Eaton 197224

Eaton Moeller® series EASY I/O expansion, For use with easyE4, 24 V DC, Inputs expansion (number) analog: 4, screw terminal EASY-E4-DC-4PE1

| PRODUCT NAME | Eaton Moeller® series EASY I/O expansion |
|-------------------------|---|
| CATALOG NUMBER | 197224 |
| PRODUCT LENGTH/DEPTH | 58 mm |
| PRODUCT HEIGHT | 90 mm |
| PRODUCT WIDTH | 36 mm |
| PRODUCT WEIGHT | 0.1 kg |
| CERTIFICATIONS | IEC/EN 61000-6-3 IEC 60068-2-30 CULus per UL 61010 IEC/EN 61131-2 IEC 60068-2-6 IEC 60068-2-7 IEC/EN 61000-6-2 EN 61010 EN 50178 CSA-C22.2 No. 61010 IEC 60664 IEC/EN 61000-4-2 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 C (ethylene) UL hazardous location |



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)

| ТҮРЕ | easyE4 extension |
|---|---|
| FEATURES | Additional measurement aids: Filtering (software), smoothing of analog input signal (PT1 behavior), only with set sampling time, selectable per sensor: yes Expandable Expansion device Measuring principle: Two or three wire per sensor, selectable by connection of sensor |
| 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 | ls the panel builder's responsibility. |
| 10.12 ELECTROMAGNETIC COMPATIBILITY | ls 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. |

| INSTALLATION VIDEOS | <u>Video easy E4 control relay</u> |
|---------------------|---|
| | TT-197224 EASY-E4-DC- 4PE1-de DE |
| | eaton-modular-plc-easy-i- o-expansion-dimensions- 002.eps |
| | eaton-modular-plc-easy-i- o-expansion-3d-drawing- 002.eps |
| | |

| 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 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 | ls the panel builder's responsibility. |
| 10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS | ls the panel builder's responsibility. |
| 10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH | ls 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 | ls the panel builder's responsibility. |
| POLLUTION DEGREE | 2 |
| BURST IMPULSE | 2 kV, Signal cable According to IEC/EN 61000-4-4 2 kV, Supply cable |
| 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 |
| INPUT | Input type resistance sensor: Platinum sensor Pt100 (according to DIN |

| | EN 60751, IEC 751) Input type resistance sensor: Nickel sensor Ni1000 (according to DIN 43760) |
|--|--|
| EXPLOSION SAFETY CATEGORY FOR GAS | None |
| MOUNTING METHOD | Rail mounting possible Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Wall mounting/direct mounting Screw fixing using fixing brackets ZB4-101-GF1 (accessories) Front build in possible |
| SCREWDRIVER SIZE | 3.5 x 0.8 mm, Terminal screw |
| VOLTAGE TYPE | DC |
| MOUNTING POSITION | Horizontal Vertical |
| 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 |
| 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- | 0 |
| | |

| INTERFACES (OTHER) | |
|--|--|
| 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 0.5 kV, Supply cables, symmetrical, EASYDC, power pulses (Surge), EMC 1 kV, Supply cables, asymmetrical, power |
| CABLE LENGTH | pulses (Surge), EMC ≤ 30 m, unscreened, Analog inputs temperature resistance Pt100 or Ni1000 sensors |
| ELECTROMAGNETIC FIELDS | 10 V/m at 0.8 - 1.0 GHz (according to IEC EN 61000-4-3) 1 V/m at 2.0 - 2.7 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 | 4 |
| (ANALOG) | |
| (ANALOG) CONNECTION TYPE | Screw terminal |
| | Screw terminal 50 mm Drop height, Drop to IEC/EN 60068-2-31 |

| INTERFERENCE | |
|---------------------------------|--|
| RADIO INTERFERENCE CLASS | Class B (EN 61000-6-3) |
| NUMBER OF OUTPUTS (DIGITAL) | 0 |
| RELATIVE HUMIDITY | 5 - 95 % (IEC 60068-2-30, IEC 60068-2-78) |
| DEGREE OF PROTECTION | IP20 |
| PROTOCOL | TCP/IP MODBUS |
| RESIDUAL RIPPLE | ≤ 5 % |
| INRUSH CURRENT | 12.5 A (for 6 ms) |
| INSULATION RESISTANCE | According to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201 |
| HEAT DISSIPATION | 3.4 W (at 24 V DC) |
| FUNCTIONS | Card diagnostic Diagnostics below lower measurement range |
| 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 |
| POTENTIAL ISOLATION | Between Analog inputs PT100 or Ni1000 and Power supply: no Between Analog inputs PT100 or Ni1000 and expansion units: yes Between Analog inputs PT100 or Ni1000 and Inputs: no |
| NUMBER OF INPUTS (DIGITAL) | 0 |
| POWER LOSS | 1 W |
| VOLTAGE DIPS | 20 ms ≤ 10 ms, Bridging voltage dips |
| NUMBER OF INTERFACES (PROFINET) | 0 |

| NUMBER OF OUTPUTS (ANALOG) | 0 |
|---|--|
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 0 A |
| 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 A |
| PRODUCT CATEGORY | Control relays easyE4 |
| RESOLUTION | 12 Bit (0- 4095, digital, scaling per sensor) |
| POWER CONSUMPTION | 1 W |
| RATED OPERATIONAL VOLTAGE | 24 V DC (-15 %/+ 20 % - power supply) 20.4 - 28.8 V DC |
| SHORT-CIRCUIT PROTECTION | ≥ 1A (T), Fuse, Power supply |
| 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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