



Communication module for connecting the easy control relay via Modbus RTU as Master or Slave, screw terminal

Part no. **EASY-COM-RTU-M1**
Catalog No. **199453**

Delivery program

Product range		Control relays easyE4
Subrange		easy communication module
Basic function		easy communication module
For use with		EASY-E4-...-12... from generation 05
Description		Enables connection to Modbus RTU as either a master or slave unit using a control relay from the easyE series If the communication module is used as a master unit, the devices at field level can be connected to the easy control relay. This allows the devices to be parameterized, monitored and controlled and allows data to be collected. If the communication module is used as a slave unit, data is exchanged with a higher-level system. Screw terminals
Bus protocol		MODBUS-RTU
Supply voltage		24 V DC (SELV)
For use with		EASY-E4-

Technical data

General

Standards		IEC/EN 61131-2 IEC/EN IEC 61010-2-201
Approvals		
certificate		CE
Dimensions (W x H x D)	mm	35.5 x 90 x 58
Weight	kg	0.082
Mounting		Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)
Connection type		screw terminal

Terminal capacities

Screw terminals		
Solid	mm ²	0,2 - 4
flexible	mm ²	0,2 - 2,5
Solid or flexible conductor, with ferrule	mm ²	0,2 - 2,5
Solid or stranded	AWG	22 - 12
Standard screwdriver	mm	0.8 x 3.5
Tightening torque	Nm	0.5 - 0.7
Stripping length	mm	6.5

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	9	°C	-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
Mounting position			Vertical or horizontal
Vibrations (IEC/EN 61131-2:2008)			
Constant amplitude 3,5 mm		Hz	5 - 8.4

Constant acceleration 1 g	Hz	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms	Impacts	18
Free fall, packaged (IEC/EN 60068-2-32)	m	0.3

Electromagnetic compatibility (EMC)

Overvoltage category/pollution degree		II/2
Electrostatic discharge (ESD)		
applied standard		nach IEC/EN 61000-4-2
Air discharge	kV	8
Contact discharge	kV	6
Environment (EMC)		This product has been designed for use in the industrial sector (Environment A).
Electromagnetic fields (RFI) to IEC EN 61000-4-3	V/m	0.08 - 1.0 GHz: 10 1.4 - 6 GHz: 3
Environment (EMC)		This product has been designed for use in the industrial sector (Environment A).
Radio interference suppression		IEC/EN 61000-6-4 Class A
Burst	kV	according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 1
power pulses (Surge)		according to IEC/EN 61000-4-5 0.5 kV (supply cables, symmetrical) 1 kV (supply cables, asymmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)	V	10

Insulation resistance

Clearance in air and creepage distances		IEC 61010-2-201, EN IEC 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Insulation resistance		IEC 61010-2-201, EN IEC 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201

Power supply

Rated operational voltage	U _e	V	24 DC (-15/+20%)
Supply voltage U _{POW}			
Supply voltage			24 V DC (SELV)
Rated current	I	A	0.04
Voltage dips		ms	≤ In accordance with IEC 61131-2 ≤ 10
Fuse		A	≥ 1A (T)
Heat dissipation at 24 V DC		W	1

Kommunikation

Type of the fieldbus interface		Modbus RTU/RS485 (TIA/EIA-485)
Participant type		Slave/master
Potential isolation		ja, 2 kV
LED display		yellow
Bus termination		Yes, configurable
Buspolarisation		Yes, configurable
Kommunikatonsparameter		
Addresses		Maximum number of bus participants: 32 (if operated as slave)
Baud Rates		Configurable: 2400, 4800, 19200, 38400, 57600, 115200
Parity		None, odd, even
Stop bit		1, 2 (default 1)
Fieldbus connection		B+(D1), A-(D0), COM
Connection		
Connection type		Screw terminal

