance with IEC 60068-2-30, IEC 60068-2-78 5 - 95
Air pressure (operation)		hPa	795 - 1080

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Vibrations		Hz	In accordance with IEC 60068-2-6 constant amplitude 0.15 mm: 10 - 57 constant acceleration 2 g: 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	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3
Mounting position			Vertical or horizontal

Electromagnetic compatibility (EMC)

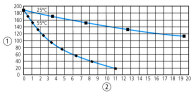
Overvoltage category/pollution degree			III/2
Electrostatic discharge (ESD)			
applied standard			according to IEC EN 61000-4-2
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (RFI) to IEC EN 61000-4-3		V/m	0.8 - 1.0 GHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1

Radio interference suppression			EN 55011 Class B
Burst		kV	according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 2 SWD lines: 2
power pulses (Surge)			according to IEC/EN 61000-4-5 1 kV (supply cables, symmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10

Insulation resistance

Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142
Insulation resistance			EN 50178

Back-up of real-time clock

Back-up of real-time clock			
			① Backup time (hours) with fully charged double layer capacitor ② Service life (years)
Accuracy of real-time clock to inputs		s/day	typ. ± 2 (± 0.2 h/Year)
			depending on ambient air temperature fluctuations of up to ± 5 s/day (± 0.5 h/year) are possible

Repetition accuracy of timing relays

Accuracy of timing relays (of values)		%	± 0.02
Resolution			
Range “S”		ms	5
Range “M:S”		s	1
Range “H:M”		min	1

Retentive memory

Write cycles of the retentive memory			10^{14} (read/write cycles)

Power supply

Rated operational voltage	U_e	V	24 DC (-15/+20%)
Permissible range	U_e		20.4 - 28.8 V DC
Residual ripple		%	≤ 5
Siemens MPI, (optional)			yes
Input current			normally 500 mA at U_e
Inrush current and length		A	12.5 for 6 ms
Voltage dips		ms	≤ In accordance with IEC 61131-2 ≤ 10
Fuse		A	≥ 3 A (T) (e.g FAZ C3)
Power loss	P	W	Normally 1
Note on heat dissipation			Current consumption at 24 V DC

Supply voltage U_{Aux}

Rated operational voltage	U_{Aux}	V	24 V DC (-15/+20%)
Permissible range			20.4 - 28.8 V DC
Output voltage SWD-OUT			U_e - 0.3 V
Siemens MPI, (optional)			yes
Residual ripple on the input voltage		%	≤ 5
Max. current	I_{max}	A	3 (IEC) 2 (UL)
Short-circuit rating			no
Heat dissipation		W	Normally 1 W at 24 V DC
Potential isolation			from power supply POW: yes to COM interface: yes to SmartWire-DT: yes
Power loss	P	W	1

SmartWire-DT supply voltage

Rated operating voltage	U_e	V	14.5 ± 3 %
max. current	I_{max}	A	0.4
Short-circuit rating			Yes

Potential isolation			from power supply POW: no to COM interface: yes to AUX: yes

SmartWire-DT network

Station type			Master
Number of SmartWire-DT slaves			Max. 99
Baud Rates		kBd	125/250
Address allocation			Automatically (via Configuration button)
Status indication		LED	SWD-LED: orange/green/red Config. LED: green/red
Connections			Plug, 8-pole
Plug connectors			Blade terminal SWD4-8MF2
Bus termination			Integrated in the device SmartWire-DT line end with SWD4-RC8-10

