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197507

Eaton Moeller® series EASY Control relays, easyE4 (expandable, Ethernet), 24 V DC, Inputs Digital: 8, of which can be used as analog: 4, push-in terminal

197505

Eaton Moeller® series EASY Control relays, easyE4 (expandable, Ethernet), 12/24 V DC, 24 V AC, Inputs Digital: 8, of which can be used as analog: 4, push-in terminal

197225

Eaton Moeller® series EASY 3 x Bus connector plug between base unit and expansion unit/bus module and 3 x end covers, For use with easyE4

197214

Eaton Moeller® series EASY Control relays, easyE4 (expandable, Ethernet), 24 V DC, Inputs Digital: 8, of which can be used as analog: 4, screw terminal

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GENERAL SPECIFICATIONS

General specifications

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PRODUCT NAME Eaton Moeller® series EASY I/O expansion

CATALOG NUMBER 197218

Product specifications

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MODEL CODE EASY-E4-UC-16RE1

EAN 4015080892793

PRODUCT LENGTH/DEPTH 58 mm

PRODUCT HEIGHT 90 mm

PRODUCT WIDTH 72 mm

PRODUCT WEIGHT 0.25 kg

CERTIFICATIONS

IEC/EN 61000-6-3
IEC 60068-2-27
IEC/EN 61000-6-2
IEC 60068-2-30
IEC/EN 61000-4-2
IEC/EN 61131-2
CSA-C22.2 No. 61010
IEC 60068-2-6
CULus per UL 61010
EN 50178
EN 61010
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

fitted with two controlled relays

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

24 V AC (-15 %/+10 % - power supply)
10.2 - 28.8 V DC
24 V DC (digital inputs)
Max. 300 V DC
12 V DC (digital inputs)
Max. 300 V AC
240 V AC
12/24 V DC (-15 %/+ 20 % - power supply)

	20.4 - 26.4 V AC 24 V AC (digital inputs)
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
MOUNTING METHOD	Top-hat rail fixing (according to IEC/EN 60715, 35) Wall mounting/direct mounting Screw fixing using fixing brackets ZB4-101-GF1 (ac) Front build in possible Rail mounting 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) 2 kV, Supply cables, asymmetrical, power pulses (S) According to IEC/EN 61000-4-5, power pulses (Sur)
FITTED WITH:	Relay output
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6 10 - 57 Hz, 0.15 mm constant amplitude 57 - 150 Hz, 2 g constant acceleration
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	5 A
SWITCHING FREQUENCY	10 Hz, Relay outputs 0.5 Hz, Inductive load, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs
FEATURES	Expansion device Expandable
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
NUMBER OF HW-INTERFACES (SERIAL TIY)	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/DC
CATEGORY (EN 954-1)	None
PRODUCT CATEGORY	Control relays easyE4

