DATASHEET - EASY-E4-DC-6AE1



I/O expansion, For use with easyE4, 24 V DC, Inputs expansion (number) analog: 4, Outputs expansion (number) digital: 2, screw terminal

Powering Business Worldwide

Part no.	**EASY-E4-DC-6AE1**
Catalog No.	**197223**
EL-Nummer (Norway)	**4500554**

Delivery program

Product range			Control relays easyE4
Subrange			easyE4 analog input/output enhancements
Basic function			easyE4 extensions
Description			Input/output extension for easyE4 control relay Expandable with the easyE4 series of digital input/output expansions with easy-E4-CONNECT1 connector (Item Y7-197225) Rated operating voltage 24V DC Analog inputs: 4 Analog outputs: 2 Screw terminals
Inputs			
Inputs expansion (number)			Analog: 4
Analog			4
Additional features			
Display			mit Diagnose-LED
Software			EASYSOFT-SWLIC/easySoft 7
Supply voltage			24 V DC
For use with			easyE4

Technical data

General

Standards			EN 61000-6-2 EN 61000-6-3 IEC 60068-2-6 IEC 60068-2-27 IEC 60068-2-30 IEC 61131-2 EN 61010 EN 50178
Dimensions (W x H x D)		mm	35.5 x 90 x 58
Weight		kg	0.2
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 (AWG 22 - 12)
Flexible with ferrule		mm^2	0.2 - 2.5
Standard screwdriver		mm	3.5 x 0.8
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	ϑ	°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
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 61000-6-3 Class B
Burst		kV	according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 2
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			nach EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Insulation resistance			in accordance with EN 50178, EN 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%)
Permissible range	U_e		20.4 - 28.8 V DC
Residual ripple		%	≦ 5
Siemens MPI, (optional)			yes
Input current			max. 100 mA at Ue
Voltage dips		ms	≤ 10
Fuse		A	≧ 1A (T)
Heat dissipation at 24 V DC		W	2.5

Analog inputs

Number			4
Potential isolation			from power supply: no to the in/outputs: no to expansion devices: yes
Input type			Voltage or current, selectable per input
Signal range			0-10 V DC 0 - 20 mA 4 - 20 mA
Resolution			12 Bit (value 0 - 4095)
Cable length		m	≦ 10, screened

Analog outputs

Number			2
Potential isolation			from power supply: no to the in/outputs: no to the expansion units: yes
Output type			Voltage or current, selectable per input
Signal range			0-10 V DC 0 - 20 mA 4 - 20 mA
Resolution			12 Bit (value 0 - 4095)
Accuracy			
-25 °C - 55 °C		%	1
Cable length		m	≦ 10, shielded

Design verification as per IEC/EN 61439

Technical data for design verification			
Static heat dissipation, non-current-dependent	P_{vs}	W	2
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.

