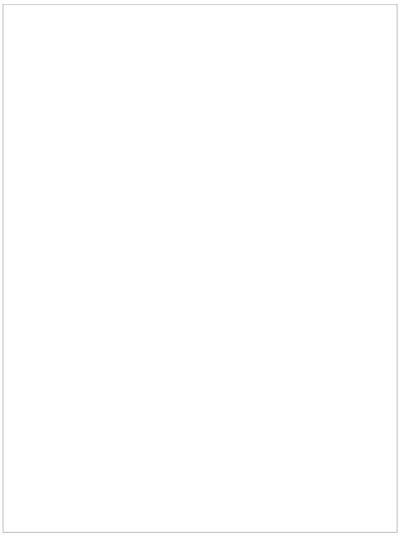
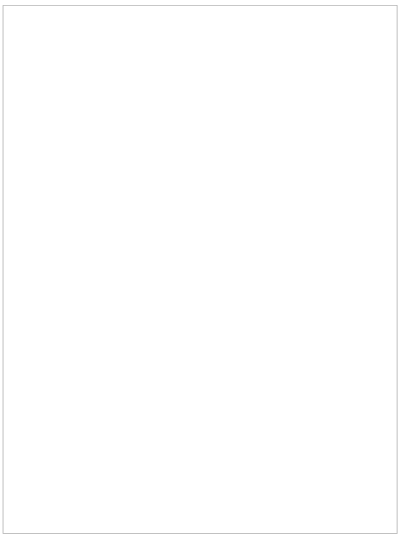
EASYE4 PROGRAMMABLE RELAYS
197212





197212

Eaton Moeller® series EASY Control relays, easyE
12/24 V DC, 24 V AC, Inputs Digital: 8, of which can
screw terminal

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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 For use with easyE4, 12/24 V D AC, Inputs expansion (number) screw terminal

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Product specifications >

GENERAL SPECIFICATIONS

PRODUCT NAME	Eaton Moeller® series EASY Control relay
CATALOG NUMBER	197212
MODEL CODE	EASY-E4-UC-12RCX1
EAN	4015081939473
PRODUCT LENGTH/DEPTH	58 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	72 mm
PRODUCT WEIGHT	0.25 kg
CERTIFICATIONS	EN 61010 IEC 60068-2-30 CULus per UL 61010 IEC/EN 61000-4-2 IEC 60068-2-6 IEC/EN 61000-6-2 IEC/EN 61000-6-3 CSA-C22.2 No. 61010 IEC 60068-2-27 IEC/EN 61131-2 EN 50178 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 ambie fluctuations of up to ± 5 s/day (± 0.5 h/year) are poss

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	10.2 - 28.8 V DC 12 V DC (digital inputs) 12/24 V DC (-15 %/+ 20 % - power supply) 24 V AC (digital inputs) 24 V DC (digital inputs) 20.4 - 26.4 V AC Max. 300 V AC

