Eaton 197221

Eaton Moeller® series EASY I/O expansion, For use with easyE4, 100 - 240 V AC, 110 - 220 V DC (cULus: 100-110 V DC), Inputs expansion (number) digital: 4, screw terminal

PRODUCT NAME	Eaton Moeller® series EASY I/O expansion
CATALOG NUMBER	197221
PRODUCT LENGTH/DEPTH	58 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	36 mm
PRODUCT WEIGHT	0.125 kg
CERTIFICATIONS	IEC/EN 61000-4-2 CULus per UL 61010 EN 61010 IEC 60068-2-30 IEC 60068-2-6 IEC 60664 IEC/EN 61000-6-3 EN 50178 IEC 60068-2-27 IEC/EN 61131-2 CSA-C22.2 No. 61010 IEC/EN 61000-6-2 UL Listed UL Category Control No.: NRAQ, NRAQ7 UL File No.: E205091 DNV GL CE UL hazardous location group C (ethylene) UL hazardous location class I UL hazardous location division 2 UL hazardous location group B (hydrogen) UL hazardous location group A (acetylene) UL hazardous location group D (propane)
CATALOG NOTES	fitted with two controlled

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relays

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TYPE	easyE4 extension
FEATURES	Expandable Expansion device
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.
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
10.5 PROTECTION AGAINST ELECTRIC	Does not apply, since the entire switchgear needs to

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DECLARATIONS OF CONFORMITY	eaton-control-relay-declaration-of-conformity-uk251131en.pdf
INSTALLATION VIDEOS	Video easy E4 control relay
□□	eaton-modular-plc-easy-i-o-expansion-dimensions.eps eaton-modular-plc-easy-i-o-expansion-3d-drawing-002.eps

SHOCK	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.
FITTED WITH:	Relay output
FREQUENCY RATING	6.5 Hz
POLLUTION DEGREE	2
BURST IMPULSE	2 kV, Signal cable 2 kV, Supply cable According to IEC/EN 61000-4-4
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 CONDITIONS	Condensation: prevent with appropriate measures Clearance in air and creepage distances according to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
EXPLOSION SAFETY CATEGORY FOR GAS	None
MOUNTING METHOD	Front build in possible Rail mounting possible Screw fixing using fixing brackets ZB4-101-GF1

	(accessories) Wall mounting/direct mounting Top-hat rail fixing (according to IEC/EN 60715, 35 mm)
SCREWDRIVER SIZE	3.5 x 0.8 mm, Terminal screw
VOLTAGE TYPE	AC
MOUNTING POSITION	Vertical Horizontal
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	No
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 THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	5 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	1 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)	0
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 per input (I1 - I4, debounce ON), Digital inputs 115/230 V AC ≤ 60 m per input (I1 - I4), Digital inputs 115/230 V AC 40 m (max. permissible per input R1 to R12), 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
DROP AND TOPPLE	50 mm Drop height, Drop to IEC/EN 60068-2-31
IMMUNITY TO LINE-	10 V (according to IEC/EN

CONDUCTED INTERFERENCE	61000-4-6)
RADIO INTERFERENCE CLASS	Class B (EN 61000-6-3)
NUMBER OF OUTPUTS (DIGITAL)	4
RELATIVE HUMIDITY	5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
DEGREE OF PROTECTION	IP20
SAFE ISOLATION	300 V AC, Between two contacts, According to EN 50178 300 V AC, Between coil and contact, According to EN 50178
DELAY TIME	25 ms typ., Digital Inputs 100 - 240 V AC 50 Hz (I1 - I4), Delay time from 0 to 1, Debounce OFF 21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I4), Delay time from 0 to 1, Debounce OFF 0.5 ms typ., Digital Inputs 100 - 240 V DC (I1 - I4), Delay time from 1 to 0, Debounce OFF 0.5 ms typ., Digital Inputs 100 - 240 V DC (I1 - I4), Delay time from 0 to 1, Debounce OFF 21 ms typ., Digital Inputs 100 - 240 V AC 60 Hz (I1 - I4), Delay time from 1 to 0, Debounce OFF 25 ms typ., Digital Inputs 100 - 240 V AC 50 Hz (I1 - I4), 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	57 - 150 Hz, 2 g constant acceleration 10 - 57 Hz, 0.15 mm constant amplitude According to IEC/EN 60068-2-6

INPUT CURRENT	6 x 0.5 mA (I1 - I4, at 230 V AC, 50 Hz, at signal 1) 4 x 0.2 mA (I9 - I12, 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 1: 79 - 264 V AC, Digital inputs, 115/230 V AC) Condition 0: 0 - 40 V AC, Digital inputs, 115/230 V AC)
RATED BREAKING CAPACITY	200000 Operations at DC-13, 24 V DC, 1 A (500 Ops./h) 300000 Operations at AC-15, 250 V AC, 3 A (600 Ops./h)
LIFESPAN, ELECTRICAL	25,000 Operations (Fluorescent lamp load 10 x 58 W at 230/240 V AC, with upstream electrical device) 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 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)
LIFESPAN, MECHANICAL	1,000,000 Operations
MAKING/BREAKING CAPACITY	3600/360 VA (AC, at B 300) 28/28 VA (DC, at R 300)
PARALLEL SWITCHING	Not permitted
POTENTIAL ISOLATION	Between Digital inputs 115/230 V AC and base unit: yes Basic isolation: 600 V AC (Relay outputs) Between Relay outputs and expansion devices:

	yes Between Relay outputs and Power supply: yes Between Relay 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 Outputs: yes Between Digital inputs 115/230 V AC: no Between Digital inputs 115/230 V AC and Power supply: no Safe isolation according to EN 50178: 300 V AC (Relay outputs)
NUMBER OF INPUTS (DIGITAL)	4
VOLTAGE DIPS	10 ms
UNINTERRUPTED CURRENT	8 A AC, at 240 V AC (UL/CSA) 1 A DC, at R 300 (UL/CSA) 5 A AC, max. thermal continuous current cos ϕ = 1 at B 300 (UL/CSA) 8 A DC, at 24 V DC (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	3 W
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	264 VAC
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 -	264 VDC

MAX	
SUPPLY VOLTAGE AT DC - MIN	85 VDC
SWITCHING CURRENT	5 A
PRODUCT CATEGORY	Control relays easyE4
PROTECTION	B16 circuit breaker or 8 A (T) fuse, Protection of an Output relay
POWER CONSUMPTION	3 W
RATED OPERATIONAL VOLTAGE	100/110/115/120/230/240 AC (-15 %/+10 %) 240 V AC Max. 300 V DC 85 - 264 V AC 110/120 V DC (power supply) Max. 300 V AC
SHORT-CIRCUIT PROTECTION	≥ 1A (T), Fuse, Power supply
SWITCHING FREQUENCY	2 Hz, Resistive load/lamp load, Relay outputs 10 Hz, Relay outputs 0.5 Hz, Inductive load, Relay outputs
TERMINAL CAPACITY	0.2 - 4 mm² (AWG 22 - 12), solid 0.2 - 2.5 mm² (22 - 12 AWG), flexible with ferrule
TIGHTENING TORQUE	0.6 Nm, Screw terminals

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
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