



On-Off switch, P1, 25 A, surface mounting, 3 pole, Emergency switching off function, with red thumb grip and yellow front plate

Part no. P1-25/I2-RT  
207300

|                                                |  |                                                                                                                                                                                                                                            |
|------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General specifications                         |  |                                                                                                                                                                                                                                            |
| Product name                                   |  | Eaton Moeller® series P1 On-off switch                                                                                                                                                                                                     |
| Part no.                                       |  | P1-25/I2-RT                                                                                                                                                                                                                                |
| EAN                                            |  | 4015082073008                                                                                                                                                                                                                              |
| Product Length/Depth                           |  | 107 millimetre                                                                                                                                                                                                                             |
| Product height                                 |  | 180 millimetre                                                                                                                                                                                                                             |
| Product width                                  |  | 100 millimetre                                                                                                                                                                                                                             |
| Product weight                                 |  | 0.43 kilogram                                                                                                                                                                                                                              |
| Certifications                                 |  | IEC/EN 60947-3<br>IEC/EN 60947<br>IEC/EN 60204<br>CSA<br>VDE 0660<br>UL                                                                                                                                                                    |
| Product Tradename                              |  | P1                                                                                                                                                                                                                                         |
| Product Type                                   |  | On-off switch                                                                                                                                                                                                                              |
| Product Sub Type                               |  | None                                                                                                                                                                                                                                       |
| Catalog Notes                                  |  | Rated Short-time Withstand Current (Icw) for a time of 1 second                                                                                                                                                                            |
| Features & Functions                           |  |                                                                                                                                                                                                                                            |
| Features                                       |  | Version as emergency stop installation                                                                                                                                                                                                     |
| Fitted with:                                   |  | Red thumb grip and yellow front plate                                                                                                                                                                                                      |
| Functions                                      |  | Emergency switching off function                                                                                                                                                                                                           |
| Number of poles                                |  | Three-pole                                                                                                                                                                                                                                 |
| General information                            |  |                                                                                                                                                                                                                                            |
| Accessories                                    |  | Auxiliary contact or neutral conductor fitted by user.                                                                                                                                                                                     |
| Degree of protection                           |  | NEMA 12                                                                                                                                                                                                                                    |
| Degree of protection (front side)              |  | IP65                                                                                                                                                                                                                                       |
| Lifespan, mechanical                           |  | 300,000 Operations                                                                                                                                                                                                                         |
| Mounting method                                |  | Surface mounting                                                                                                                                                                                                                           |
| Mounting position                              |  | As required                                                                                                                                                                                                                                |
| Operating frequency                            |  | 1200 Operations/h                                                                                                                                                                                                                          |
| Overvoltage category                           |  | III                                                                                                                                                                                                                                        |
| Pollution degree                               |  | 3                                                                                                                                                                                                                                          |
| Rated impulse withstand voltage (Uimp)         |  | 6000 V AC                                                                                                                                                                                                                                  |
| Safe isolation                                 |  | 440 V AC, Between the contacts, According to EN 61140                                                                                                                                                                                      |
| Safety parameter (EN ISO 13849-1)              |  | B10d values as per EN ISO 13849-1, table C.1                                                                                                                                                                                               |
| Shock resistance                               |  | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms                                                                                                                                                              |
| Suitable for                                   |  | Ground mounting                                                                                                                                                                                                                            |
| Climatic environmental conditions              |  |                                                                                                                                                                                                                                            |
| Ambient operating temperature - min            |  | -25 °C                                                                                                                                                                                                                                     |
| Ambient operating temperature - max            |  | 40 °C                                                                                                                                                                                                                                      |
| Ambient operating temperature (enclosed) - min |  | -25 °C                                                                                                                                                                                                                                     |
| Ambient operating temperature (enclosed) - max |  | 40 °C                                                                                                                                                                                                                                      |
| Climatic proofing                              |  | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78                                                                                                                                                             |
| Terminal capacities                            |  |                                                                                                                                                                                                                                            |
| Terminal capacity                              |  | 2 x (1.5 - 6) mm², solid or stranded<br>2 x (1 - 4) mm², flexible with ferrules to DIN 46228<br>14 - 8 AWG, solid or flexible with ferrule<br>1 x (1.5 - 6) mm², solid or stranded<br>1 x (1 - 4) mm², flexible with ferrules to DIN 46228 |

