



I/O expansion, For use with easyE4, 12/24 V DC, 24 V AC, Inputs/Outputs expansion (number) digital: 4, Push-In



Part no. EASY-E4-UC-8RE1P 197510

General specifications		
Product name		Eaton Moeller® series EASY I/O expansion
Part no.		EASY-E4-UC-8RE1P
EAN		4015081940882
Product Length/Depth		58 millimetre
Product height		90 millimetre
Product width		36 millimetre
Product weight		0.125 kilogram
Compliances		CE
Certifications		UL Category Control No.: NRAQ, NRAQ7 IEC/EN 61000-6-2 IEC/EN 61000-4-2 IEC/EN 61131-2 UL Listed IEC 60068-2-27 IEC 60068-2-6 EN 50178 IEC 60068-2-30 CE EN 61010 DNV GL IEC/EN 61000-6-3 UL File No.: E205091 UL hazardous location group A (acetylene) UL hazardous location class I UL hazardous location division 2 UL hazardous location group C (ethylene) UL hazardous location group D (propane) UL hazardous location group B (hydrogen)
Product Tradename		EASY
Product Type		I/O expansion
Product Sub Type		None
Features & Functions		
Fitted with:		Relay output
General information		
Degree of protection		IP20
Input frequency		50/60 Hz (Digital inputs, at 115/230 V AC) 50/60 Hz (Digital inputs, at 24 V DC)
Insulation resistance		According to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Lifespan, electrical		25,000 Operations (Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated) 25,000 Operations (Fluorescent lamp load 10 x 58 W at 230/240 V AC, with upstream electrical device) 25,000 Operations (Fluorescent lamp load 10 x 58 W at 230/240 V AC, uncompensated) 25,000 Operations (Filament bulb load at 500 W, 115/120 V AC) 25,000 Operations (Filament bulb load at 1000 W, 230/240 V AC)
Lifespan, mechanical		1,000,000 Operations
Mounting method		Rail mounting possible Wall mounting/direct mounting
Overvoltage category		III
Pollution degree		2
Product category		Control relays easyE4
Protocol		MODBUS TCP/IP
Protection		Miniature circuit-breaker B16 or slow-blow 8 A fuse, Protection of an output relay
Rated impulse withstand voltage (Uimp)		6 kV (contact-coil)
Residual ripple		5 % (transistor outputs) ≤ 5 %
Software		EASYSOFT-SWLIC/easySoft7

Switching frequency			0.5 Hz, Inductive load, Relay outputs 10 Hz, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs
Type			easyE4 extension
Used with			easyE4
Utilization category			B 300 Light Pilot Duty, UL/CSA Control Circuit Rating Codes AC R 300 Light Pilot Duty, UL/CSA Control Circuit Rating Codes DC
Voltage type			AC/DC
Ambient conditions, mechanical			
Drop and topple			50 mm Drop height, Drop to IEC/EN 60068-2-31
Height of fall (IEC/EN 60068-2-32) - max			0.3 m
Mounting position			Horizontal Vertical
Shock resistance			15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 18 Impacts
Vibration resistance			57 - 150 Hz, 2 g constant acceleration 10 - 57 Hz, 0.15 mm constant amplitude According to IEC/EN 60068-2-6
Climatic environmental conditions			
Air pressure			795 - 1080 hPa (operation)
Ambient operating temperature - min			-25 °C
Ambient operating temperature - max			55 °C
Ambient storage temperature - min			-40 °C
Ambient storage temperature - max			70 °C
Environmental conditions			Condensation: prevent with appropriate measures Clearance in air and creepage distances according to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Relative humidity			5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
Electro magnetic compatibility			
Air discharge			8 kV
Burst impulse			2 kV, Signal cable 2 kV, Supply cable According to IEC/EN 61000-4-4
Contact discharge			6 kV
Electromagnetic fields			1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3) 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3)
Immunity to line-conducted interference			10 V (according to IEC/EN 61000-4-6)
Radio interference class			Class B (EN 61000-6-3)
Surge rating			1 kV, Supply cables, symmetrical, power pulses (Surge), EMC 2 kV, Supply cables, asymmetrical, power pulses (Surge), EMC According to IEC/EN 61000-4-5 Level 4
Voltage dips			≤ 1 ms from rated voltage (12 V DC) 10 ms
Terminal capacities			
Terminal capacity			0.2 - 2.5 mm ² (22 - 12 AWG), flexible with ferrule
Electrical rating			
Conventional thermal current ith of auxiliary contacts (1-pole, open)			5 A
Power consumption			2 W
Power loss			2 W
Rated breaking capacity			200000 Operations at DC-13, 24 V DC, 1 A (500 Ops./h) 300000 Operations at AC-15, 250 V AC, 3 A (600 Ops./h)
Rated insulation voltage (Ui)			240 V
Rated operational voltage			Max. 300 V AC Max. 300 V DC 85 - 264 V AC 100/110/115/120/230/240 AC (-15 %/+10 %)
Supply frequency			50/60 Hz (± 5%)
Supply voltage at AC, 50 Hz - min			85 V AC
Supply voltage at AC, 50 Hz - max			264 V AC
Supply voltage at DC - min			10.2 V DC
Supply voltage at DC - max			28.8 V DC
Uninterrupted current			1 A DC, at R 300 (UL/CSA)