Between Digital inputs 24 V DC and base unit: yes

POTENTIAL ISOLATION	<p>Between Digital inputs 24 V DC and Outputs: yes</p> <p>Between Digital inputs 24 V DC and expansion dev</p> <p>Between Relay outputs and Inputs: yes</p> <p>Basic isolation: 600 V AC (Relay outputs)</p> <p>Safe isolation according to EN 50178: 300 V AC (R</p> <p>Between Digital inputs 24 V AC and base unit: yes</p> <p>Between Digital inputs 12 V DC and Outputs: yes</p> <p>Between Digital inputs 24 V AC and expansion dev</p> <p>Between Digital inputs 12 V DC and expansion dev</p> <p>Between Relay outputs and Power supply: yes</p> <p>Between Relay outputs and expansion devices: yes</p> <p>Between Digital inputs 12 V DC and base unit: yes</p> <p>Between Digital inputs 24 V AC and Outputs: yes</p> <p>Between Relay outputs: yes</p>
RADIO INTERFERENCE CLASS	Class B (EN 61000-6-3)
RESIDUAL RIPPLE	≤ 5 %
INDICATION	<p>LCD-display base unit used as status indication of DC</p> <p>LCD-display base unit used as status indication of DC</p>
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 NO. 61010-2-201
OUTPUT	<p>8 Relay Outputs</p> <p>Relay outputs in groups of 1</p> <p>> 500 mA (Relay outputs, Recommended for load:</p> <p>Voltage</p> <p>Current</p>
ELECTROMAGNETIC FIELDS	<p>10 V/m at 0.8 - 1.0 GHz (according to IEC EN 61000-3-2)</p> <p>3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-3-2)</p> <p>1 V/m at 2.0 - 2.7 GHz (according to IEC EN 61000-3-2)</p>
CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	5 A
PROTOCOL	<p>MODBUS</p> <p>TCP/IP</p>
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	<p>Condition 1: ≥ 15 V DC (I1 - I8, Digital inputs, 24 V DC)</p> <p>Signal 0: ≤ 5 V DC (I1 - I4, Digital inputs, 12 V DC)</p> <p>At signal 0: ≤ 5 V (I1 - I8, sinusoidal, Digital input)</p> <p>At signal 1: ≥ 15 V (I1 - I8, sinusoidal, Digital input)</p>

Signal 0: ≤ 5 V DC (I1 - I8, Digital inputs, 24 V DC)
 Status 0: ≤ 15 V DC (I1 - I4, Digital inputs, 24 V DC)

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 extension
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	Clearance in air and creepage distances according to 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61 Condensation: prevent with appropriate measures
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	3.3 mA (I5 - I8, at 24 V DC, at signal 1) 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)	0
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	10.2 VDC
NUMBER OF HW-INTERFACES (WIRELESS)	0
	25,000 Operations (Filament bulb load at 500 W, 1 25,000 Operations (Filament bulb load at 1000 W, 25,000 Operations (Fluorescent lamp load 10 x 58 W)

LIFESPAN, ELECTRICAL	with upstream electrical device) 25,000 Operations (Fluorescent lamp load 10 x 58 W uncompensated) 25,000 Operations (Fluorescent lamp load 1 x 58 W conventional, compensated)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	3 W
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	B 300 Light Pilot Duty, UL/CSA Control Circuit I R 300 Light Pilot Duty, UL/CSA Control Circuit I
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF INPUTS (DIGITAL)	8
RATED BREAKING CAPACITY	300000 Operations at AC-15, 250 V AC, 3 A (600 200000 Operations at DC-13, 24 V DC, 1 A (500 C
CABLE LENGTH	100 m, unscreened, Digital inputs 12 V DC 100 m, unscreened, Digital inputs 24 V AC 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 two contacts, According to EN 300 V AC, Between coil and contact, According to
VOLTAGE DIPS	≤ 1 ms from rated voltage (12 V DC) 10 ms
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
MOUNTING POSITION	Vertical Horizontal
SOFTWARE	EASYSOFT-SWLIC/easySof7
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
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	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 $\cos \phi = 1$
HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX	0.3 m

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	2 W
NUMBER OF OUTPUTS (ANALOG)	0
AIR DISCHARGE	8 kV
NUMBER OF HW-INTERFACES (USB)	0
DELAY TIME	0.1 ms typ., Digital inputs 24 V DC (I1 - I8), Delay Debounce OFF 20 ms, Digital Inputs 12 V DC, Delay time from 1 0.2 ms typ., Digital inputs 24 V DC (I1 - I8), Delay Debounce OFF 20 ms, Digital Inputs 12 V DC, Delay time from 0 0.2 ms typ., Digital inputs 12 V DC (I1 - I8), Delay Debounce OFF 0.15 ms typ., Digital inputs 12 V DC (I1 - I8), Del Debounce OFF
NUMBER OF OUTPUTS (DIGITAL)	8
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
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	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	According to IEC/EN 61000-4-4 2 kV, Supply cable 2 kV, Signal cable
BASE TYPE	No
NUMBER OF INTERFACES (PROFINET)	0
RATED INSULATION VOLTAGE (UI)	240 V



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