Data for design verification according to IEC/EN 61439

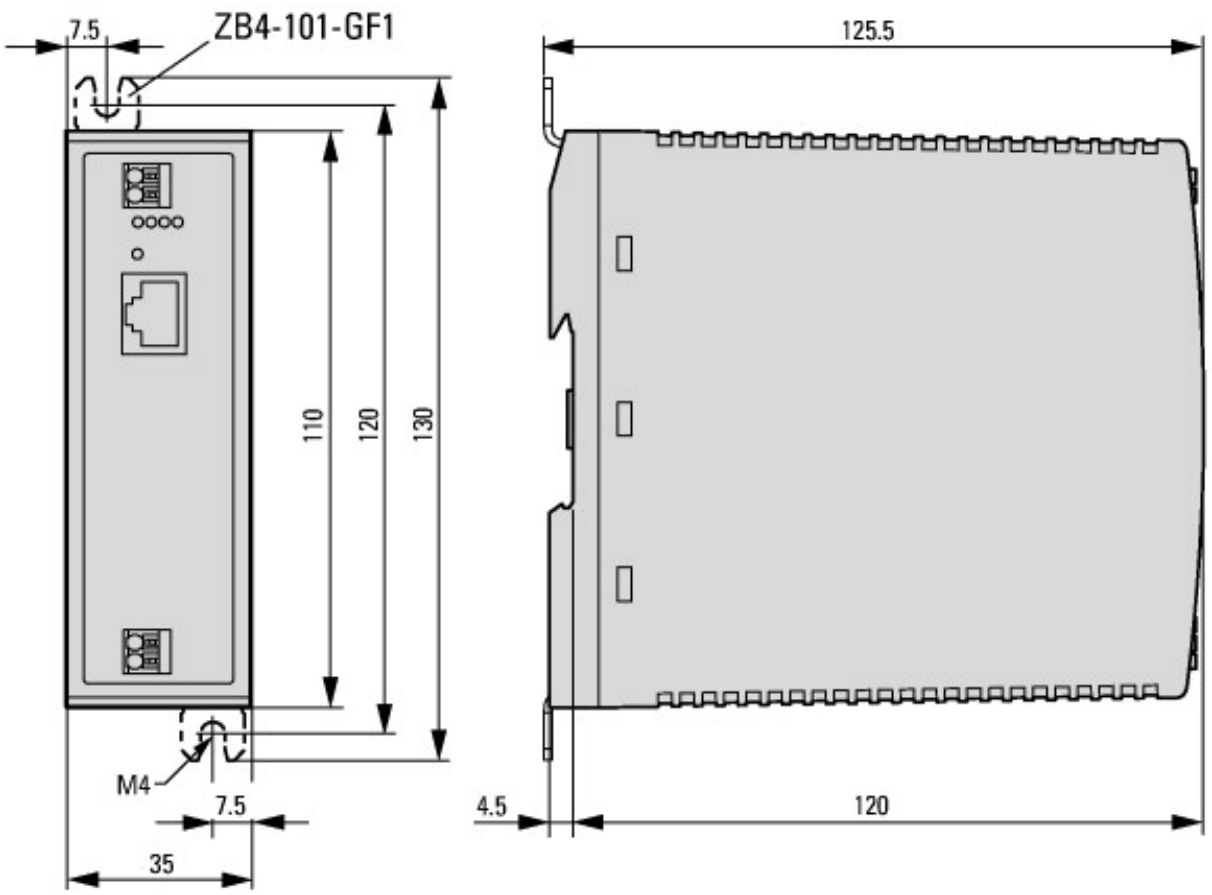
Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	5
Heat dissipation capacity	P_{diss}	W	0
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.

Approvals

Product Standards			IEC/EN see Technical Data; UL508; CSA C22.2 No. 142-M1987
UL File No.			E135462
UL Category Control No.			NRAQ, NRAQ7
CSA File No.			UL report applies to both US and Canada
CSA Class No.			2252-01 + 2258-02
North America Certification			UL listed, certified by UL for use in Canada
Degree of Protection			IEC: IP20, UL/CSA Type: -

shipping classification	DNV

Dimensions



Additional product information (links)

IL05013041Z easy800-SWD	
IL05013041Z easy800-SWD	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013041Z2011_08.pdf
MN04902001Z (AWB2528-1423) easy800 control relay	
MN04902001Z (AWB2528-1423) Steuerrelais easy800 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf
MN04902001Z (AWB2528-1423) easy800 control relay - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf
BR05013001Z-EN, easy Family	http://www.moeller.net/binary/w_brochures/br05013001Z-en.pdf

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