

EASYE4 PROGRAMMABLE RELAYS  
197215



Overview



Specifications



Resources

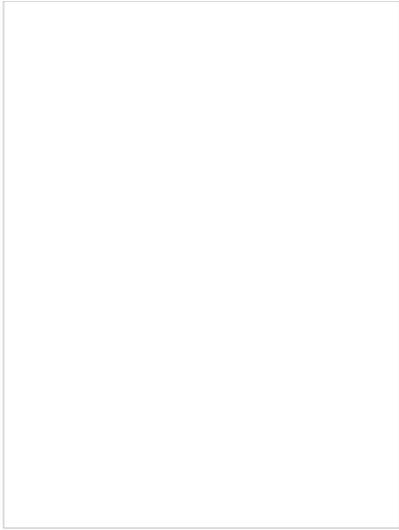
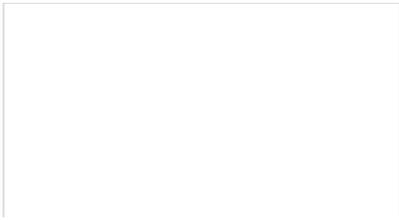
How to buy

# 197215

Eaton Moeller® series EASY Control relays easyE4 (Ethernet), 100 - 240 V AC, 110 - 220 VDC (cULus: 1  
Digital: 8, screw terminal EASY-E4-AC-12RC1

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### 197218

Eaton Moeller® series EASY I/O expansion,  
For use with easyE4, 12/24 V DC, 24 V  
AC, Inputs expansion (number) digital: 8,  
screw terminal

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### 197223

Eaton Moeller® series EASY I/O expansion,  
For use with easyE4, 24 V DC, Inputs  
expansion (number) analog: 4, screw  
terminal EASY-E4-DC-6AE1

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### 198513

Eaton XV-102 Touch display for easyE4, 24  
V DC, 3.5z, TFTcolor, ethernet

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### 197217

Eaton Moeller® series EASY I/O expansion,  
For use with easyE4, 12/24 V DC,  
24 V AC, Inputs expansion (number) digital: 8,  
screw terminal

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## GENERAL SPECIFICATIONS

General specifications

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**PRODUCT NAME** Eaton Moeller® series EASY Control relay

**CATALOG NUMBER** 197215

Product specifications

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**MODEL CODE** EASY-E4-AC-12RC1

**EAN** 4015081939442

**PRODUCT LENGTH/DEPTH** 58 mm

**PRODUCT HEIGHT** 90 mm

**PRODUCT WIDTH** 72 mm

**PRODUCT WEIGHT** 0.25 kg

### CERTIFICATIONS

EN 61010  
IEC/EN 61000-6-2  
CULus per UL 61010  
IEC/EN 61000-4-2  
IEC/EN 61131-2  
IEC 60068-2-30  
CSA-C22.2 No. 61010  
EN 50178  
IEC 60664  
IEC 60068-2-27  
IEC 60068-2-6  
IEC/EN 61000-6-3  
UL Listed  
UL Category Control No.: NRAQ, NRAQ7  
UL File No.: E205091  
DNV GL  
CE  
UL hazardous location class I  
UL hazardous location division 2  
UL hazardous location group A (acetylene)  
UL hazardous location group B (hydrogen)  
UL hazardous location group C (ethylene)  
UL hazardous location group D (propane)

### CATALOG NOTES

Accuracy of the real-time clock depending on ambient  
fluctuations of up to  $\pm 5$  s/day ( $\pm 0.5$  h/year) are possible.