	24 V AC (-15 %/+10 % - power supply) 240 V AC Max. 300 V DC
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
CABLE TYPE	CAT5
MOUNTING METHOD	Front build in possible Top-hat rail fixing (according to IEC/EN 60715, 35 Wall mounting/direct mounting Rail mounting possible Screw fixing using fixing brackets ZB4-101-GF1 (ac
LED INDICATOR	Status indication of Power/RUN Status indication of Ethernet: LED
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	2 kV, Supply cables, asymmetrical, power pulses (S According to IEC/EN 61000-4-5, power pulses (Sur 1 kV, Supply cables, symmetrical, power pulses (Su
FITTED WITH:	Timer Relay output Real time clock
VIBRATION RESISTANCE	57 - 150 Hz, 2 g constant acceleration According to IEC/EN 60068-2-6 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	0.5 Hz, Inductive load, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs 10 Hz, Relay outputs
FEATURES	Expandable Networkable (Ethernet)
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
NUMBER OF HW-INTERFACES (SERIAL TTY)	0
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	26.4 VAC
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
CONVERSIONS	Each CPU cycle, Analog inputs
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/DC
CATEGORY (EN 954-1)	None
PRODUCT CATEGORY	Control relays easyE4
POTENTIAL ISOLATION	Between Digital inputs 24 V AC and Outputs: yes Between Relay outputs and expansion devices: yes Between Digital inputs 12 V DC and expansion dev Between Relay outputs: yes Between Analog inputs and Outputs: yes Basic isolation: 600 V AC (Relay outputs) Between Analog inputs and expansion devices: yes Between Digital inputs 24 V AC and expansion dev Between Relay outputs and Power supply: yes Between Digital inputs 24 V DC and Outputs: yes Between Analog inputs and Ethernet: yes Safe isolation according to EN 50178: 300 V AC (R Between Digital inputs 24 V AC and Ethernet: yes Between Digital inputs 24 V DC and expansion dev Between Relay outputs and Inputs: yes Between Digital inputs 12 V DC and Ethernet: yes Between Digital inputs 12 V DC and Outputs: yes Between Digital inputs 24 V DC and Ethernet: yes
RADIO INTERFERENCE CLASS	Class B (EN 61000-6-3)
RESIDUAL RIPPLE	≤ 5 %
INDICATION	LCD-display used as status indication of Digital inp LCD-display used as status indication of Digital inp
TERMINAL CAPACITY	0.2 - 2.5 mm² (22 - 12 AWG), flexible with ferrule 0.2 - 4 mm² (AWG 22 - 12), solid
HEAT DISSIPATION CAPACITY PDISS	0 W
INCREMENTAL ENCODER	Cable length: ≤ 20 m (screened)
NUMBER OF HW-INTERFACES (RS-422)	0
INSULATION RESISTANCE	According to EN 50178, EN 61010-2-201, UL6101 NO. 61010-2-201
OUTPUT	Relay outputs in groups of 1 > 500 mA (Relay outputs, Recommended for load: 4 Relay Outputs Voltage Current
ELECTROMAGNETIC FIELDS	10 V/m at 0.8 - 1.0 GHz (according to IEC EN 610 1 V/m at 2.0 - 2.7 GHz (according to IEC EN 6100 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-
CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	8 A
PROTOCOL	MODBUS TCP/IP
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.

OVERVOLTAGE CATEGORY	III
DEGREE OF PROTECTION	IP20
PARALLEL SWITCHING	Not permitted
FREQUENCY COUNTER	Pulse shape: Square (digital inputs 24 V DC) Cable length: ≤ 20 m (screened, Digital inputs 24 V Number: 4 (I1, I2, I3, I4 - Digital inputs 24 V DC) Pulse pause ratio: 1:1 (Digital inputs 24 V DC) Counter frequency: 5 kHz (Digital inputs 24 V DC)
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
INPUT VOLTAGE	Status 1: ≥ 15 V DC (I1 - I4, Digital inputs, 24 V I Status 0: ≤ 8 V DC (I5 - I8, Digital inputs, 24 V D At signal 0: ≤ 5 V (I1 - I8, sinusoidal, Digital input At signal 1: ≥ 15 V (I1 - I8, sinusoidal, Digital inpu Status 1: ≥ 8 V DC (I5 - I8, Digital inputs, 24 V D Signal 0: ≤ 5 V DC (I1 - I4, Digital inputs, 12 V D Status 0: ≤ 15 V DC (I1 - I4, Digital inputs, 24 V I
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 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.
INCREMENTAL COUNTER	Number of counter inputs: 2 (I1 + I2, I3 + I4) Signal offset: 90° Pulse pause ratio: 1:1 Value range: -2147483648 to +2147483647 Pulse shape: Square Counter frequency: ≤ 5 kHz
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)
SIGNAL RANGE	0 - 10 V DC, Analog inputs
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27 shock 11 ms, 18 Impacts
NUMBER OF INPUTS (ANALOG)	0 4

