Eaton 197216

Eaton Moeller® series EASY Control relays, easyE4 (expandable, Ethernet), 100 - 240 V AC, 110 - 220 V DC (cULus: 100 - 110 V DC), Inputs Digital: 8, screw terminal

PRODUCT NAME	Eaton Moeller® series EASY Control relay
CATALOG NUMBER	197216
PRODUCT LENGTH/DEPTH	58 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	72 mm
PRODUCT WEIGHT	0.25 kg
COMPLIANCES	Eaton supports the product until its end of life
CERTIFICATIONS	CULus per UL 61010 IEC 60068-2-30 IEC/EN 61000-4-2 IEC/EN 61131-2 EN 61010 IEC 60068-2-27 EN 50178 IEC 60068-2-6 IEC/EN 61000-6-2 CSA-C22.2 No. 61010 IEC 60664 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

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	group C (ethylene) UL hazardous location group D (propane)
CATALOG NOTES	Accuracy of the real-time clock depending on ambient air temperature - fluctuations of up to ± 5 s/day (± 0.5 h/year) are possible

USED WITH	easyE4
TYPE	easyE4 base device
FEATURES	Expandable Networkable (Ethernet)
AIR DISCHARGE	8 kV
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.
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.

CHARACTERISTIC CURVE	eaton-electrical-timers-easy-control-relays-characteristic-curve-002.eps
INSTALLATION VIDEOS	Video easy E4 control relay
	eaton-logic-relays-easy-control-relays-dimensions.eps eaton-modular-plc-easy-control-relays-3d-drawing-002.eps

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.
CABLE TYPE	CAT5
FITTED WITH:	Timer Real time clock Relay output
FREQUENCY RATING	6.5 Hz
POLLUTION DEGREE	2
ACCURACY	± 1 %, Repetition accuracy of timing relays (of values) ± 2 s/day, Real-time clock to inputs (± 0.2 h/Year)
BURST IMPULSE	2 kV, Supply cable According to IEC/EN 61000-4-4 2 kV, Signal cable
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6 kV (contact-coil)
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
AIR PRESSURE	795 - 1080 hPa (operation)
CATEGORY (EN 954-1)	None
EXPLOSION SAFETY CATEGORY FOR DUST	None
ENVIRONMENTAL	Clearance in air and

CONDITIONS	creepage distances according to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201 Condensation: prevent with appropriate measures
INDICATION	LCD-display used as status indication of Digital inputs 115/230 V AC
EXPLOSION SAFETY CATEGORY FOR GAS	None
MOUNTING METHOD	Front build in possible Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Wall mounting/direct mounting Rail mounting possible Screw fixing using fixing brackets ZB4-101-GF1 (accessories)
SCREWDRIVER SIZE	3.5 x 0.8 mm, Terminal screw
VOLTAGE TYPE	AC
MOUNTING POSITION	Horizontal Vertical
OUTPUT	Relay outputs in groups of 1 4 Relay Outputs > 500 mA (Relay outputs, Recommended for load: 12 V AC/DC) Voltage Current
CONTACT DISCHARGE	6 kV
BASE TYPE	Yes
SAFETY PERFORMANCE LEVEL (EN ISO 13849-1)	None
SIL (IEC 61508)	None
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CONVENTIONAL	8 A

THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	
DISPLAY TEMPERATURE - MAX	55 °C
DISPLAY TEMPERATURE - MIN	0 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	4 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX	0.3 m
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	1
NUMBER OF HW-INTERFACES (OTHER)	0
NUMBER OF HW-INTERFACES (PARALLEL)	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 (WIRELESS)	0
OVERVOLTAGE CATEGORY	III
SOFTWARE	EASYSOFT-SWLIC/easySoft
SURGE RATING	According to IEC/EN 61000-4-5, power pulses (Surge), EMC 1 kV, Supply cables, symmetrical, power pulses (Surge), EMC 2 kV, Supply cables, asymmetrical, power pulses (Surge), EMC
CABLE LENGTH	100 m (max. permissible

	per input I7 to I8), Digital inputs 115/230 V AC 40 m (max. permissible per input I1 to I6), Digital inputs 115/230 V AC
ELECTROMAGNETIC FIELDS	1 V/m at 2.0 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.8 - 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)
PROTECTION AGAINST POLARITY REVERSAL	Yes, for supply voltage (Siemens MPI optional)
NUMBER OF INPUTS (ANALOG)	0
CONNECTION TYPE	Screw terminal Ethernet: RJ45 plug, 8-pole
DROP AND TOPPLE	50 mm Drop height, Drop to IEC/EN 60068-2-31
IMMUNITY TO LINE-CONDUCTED INTERFERENCE	10 V (according to IEC/EN 61000-4-6)
RADIO INTERFERENCE CLASS	Class B (EN 61000-6-3)
NUMBER OF OUTPUTS (DIGITAL)	4
DATA TRANSFER RATE	10/100 MBit/s
RELATIVE HUMIDITY	5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
DEGREE OF PROTECTION	IP20
SAFE ISOLATION	300 V AC, Between coil and contact, According to EN 50178 300 V AC, Between two contacts, According to EN 50178
DELAY TIME	20 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8), Delay time from 0 to 1, Debounce ON 20 ms, Digital inputs 115/230 V AC 50 Hz (I7, I8), Delay time from 1 to 0, Debounce OFF 20 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8), Delay time from 1 to 0, Debounce ON