Technical data ETIM 7.0

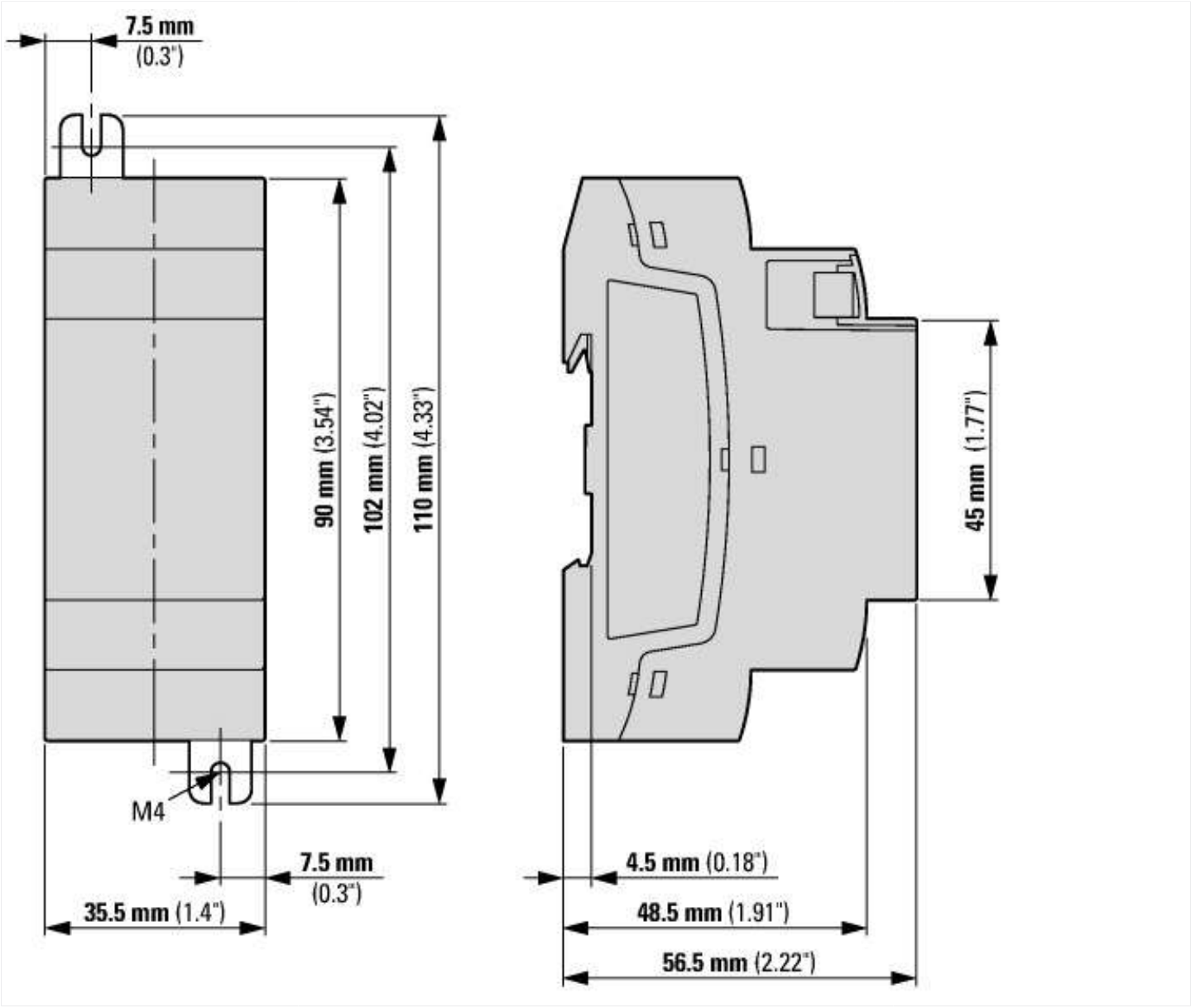
PLC's (EG000024) / Logic module (EC001417)		
Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / Logic module (ecl@ss10.0.1-27-24-22-16 [AKE539014])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	20.4 - 28.8
Voltage type of supply voltage		DC
Voltage type of supply voltage		DC
Switching current	A	0.5
Number of analogue inputs		4
Number of analogue outputs		2
Number of digital inputs		0
Number of digital outputs		0
With relay output		No
Number of HW-interfaces industrial Ethernet		0
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		0
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces other		2
With optical interface		No
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No

Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No
Supporting protocol for MODBUS		No
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
Redundancy		No
With display		No
Degree of protection (IP)		IP20
Basic device		No
Expandable		Yes
Expansion device		Yes
With timer		No
Rail mounting possible		Yes
Wall mounting/direct mounting		Yes
Front build in possible		Yes
Rack-assembly possible		No
Suitable for safety functions		No
Category according to EN 954-1		-
SIL according to IEC 61508		None
Performance level acc. EN ISO 13849-1		None
Appendant operation agent (Ex ia)		No
Appendant operation agent (Ex ib)		No
Explosion safety category for gas		None
Explosion safety category for dust		None
Width	mm	35.5
Height	mm	90
Depth	mm	58

Approvals

Degree of Protection		IEC: IP20, UL/CSA Type: -

Dimensions



Assets (links)

Declaration of CE Conformity

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