INPUT CURRENT	2.2 mA (I5 - I8, at 24 V DC, at signal 1) 3.3 mA (I1 - I4, at 24 V DC, at signal 1) 1 mA (Analog inputs) 200 mA
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
INPUT	Voltage (DC)
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	Miniature circuit-breaker B16 or slow-blow 8 A fuse output relay
CONTACT DISCHARGE	6 kV
SUPPLY VOLTAGE AT DC - MIN	10.2 VDC
NUMBER OF HW-INTERFACES (WIRELESS)	0
LIFESPAN, ELECTRICAL	25,000 Operations (Filament bulb load at 500 W, 1 25,000 Operations (Fluorescent lamp load 10 x 58 W uncompensated) 25,000 Operations (Fluorescent lamp load 10 x 58 W with upstream electrical device) 25,000 Operations (Fluorescent lamp load 1 x 58 W conventional, compensated) 25,000 Operations (Filament bulb load at 1000 W,
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	3 W
INPUT IMPEDANCE	13.3 kΩ
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	B 300 Light Pilot Duty, UL/CSA Control Circuit R R 300 Light Pilot Duty, UL/CSA Control Circuit R
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF INPUTS (DIGITAL)	4 8
RATED BREAKING CAPACITY	200000 Operations at DC-13, 24 V DC, 1 A (500 C 300000 Operations at AC-15, 250 V AC, 3 A (600
CABLE LENGTH	100 m, unscreened, Digital inputs 12 V DC 100 m, unscreened, Digital inputs 24 V AC ≤ 30 m, screened, Analog inputs 100 m, unscreened, Digital inputs 24 V DC 40 m (max. per input), Digital inputs 24 V DC

10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
SAFE ISOLATION	300 V AC, Between coil and contact, According to 300 V AC, Between two contacts, According to EN
VOLTAGE DIPS	≤ 1 ms from rated voltage (12 V DC) 10 ms
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
USED WITH	easyE4
MOUNTING POSITION	Horizontal Vertical
SOFTWARE	EASYSOFT-SWLIC/easySoft7
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the inf instruction leaflet (IL) is observed.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
SAFETY PERFORMANCE LEVEL (EN ISO 13849-1)	None
RESOLUTION	• 1 min (Range H:M) • 1 s (Range M:S) • 12 Bit (value 0 - 4095, Analog inputs) • 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	20.4 VAC
UNINTERRUPTED CURRENT	1 A DC, at R 300 (UL/CSA) 5 A AC, max. thermal continuous current cos ϕ = 1 8 A DC, at 24 V DC (UL/CSA) 10 A AC, at 240 V AC (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	± 2 s/day, Real-time clock to inputs (± 0.2 h/Year) ± 2 %, (I7, I8) ± 0.12 V, of actual value, within a si Inputs) ± 1 %, Repetition accuracy of timing relays (of valu ± 3 %, of actual value, two easy devices (Analog Inp
	20 ms typ., Digital inputs 12 V DC (I1 - I8), Delay Debounce ON

DELAY TIME	20 ms typ., Digital inputs 24 V DC (I1 - I8), Delay Debounce ON 0.015 ms typ., Digital inputs 12 V DC (I1 - I8), De Debounce OFF 0.015 ms typ., Digital inputs 24 V DC (I1 - I8), De Debounce OFF 0.015 ms typ., Digital inputs 24 V DC (I1 - I8), De Debounce OFF 0.015 ms typ., Digital inputs 12 V DC (I1 - I8), De Debounce OFF 20 ms typ., Digital inputs 12 V DC (I1 - I8), Delay Debounce ON 20 ms typ., Digital inputs 24 V DC (I1 - I8), Delay Debounce ON
DATA TRANSFER RATE	10/100 MBit/s
NUMBER OF OUTPUTS (DIGITAL)	4
POWER CONSUMPTION	3 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	10,000,000 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	20.4 VAC
RAPID COUNTER INPUTS	-2147483648 - 2147483647 (value range) Number: 4 (I1, I2, I3, I4 - Digital inputs 24 V DC) ≤ 20 m (cable length, screened) 1:1 (Pulse pause ratio) Square (pulse shape) 10 kHz, Counter frequency
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	26.4 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 2 kV, Supply cable According to IEC/EN 61000-4-4
BASE TYPE	Yes

NUMBER OF INTERFACES (PROFINET)	0
RATED INSULATION VOLTAGE (UI)	240 V

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