Design verification as per IEC/EN 61439

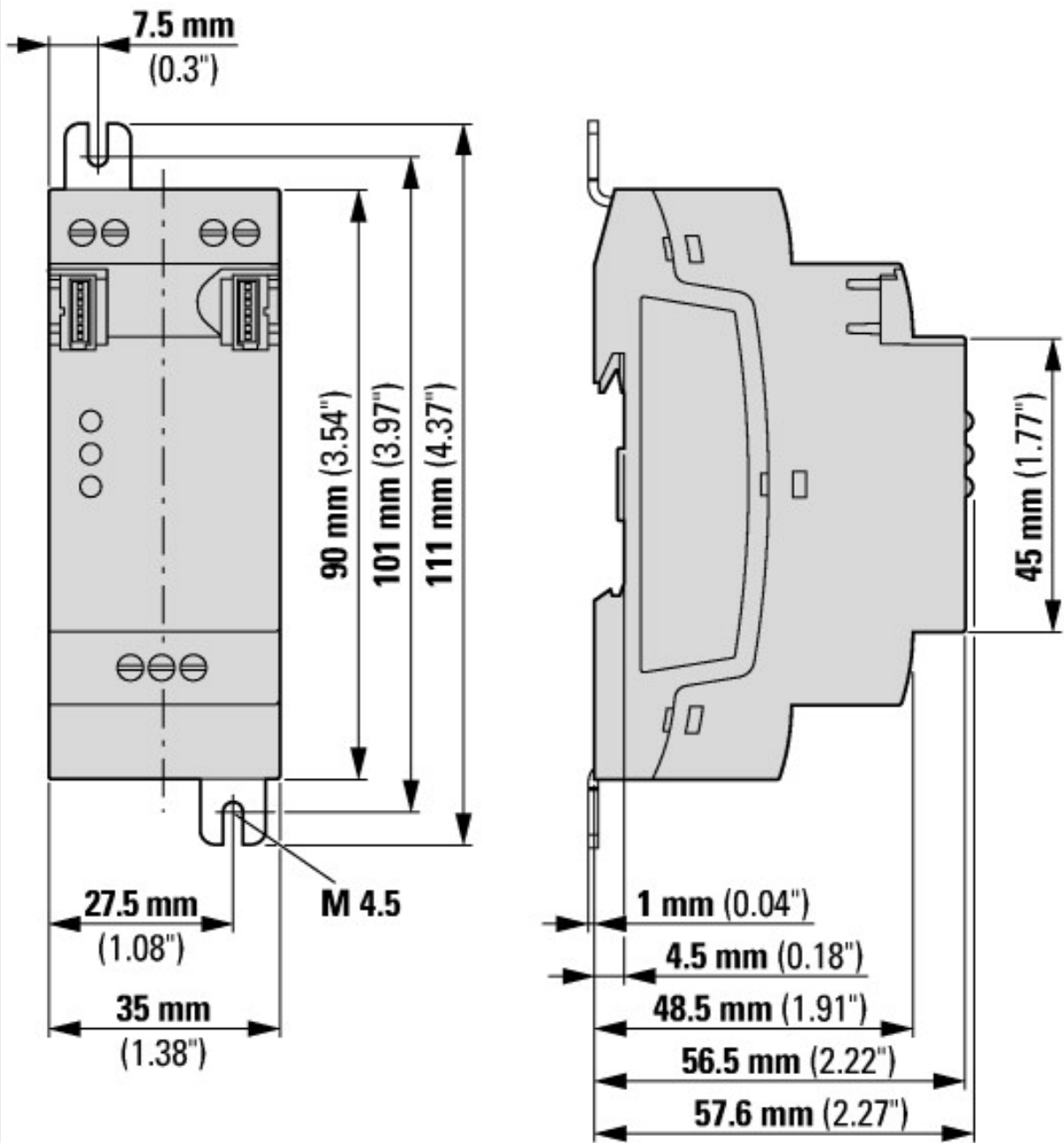
Technical data for design verification			
Operating ambient temperature min.	°C	-25	
Operating ambient temperature max.	°C	55	
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of 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.

Approvals

UL File No.			E205091
North America Certification			UL listed
Degree of Protection			IEC: IP20, UL/CSA Type: -

Dimensions



Additional product information (links)

Montageanweisung easy-COM-RTU... IL050035ZU	
Montageanweisung easy-COM-RTU... IL050035ZU	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL050035ZU.pdf
easyE4 (MN050009) manual	
easyE4 – Handbuch (MN050009) - Deutsch	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN050009_DE.pdf
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Produktübersicht (WEB)	http://www.eaton.eu/easy