			10 A AC, at 240 V AC (UL/CSA) 8 A DC, at 24 V DC (UL/CSA) 5 A AC, max. thermal continuous current $\cos \varphi = 1$ at B 300 (UL/CSA)
Short-circuit rating			
Short-circuit protection			≥ 1 A (T), Fuse, Power supply
Communication			
Connection type			Push in terminals
Cable			
Cable length			40 m (max. per input), Digital inputs 24 V DC 100 m, unscreened, Digital inputs 12 V DC 100 m, unscreened, Digital inputs 24 V AC
Input/Output			
Delay time			20 ms, Digital Inputs 12 V DC, Delay time from 1 to 0, Debounce ON 0.2 ms typ., Digital inputs 24 V DC (I1 - I8), Delay time from 1 to 0, Debounce OFF 20 ms, Digital Inputs 12 V DC, Delay time from 0 to 1, Debounce ON 0.2 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 1 to 0, Debounce OFF 0.15 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 0 to 1, Debounce OFF 0.1 ms typ., Digital inputs 24 V DC (I1 - I8), Delay time from 0 to 1, Debounce OFF
Input current			80 mA
Input voltage			Status 0: ≤ 15 V DC (I1 - I4, Digital inputs, 24 V DC) Signal 0: ≤ 5 V DC (I1 - I4, Digital inputs, 12 V DC)
Making/breaking capacity			28/28 VA (DC, at R 300) 3600/360 VA (AC, at B 300)
Number of inputs (analog)			0
Number of inputs (digital)			4
Number of outputs (analog)			0
Number of outputs (digital)			4
Output			Voltage Relay outputs in groups of 1 > 500 mA (Relay outputs, Recommended for load: 12 V AC/DC) Current 4 Relay Outputs
Safety			
Explosion safety category for gas			None
Potential isolation			Basic isolation: 600 V AC (Relay outputs) Between Analog inputs and Digital inputs: no Between Relay outputs: yes
Protection against polarity reversal			Yes
Explosion safety category for dust			None
Safe isolation			300 V AC, Between coil and contact, According to EN 50178 300 V AC, Between two contacts, According to EN 50178
Design verification			
Equipment heat dissipation, current-dependent P _{vid}			1 W
Heat dissipation capacity P _{diss}			0 W
Heat dissipation per pole, current-dependent P _{vid}			0 W
Static heat dissipation, non-current-dependent P _{vs}			2 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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 9.0

Programmable logic controllers PLC (EG000024) / Logic module (EC001417)		
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Programmable logic control (SPS) / Logic module (ec@ss13-27-24-22-16 [AKE539019])		
Supply voltage AC 50 Hz	V	85 - 264
Supply voltage AC 60 Hz	V	85 - 264
Supply voltage DC	V	10.2 - 28.8
Voltage type (supply voltage)		AC/DC
Switching current	A	5
Power consumption	W	2
Number of analogue inputs		0
Number of analogue outputs		0
Number of digital inputs		4
Number of digital outputs		4
With relay output		Yes
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		0
With optical interface		No
Supporting protocol for EtherCAT		No
Supporting protocol for TCP/IP		Yes
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		Yes
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			No
Expansion device			No
With time switch clock			No
Rail mounting possible			Yes
Wall mounting/direct mounting			Yes
Front built-in possible			No
Rack-assembly possible			No
Suitable for safety functions			No
SIL according to IEC 61508			None
Performance level according to 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
Certified for UL hazardous location class I			Yes
Certified for UL hazardous location class II			No
Certified for UL hazardous location class III			No
Certified for UL hazardous location division 1			No
Certified for UL hazardous location division 2			Yes
Certified for UL hazardous location group A (acetylene)			Yes
Certified for UL hazardous location group B (hydrogen)			No
Certified for UL hazardous location group C (ethylene)			Yes
Certified for UL hazardous location group D (propane)			Yes
Certified for UL hazardous location group E (metal dusts)			No
Certified for UL hazardous location group F (carbonaceous dusts)			No
Certified for UL hazardous location group G (non-conductive dusts)			No
Width		mm	36
Height		mm	90
Depth		mm	58