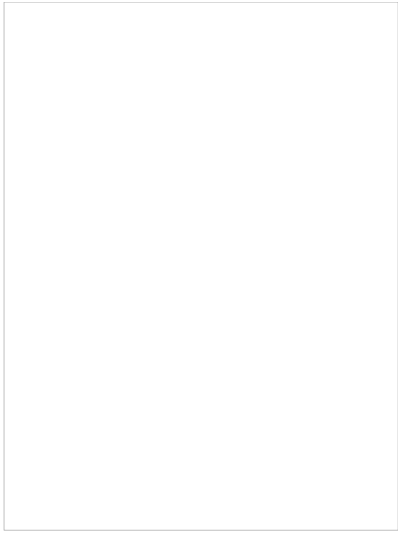
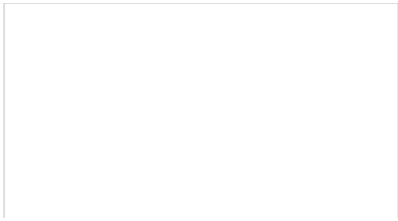




How to

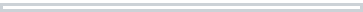
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197218

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



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



198513

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



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

>

PRODUCT NAME

Eaton Moeller® series EASY Control relay

CATALOG NUMBER

197215

Product specifications

>

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 temperature fluctuations of up to ± 5 s/day (± 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

10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
CABLE TYPE	CAT5
MOUNTING METHOD	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
AIR PRESSURE	795 - 1080 hPa (operation)
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
SURGE RATING	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)
FITTED WITH:	Relay output Timer Keypad Display Real time clock
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6 57 - 150 Hz, 2 g constant acceleration 10 - 57 Hz, 0.15 mm constant amplitude
MAKING/BREAKING CAPACITY	3600/360 VA (AC, at B 300) 28/28 VA (DC, at R 300)
EXPLOSION SAFETY CATEGORY FOR GAS	None
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
SWITCHING CURRENT	8 A
SWITCHING FREQUENCY	10 Hz, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs 0.5 Hz, Inductive load, Relay outputs
FEATURES	Networkable (Ethernet) Expandable Display indication of 6 lines x 16 characters
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
NUMBER OF HW-INTERFACES (SERIAL TTY)	0
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	264 VAC
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to
10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Meets the product standard's requirements.
VOLTAGE TYPE	AC

CATEGORY (EN 954-1)	None
PRODUCT CATEGORY	Control relays easyE4
POTENTIAL ISOLATION	<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>
RADIO INTERFERENCE CLASS	Class B (EN 61000-6-3)
RESIDUAL RIPPLE	≤ 5 %
INDICATION	LCD-display used as status indication of Digital inputs
TERMINAL CAPACITY	<p>0.2 - 4 mm² (AWG 22 - 12), solid</p> <p>0.2 - 2.5 mm² (22 - 12 AWG), flexible with ferrule</p>
HEAT DISSIPATION CAPACITY PDISS	0 W
NUMBER OF HW-INTERFACES (RS-422)	0
INSULATION RESISTANCE	According to EN 50178, EN 61010-2-201, UL61010-2-201 NO. 61010-2-201
POWER LOSS	10 W
OUTPUT	<p>Relay outputs in groups of 1</p> <p>4 Relay Outputs</p> <p>> 500 mA (Relay outputs, Recommended for load: 500 mA)</p> <p>Voltage</p> <p>Current</p>
ELECTROMAGNETIC FIELDS	<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>
CONVENTIONAL THERMAL CURRENT I_{th} OF AUXILIARY CONTACTS (1-POLE, OPEN)	8 A
INRUSH CURRENT	12.5 A (for 6 ms)
PROTOCOL	TCP/IP MODBUS
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
OVERVOLTAGE CATEGORY	III
DEGREE OF PROTECTION	IP20
PARALLEL SWITCHING	Not permitted

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

NUMBER OF HW-INTERFACES (WIRELESS)	0
LIFESPAN, ELECTRICAL	<p>25,000 Operations (Fluorescent lamp load 1 x 58 W conventional, compensated)</p> <p>25,000 Operations (Fluorescent lamp load 10 x 58 W with upstream electrical device)</p> <p>25,000 Operations (Filament bulb load at 1000 W, uncompensated)</p> <p>25,000 Operations (Fluorescent lamp load 10 x 58 W uncompensated)</p> <p>25,000 Operations (Filament bulb load at 500 W, 1</p>
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	4 W
DISPLAY TEMPERATURE - MIN	0 °C
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	<p>B 300 Light Pilot Duty, UL/CSA Control Circuit R</p> <p>R 300 Light Pilot Duty, UL/CSA Control Circuit I</p>
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF INPUTS (DIGITAL)	8
RATED BREAKING CAPACITY	<p>300000 Operations at AC-15, 250 V AC, 3 A (600</p> <p>200000 Operations at DC-13, 24 V DC, 1 A (500 C</p>
CABLE LENGTH	<p>100 m (max. permissible per input I7 to I8), Digital AC</p> <p>40 m (max. permissible per input I1 to I6), Digital</p>
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
SAFE ISOLATION	<p>300 V AC, Between two contacts, According to EN</p> <p>300 V AC, Between coil and contact, According to</p>
VOLTAGE DIPS	10 ms
SUPPLY VOLTAGE AT DC - MAX	264 VDC
USED WITH	easyE4
MOUNTING POSITION	<p>Horizontal</p> <p>Vertical</p>
SOFTWARE	EASYSOFT-SWLIC/easySoft7
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the instruction leaflet (IL) is observed.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
DISPLAY TEMPERATURE - MAX	55 °C
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
SAFETY PERFORMANCE LEVEL (EN ISO 13849-1)	None
RESOLUTION	<ul style="list-style-type: none"> • 1 min (Range H:M) • 1 s (Range M:S) • 5 ms (Range S)

SHORT-CIRCUIT PROTECTION	≥ 1A (T), Fuse, Power supply
DROP AND TOPPLE	50 mm Drop height, Drop to IEC/EN 60068-2-31
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	85 VAC
UNINTERRUPTED CURRENT	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)
HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX	0.3 m
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	4 W
NUMBER OF OUTPUTS (ANALOG)	0
AIR DISCHARGE	8 kV
NUMBER OF HW-INTERFACES (USB)	0
ACCURACY	± 1 %, Repetition accuracy of timing relays (of value) ± 2 s/day, Real-time clock to inputs (± 0.2 h/Year)
DISPLAY TYPE	Monochrome
DELAY TIME	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 16⅔ 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
DATA TRANSFER RATE	10/100 MBit/s
NUMBER OF OUTPUTS (DIGITAL)	4
POWER CONSUMPTION	4 W
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.
CONNECTION TYPE	Screw terminal Ethernet: RJ45 plug, 8-pole
LIFESPAN, MECHANICAL	1,000,000 Operations
NUMBER OF HW-INTERFACES (OTHER)	0

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



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