Eaton 197512

Eaton Moeller® series EASY I/O expansion, For use with easyE4, 24 V DC, Inputs/Outputs expansion (number) digital: 4, Push-In

PRODUCT NAME	Eaton Moeller® series EASY I/O expansion
CATALOG NUMBER	197512
PRODUCT LENGTH/DEPTH	58 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	36 mm
PRODUCT WEIGHT	0.1 kg
CERTIFICATIONS	UL Listed UL Category Control No.: NRAQ, NRAQ7 IEC/EN 61000-4-2 IEC/EN 61131-2 IEC 60068-2-6 IEC 60068-2-30 IEC 60068-2-27 EN 61010 IEC/EN 61000-6-3 IEC/EN 61000-6-2 EN 50178 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) UL hazardous location class I UL hazardous location

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	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)

USED WITH	easyE4
TYPE	easyE4 extension
FEATURES	Parallel connection of transistor outputs with resistive load, inductive load with external suppressor circuit, combination within a group - Group 1 Q1 to Q4
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

INSTALLATION VIDEOS	Video easy E4 control relay
	eaton-modular-plc-easy-i-o-expansion-dimensions.eps eaton-general-easy-control-relays-symbol-002.tif eaton-modular-plc-easy-i-o-expansion-3d-drawing-002.eps

	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 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.
OPERATING FREQUENCY	Dependent on the cycle time of the basic device
POLLUTION DEGREE	2
BURST IMPULSE	2 kV, Signal cable 2 kV, Supply cable According to IEC/EN 61000-4-4
AIR PRESSURE	795 - 1080 hPa (operation)
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
OUTPUT VOLTAGE	Max. 2.5 V (at status 0 per channel, transistor outputs) $U = U_e$ - 1 V (signal 1 at I_e = 0.5 A, transistor outputs)
EXPLOSION SAFETY	None

CATEGORY FOR GAS	
MOUNTING METHOD	Rail mounting possible
VOLTAGE TYPE	DC
MOUNTING POSITION	Horizontal Vertical
OUTPUT	Voltage Current 4 Transistor Outputs
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)	0.5 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 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-	0

INTERFACES (RS-485)	
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	0.5 kV, Supply cables, symmetrical, EASY...DC, power pulses (Surge), EMC 1 kV, Supply cables, asymmetrical, power pulses (Surge), EMC According to IEC/EN 61000-4-5 Level 4
CABLE LENGTH	100 m, unscreened, Digital inputs 12 V DC 100 m, unscreened, Digital inputs 24 V AC
ELECTROMAGNETIC FIELDS	1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.08 - 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 (Caution: A short circuit will result if 0 V or earth is applied to the outputs in the event that the supply voltage is connected to the wrong poles.)
NUMBER OF INPUTS (ANALOG)	0
CONNECTION TYPE	Push in terminals
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	4

(DIGITAL)	
RELATIVE HUMIDITY	5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
DEGREE OF PROTECTION	IP20
DELAY TIME	20 ms, Digital Inputs 12 V DC, Delay time from 0 to 1, Debounce ON 20 ms, Digital Inputs 12 V DC, Delay time from 1 to 0, Debounce ON 0.1 ms typ., Digital inputs 24 V DC (I1 - I4), Delay time from 0 to 1, Debounce OFF 0.2 ms typ., Digital inputs 24 V DC (I1 - I4), Delay time from 1 to 0, Debounce OFF 0.015 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 1 to 0, Debounce OFF 0.015 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 0 to 1, Debounce OFF
RESIDUAL CURRENT	0.1 mA (on signal "1" per channel)
PROTOCOL	MODBUS
RESIDUAL RIPPLE	5 % (transistor outputs) ≤ 5 %
RATED OPERATIONAL CURRENT (IE)	Max. 0.5 A at signal „1” DC per channel
INSULATION RESISTANCE	According to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
FUNCTIONS	Thermal cutout
SHORT-CIRCUIT CURRENT	6.8 A, Transistor outputs
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	40 mA
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 18 Impacts

INPUT VOLTAGE	Status 0: ≤ 15 V DC (I1 - I4, Digital inputs, 24 V DC) Signal 0: ≤ 5 V DC (I1 - I4, Digital inputs, 12 V DC)
SHORT-CIRCUIT TRIPPING CURRENT	0.7 ≤ Ie ≤ 1.7 per output, For Ra ≤ 10 mΩ, Depending on number of active channels and their load, Transistor outputs
POTENTIAL ISOLATION	Between Analog inputs and Digital inputs: no
NUMBER OF INPUTS (DIGITAL)	4
POWER LOSS	1 W
VOLTAGE DIPS	≤ 10 ms, Bridging voltage dips
NUMBER OF INTERFACES (PROFINET)	0
NUMBER OF OUTPUTS (ANALOG)	0
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1 W
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
SUPPLY VOLTAGE AT DC - MIN	20.4 VDC
SWITCHING CURRENT	0.5 A
PRODUCT CATEGORY	Control relays easyE4
POWER CONSUMPTION	1 W
RATED OPERATIONAL VOLTAGE	20.4 - 28.8 V DC 20.4 - 28.8 V DC (Transistor outputs) 24 V DC (-15 %/+ 20 % - power supply) 24 V DC (transistor outputs) 24 V DC (digital inputs)
SHORT-CIRCUIT PROTECTION	≥ 1A (T), Fuse, Power supply

	Yes, electronic (Q1 - Q4), Transistor outputs
TERMINAL CAPACITY	0.2 - 2.5 mm^2 (22 - 12 AWG), flexible with ferrule

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
:

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