## PRODUCT SPECIFICATIONS

**RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT  
DISSIPATION (IN)** 0 A

**10.11 SHORT-CIRCUIT RATING** Is the panel builder's responsibility.

### RATED OPERATIONAL VOLTAGE

Max. 300 V DC  
100/110/115/120/230/240 AC (-15 %/+10 %)  
85 - 264 V AC  
Max. 300 V AC  
110/120 V DC (power supply)  
240 V AC

<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>CABLE TYPE</b>	CAT5
<b>MOUNTING METHOD</b>	Screw fixing using fixing brackets ZB4-101-GF1 (ac) Rail mounting possible Top-hat rail fixing (according to IEC/EN 60715, 35) Wall mounting/direct mounting Front build in possible
<b>AIR PRESSURE</b>	795 - 1080 hPa (operation)
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>SURGE RATING</b>	1 kV, Supply cables, symmetrical, power pulses (S) According to IEC/EN 61000-4-5, power pulses (Sur) 2 kV, Supply cables, asymmetrical, power pulses (S)
<b>FITTED WITH:</b>	Relay output Timer Keypad Display Real time clock
<b>VIBRATION RESISTANCE</b>	According to IEC/EN 60068-2-6 57 - 150 Hz, 2 g constant acceleration 10 - 57 Hz, 0.15 mm constant amplitude
<b>MAKING/BREAKING CAPACITY</b>	3600/360 VA (AC, at B 300) 28/28 VA (DC, at R 300)
<b>EXPLOSION SAFETY CATEGORY FOR GAS</b>	None
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	55 °C
<b>SWITCHING CURRENT</b>	8 A
<b>SWITCHING FREQUENCY</b>	10 Hz, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs 0.5 Hz, Inductive load, Relay outputs
<b>FEATURES</b>	Networkable (Ethernet) Expandable Display indication of 6 lines x 16 characters
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>NUMBER OF HW-INTERFACES (SERIAL TTY)</b>	0
<b>SUPPLY VOLTAGE AT AC, 60 HZ - MAX</b>	264 VAC
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Meets the product standard's requirements.
<b>VOLTAGE TYPE</b>	AC

<b>CATEGORY (EN 954-1)</b>	None
<b>PRODUCT CATEGORY</b>	Control relays easyE4
<b>POTENTIAL ISOLATION</b>	<p>Between Digital inputs 115/230 V AC and Power supply: yes</p> <p>Between Relay outputs and expansion devices: yes</p> <p>Between Digital inputs 115/230 V AC: no</p> <p>Between Relay outputs and Inputs: yes</p> <p>Between Digital inputs 115/230 V AC and base unit: yes</p> <p>Between Digital inputs 115/230 V AC and Outputs: yes</p> <p>Between Digital inputs 115/230 V AC and Ethernet: yes</p> <p>Between Relay outputs and Ethernet: yes</p> <p>Basic isolation: 600 V AC (Relay outputs)</p> <p>Between Digital inputs 115/230 V AC and expansion devices: yes</p> <p>Safe isolation according to EN 50178: 300 V AC (Relay outputs)</p> <p>Between Relay outputs: yes</p> <p>Between Digital inputs 115/230 V AC and Memory: yes</p> <p>Between Relay outputs and Power supply: yes</p> <p>Between Digital inputs 115/230 V AC and Interface: yes</p>
<b>RADIO INTERFERENCE CLASS</b>	Class B (EN 61000-6-3)
<b>RESIDUAL RIPPLE</b>	≤ 5 %
<b>INDICATION</b>	LCD-display used as status indication of Digital inputs
<b>TERMINAL CAPACITY</b>	<p>0.2 - 4 mm<sup>2</sup> (AWG 22 - 12), solid</p> <p>0.2 - 2.5 mm<sup>2</sup> (22 - 12 AWG), flexible with ferrule</p>
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>NUMBER OF HW-INTERFACES (RS-422)</b>	0
<b>INSULATION RESISTANCE</b>	According to EN 50178, EN 61010-2-201, UL61010-1 NO. 61010-2-201
<b>POWER LOSS</b>	10 W
<b>OUTPUT</b>	<p>Relay outputs in groups of 1</p> <p>4 Relay Outputs</p> <p>&gt; 500 mA (Relay outputs, Recommended for load: Voltage Current</p>
<b>ELECTROMAGNETIC FIELDS</b>	<p>3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-6-3)</p> <p>1 V/m at 2.0 - 2.7 GHz (according to IEC EN 61000-6-3)</p> <p>10 V/m at 0.8 - 1.0 GHz (according to IEC EN 61000-6-3)</p>
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> OF AUXILIARY CONTACTS (1-POLE, OPEN)</b>	8 A
<b>INRUSH CURRENT</b>	12.5 A (for 6 ms)
<b>PROTOCOL</b>	TCP/IP MODBUS
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>OVERVOLTAGE CATEGORY</b>	III
<b>DEGREE OF PROTECTION</b>	IP20
<b>PARALLEL SWITCHING</b>	Not permitted