	21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I8), Delay time from 0 to 1, Debounce OFF 21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I8), Delay time from 1 to 0, Debounce OFF 16⅔ ms, Digital inputs 115/230 V AC 60 Hz (I7, I8), Delay time from 1 to 0, Debounce OFF 0.03 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8), Delay time from 0 to 1, Debounce OFF 0.03 ms typ., Digital Inputs 100 - 240 V DC (I1 - I8), Delay time from 1 to 0, Debounce OFF
PROTOCOL	MODBUS TCP/IP
RESIDUAL RIPPLE	≤ 5 %
INRUSH CURRENT	12.5 A (for 6 ms)
SUPPLY FREQUENCY	50/60 Hz (± 5%)
INSULATION RESISTANCE	According to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6 10 - 57 Hz, 0.15 mm constant amplitude 57 - 150 Hz, 2 g constant acceleration
INPUT CURRENT	6 x 0.5 mA (I1 - I6, at 230 V AC, 50 Hz, at signal 1) 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 0.25 mA (I1 - I8, at 115 V AC, 60 Hz, at signal 1)
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 18 Impacts
INPUT FREQUENCY	50/60 Hz (Digital inputs, at 115/230 V AC) 50/60 Hz (Digital inputs, at

	24 V DC)
INPUT VOLTAGE	Condition 0: 0 - 40 V AC, Digital inputs, 115/230 V AC) Condition 1: 79 - 264 V AC, Digital inputs, 115/230 V AC)
RATED BREAKING CAPACITY	300000 Operations at AC-15, 250 V AC, 3 A (600 Ops./h) 200000 Operations at DC-13, 24 V DC, 1 A (500 Ops./h)
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, 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) 25,000 Operations (Fluorescent lamp load 10 x 58 W at 230/240 V AC, with upstream electrical device)
LED INDICATOR	Status indication of Ethernet: LED Status indication of Power/RUN
LIFESPAN, MECHANICAL	1,000,000 Operations
MAKING/BREAKING CAPACITY	28/28 VA (DC, at R 300) 3600/360 VA (AC, at B 300)
PARALLEL SWITCHING	Not permitted
POTENTIAL ISOLATION	Between Relay outputs and Ethernet: yes Between Digital inputs 115/230 V AC: no Between Digital inputs 115/230 V AC and base unit: yes Between Relay outputs and expansion devices: yes Basic isolation: 600 V AC (Relay outputs)

	Between Digital inputs 115/230 V AC and Outputs: yes Between Relay outputs and Inputs: yes Between Digital inputs 115/230 V AC and expansion devices: yes Between Digital inputs 115/230 V AC and Memory card: no Between Digital inputs 115/230 V AC and Ethernet: yes Between Digital inputs 115/230 V AC and Power supply: no Safe isolation according to EN 50178: 300 V AC (Relay outputs) Between Relay outputs and Power supply: yes Between Relay outputs: yes Between Digital inputs 115/230 V AC and Interface: yes
NUMBER OF INPUTS (DIGITAL)	8
POWER LOSS	10 W
VOLTAGE DIPS	10 ms
UNINTERRUPTED CURRENT	8 A AC, at 240 V AC (UL/CSA) 1 A DC, at R 300 (UL/CSA) 8 A DC, at 24 V DC (UL/CSA) 5 A AC, max. thermal continuous current cos ϕ = 1 at B 300 (UL/CSA)
NUMBER OF INTERFACES (PROFINET)	0
NUMBER OF OUTPUTS (ANALOG)	0
RATED INSULATION VOLTAGE (UI)	240 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	4 W
SUPPLY VOLTAGE AT AC,	264 VAC

50 HZ - MAX	
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	85 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	264 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	85 VAC
SUPPLY VOLTAGE AT DC - MAX	264 VDC
SUPPLY VOLTAGE AT DC - MIN	85 VDC
SWITCHING CURRENT	8 A
PRODUCT CATEGORY	Control relays easyE4
PROTECTION	B16 circuit breaker or 8 A (T) fuse, Protection of an Output relay
RESOLUTION	• 1 min (Range H:M) • 1 s (Range M:S) • 5 ms (Range S)
POWER CONSUMPTION	4 W
RATED OPERATIONAL VOLTAGE	110/120 V DC (power supply) Max. 300 V DC Max. 300 V AC 100/110/115/120/230/240 AC (-15 %/+10 %) 85 - 264 V AC 240 V AC
SHORT-CIRCUIT PROTECTION	≥ 1A (T), Fuse, Power supply
SWITCHING FREQUENCY	10 Hz, Relay outputs 2 Hz, Resistive load/lamp load, Relay outputs 0.5 Hz, Inductive load, Relay outputs
TERMINAL CAPACITY	0.2 - 2.5 mm^2 (22 - 12 AWG), flexible with ferrule 0.2 - 4 mm^2 (AWG 22 - 12), solid
TIGHTENING TORQUE	0.6 Nm, Screw terminals

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	

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