<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	70 °C
<b>INPUT VOLTAGE</b>	Condition 0: 0 - 40 V AC, Digital inputs, 115/230 Condition 1: 79 - 264 V AC, Digital inputs, 115/230
<b>POLLUTION DEGREE</b>	2
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6 kV (contact-coil)
<b>SIL (IEC 61508)</b>	None
<b>TIGHTENING TORQUE</b>	0.6 Nm, Screw terminals
<b>INPUT FREQUENCY</b>	50/60 Hz (Digital inputs, at 115/230 V AC) 50/60 Hz (Digital inputs, at 24 V DC)
<b>TYPE</b>	easyE4 base device
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>SUPPLY FREQUENCY</b>	50/60 Hz (± 5%)
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>ENVIRONMENTAL CONDITIONS</b>	Condensation: prevent with appropriate measures Clearance in air and creepage distances according to 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61
<b>PROTECTION AGAINST POLARITY REVERSAL</b>	Yes, for supply voltage (Siemens MPI optional)
<b>SHOCK RESISTANCE</b>	15 g, Mechanical, according to IEC/EN 60068-2-27 shock 11 ms, 18 Impacts
<b>NUMBER OF INPUTS (ANALOG)</b>	0
<b>INPUT CURRENT</b>	2 x 4 mA (I7 - I8, at 115 V AC, 60 Hz, at signal 1) 6 x 0.25 mA (I1 - I6, at 115 V AC, 60 Hz, at signal 1) 2 x 6 mA (I7 - I8, at 230 V AC, 50 Hz, at signal 1) 6 x 0.5 mA (I1 - I6, at 230 V AC, 50 Hz, at signal 1)
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to
<b>NUMBER OF HW-INTERFACES (RS-485)</b>	0
<b>NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)</b>	1
<b>FREQUENCY RATING</b>	6.5 Hz
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>IMMUNITY TO LINE-CONDUCTED INTERFERENCE</b>	10 V (according to IEC/EN 61000-4-6)
<b>PROTECTION</b>	B16 circuit breaker or 8 A (T) fuse, Protection of an
<b>CONTACT DISCHARGE</b>	6 kV
<b>SUPPLY VOLTAGE AT DC - MIN</b>	85 VDC

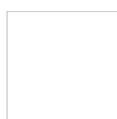
<b>NUMBER OF HW-INTERFACES (WIRELESS)</b>	0
<b>LIFESPAN, ELECTRICAL</b>	25,000 Operations (Fluorescent lamp load 1 x 58 W conventional, compensated) 25,000 Operations (Fluorescent lamp load 10 x 58 W with upstream electrical device) 25,000 Operations (Filament bulb load at 1000 W, uncompensated) 25,000 Operations (Fluorescent lamp load 10 x 58 W uncompensated) 25,000 Operations (Filament bulb load at 500 W, 1000 V)
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	4 W
<b>DISPLAY TEMPERATURE - MIN</b>	0 °C
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>UTILIZATION CATEGORY</b>	B 300 Light Pilot Duty, UL/CSA Control Circuit R R 300 Light Pilot Duty, UL/CSA Control Circuit R
<b>NUMBER OF HW-INTERFACES (RS-232)</b>	0
<b>NUMBER OF INPUTS (DIGITAL)</b>	8
<b>RATED BREAKING CAPACITY</b>	300000 Operations at AC-15, 250 V AC, 3 A (600 V AC) 200000 Operations at DC-13, 24 V DC, 1 A (500 V DC)
<b>CABLE LENGTH</b>	100 m (max. permissible per input I7 to I8), Digital AC 40 m (max. permissible per input I1 to I6), Digital DC
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be protected.
<b>SAFE ISOLATION</b>	300 V AC, Between two contacts, According to EN 60947-2 300 V AC, Between coil and contact, According to EN 60947-2
<b>VOLTAGE DIPS</b>	10 ms
<b>SUPPLY VOLTAGE AT DC - MAX</b>	264 VDC
<b>USED WITH</b>	easyE4
<b>MOUNTING POSITION</b>	Horizontal Vertical
<b>SOFTWARE</b>	EASYSOFT-SWLIC/easySof7
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the instructions in the instruction leaflet (IL) is observed.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>DISPLAY TEMPERATURE - MAX</b>	55 °C
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	0 W
<b>SAFETY PERFORMANCE LEVEL (EN ISO 13849-1)</b>	None
<b>RESOLUTION</b>	<ul style="list-style-type: none"> <li>• 1 min (Range H:M)</li> <li>• 1 s (Range M:S)</li> <li>• 5 ms (Range S)</li> </ul>

<b>SHORT-CIRCUIT PROTECTION</b>	≥ 1A (T), Fuse, Power supply
<b>DROP AND TOPPLE</b>	50 mm Drop height, Drop to IEC/EN 60068-2-31
<b>SUPPLY VOLTAGE AT AC, 60 HZ - MIN</b>	85 VAC
<b>UNINTERRUPTED CURRENT</b>	5 A AC, max. thermal continuous current $\cos \phi = 1$ 8 A AC, at 240 V AC (UL/CSA) 8 A DC, at 24 V DC (UL/CSA) 1 A DC, at R 300 (UL/CSA)
<b>HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX</b>	0.3 m
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	4 W
<b>NUMBER OF OUTPUTS (ANALOG)</b>	0
<b>AIR DISCHARGE</b>	8 kV
<b>NUMBER OF HW-INTERFACES (USB)</b>	0
<b>ACCURACY</b>	± 1 %, Repetition accuracy of timing relays (of value) ± 2 s/day, Real-time clock to inputs (± 0.2 h/Year)
<b>DISPLAY TYPE</b>	Monochrome
<b>DELAY TIME</b>	21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I8) from 0 to 1, Debounce OFF 20 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8) to 1, Debounce ON 20 ms, Digital inputs 115/230 V AC 50 Hz (I7, I8) to 0, Debounce OFF 21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I8) from 1 to 0, Debounce OFF 16½ ms, Digital inputs 115/230 V AC 60 Hz (I7, I8) to 0, Debounce OFF 0.03 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8) to 1, Debounce OFF 0.03 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8) to 0, Debounce OFF 20 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8) to 0, Debounce ON
<b>DATA TRANSFER RATE</b>	10/100 MBit/s
<b>NUMBER OF OUTPUTS (DIGITAL)</b>	4
<b>POWER CONSUMPTION</b>	4 W
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>CONNECTION TYPE</b>	Screw terminal Ethernet: RJ45 plug, 8-pole
<b>LIFESPAN, MECHANICAL</b>	1,000,000 Operations
<b>NUMBER OF HW-INTERFACES (OTHER)</b>	0

<b>RELATIVE HUMIDITY</b>	5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
<b>SUPPLY VOLTAGE AT AC, 50 HZ - MIN</b>	85 VAC
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>SUPPLY VOLTAGE AT AC, 50 HZ - MAX</b>	264 VAC
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the device
<b>NUMBER OF HW-INTERFACES (PARALLEL)</b>	0
<b>EXPLOSION SAFETY CATEGORY FOR DUST</b>	None
<b>SCREWDRIVER SIZE</b>	3.5 x 0.8 mm, Terminal screw
<b>BURST IMPULSE</b>	2 kV, Signal cable According to IEC/EN 61000-4-4 2 kV, Supply cable
<b>BASE TYPE</b>	Yes
<b>NUMBER OF INTERFACES (PROFNET)</b>	0
<b>RATED INSULATION VOLTAGE (UI)</b>	240 V



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## mCAD model

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197215



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