|                                                                        |  |                                                                                                                                                                                                           |
|------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Screw size                                                             |  | M4, Terminal screw                                                                                                                                                                                        |
| Tightening torque                                                      |  | 1.6 Nm, Screw terminals<br>14.1 lb-in, Screw terminals                                                                                                                                                    |
| <b>Electrical rating</b>                                               |  |                                                                                                                                                                                                           |
| Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)          |  | 190 A                                                                                                                                                                                                     |
| Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)          |  | 150 A                                                                                                                                                                                                     |
| Rated breaking capacity at 500 V (cos phi to IEC 60947-3)              |  | 170 A                                                                                                                                                                                                     |
| Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)          |  | 150 A                                                                                                                                                                                                     |
| Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V            |  | 19.6 A                                                                                                                                                                                                    |
| Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V            |  | 15.2 A                                                                                                                                                                                                    |
| Rated operational current (Ie) at AC-3, 500 V                          |  | 12.1 A                                                                                                                                                                                                    |
| Rated operational current (Ie) at AC-3, 660 V, 690 V                   |  | 8.8 A                                                                                                                                                                                                     |
| Rated operational current (Ie) at AC-21, 440 V                         |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at AC-23A, 230 V                        |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at AC-23A, 400 V, 415 V                 |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at AC-23A, 500 V                        |  | 17.4 A                                                                                                                                                                                                    |
| Rated operational current (Ie) at AC-23A, 690 V                        |  | 12.6 A                                                                                                                                                                                                    |
| Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at DC-23A, 24 V                         |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at DC-23A, 48 V                         |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at DC-23A, 60 V                         |  | 25 A                                                                                                                                                                                                      |
| Rated operational current (Ie) at DC-23A, 120 V                        |  | 12 A                                                                                                                                                                                                      |
| Rated operational power at AC-3, 380/400 V, 50 Hz                      |  | 7.5 kW                                                                                                                                                                                                    |
| Rated operational power at AC-3, 415 V, 50 Hz                          |  | 7.5 kW                                                                                                                                                                                                    |
| Rated operational power at AC-3, 500 V, 50 Hz                          |  | 7.5 kW                                                                                                                                                                                                    |
| Rated operational power at AC-3, 690 V, 50 Hz                          |  | 7.5 kW                                                                                                                                                                                                    |
| Rated operational power at AC-23A, 220/230 V, 50 Hz                    |  | 5.5 kW                                                                                                                                                                                                    |
| Rated operational power at AC-23A, 400 V, 50 Hz                        |  | 13 kW                                                                                                                                                                                                     |
| Rated operational power at AC-23A, 500 V, 50 Hz                        |  | 11 kW                                                                                                                                                                                                     |
| Rated operational power at AC-23A, 690 V, 50 Hz                        |  | 11 kW                                                                                                                                                                                                     |
| Rated operational voltage (Ue) at AC - max                             |  | 690 V                                                                                                                                                                                                     |
| Rated uninterrupted current (Iu)                                       |  | 25 A                                                                                                                                                                                                      |
| Uninterrupted current                                                  |  | Rated uninterrupted current Iu is specified for max. cross-section.                                                                                                                                       |
| <b>Short-circuit rating</b>                                            |  |                                                                                                                                                                                                           |
| Rated conditional short-circuit current (Iq)                           |  | 80 kA                                                                                                                                                                                                     |
| Rated short-time withstand current (Icw)                               |  | 640 A, Contacts, 1 second<br>0.64 kA                                                                                                                                                                      |
| Short-circuit current rating (basic rating)                            |  | 5 kA, SCCR (UL/CSA)<br>110A, max. Fuse, SCCR (UL/CSA)                                                                                                                                                     |
| Short-circuit current rating (high fault)                              |  | 50 A, Class J, max. Fuse, SCCR (UL/CSA)<br>10 kA, SCCR (UL/CSA)                                                                                                                                           |
| Short-circuit protection rating                                        |  | 25 A gG/gL, Fuse, Contacts                                                                                                                                                                                |
| <b>Switching capacity</b>                                              |  |                                                                                                                                                                                                           |
| Load rating                                                            |  | 1.6 x I# (with intermittent operation class 12, 40 % duty factor)<br>2 x I# (with intermittent operation class 12, 25 % duty factor)<br>1.3 x I# (with intermittent operation class 12, 60 % duty factor) |
| Number of contacts in series at DC-23A, 24 V                           |  | 1                                                                                                                                                                                                         |
| Number of contacts in series at DC-23A, 48 V                           |  | 2                                                                                                                                                                                                         |
| Number of contacts in series at DC-23A, 60 V                           |  | 2                                                                                                                                                                                                         |
| Number of contacts in series at DC-23A, 120 V                          |  | 3                                                                                                                                                                                                         |
| Switching capacity (main contacts, general use)                        |  | 20 A, Rated uninterrupted current max. (UL/CSA)                                                                                                                                                           |
| Switching capacity (auxiliary contacts, general use)                   |  | 10A, IU, (UL/CSA)                                                                                                                                                                                         |
| Switching capacity (auxiliary contacts, pilot duty)                    |  | P600 (UL/CSA)<br>A600 (UL/CSA)                                                                                                                                                                            |
| Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)          |  | 240 A                                                                                                                                                                                                     |
| Voltage per contact pair in series                                     |  | 60 V                                                                                                                                                                                                      |
| <b>Motor rating</b>                                                    |  |                                                                                                                                                                                                           |

|                                                                                  |  |  |                                                                                                                                  |
|----------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------|
| Assigned motor power at 115/120 V, 60 Hz, 1-phase                                |  |  | 1 HP                                                                                                                             |
| Assigned motor power at 200/208 V, 60 Hz, 1-phase                                |  |  | 2 HP                                                                                                                             |
| Assigned motor power at 200/208 V, 60 Hz, 3-phase                                |  |  | 3 HP                                                                                                                             |
| Assigned motor power at 230/240 V, 60 Hz, 1-phase                                |  |  | 3 HP                                                                                                                             |
| Assigned motor power at 230/240 V, 60 Hz, 3-phase                                |  |  | 5 HP                                                                                                                             |
| Assigned motor power at 460/480 V, 60 Hz, 3-phase                                |  |  | 10 HP                                                                                                                            |
| Assigned motor power at 575/600 V, 60 Hz, 3-phase                                |  |  | 15 HP                                                                                                                            |
| Contacts                                                                         |  |  |                                                                                                                                  |
| Control circuit reliability                                                      |  |  | 1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)                                          |
| Number of auxiliary contacts (change-over contacts)                              |  |  | 0                                                                                                                                |
| Number of auxiliary contacts (normally closed contacts)                          |  |  | 0                                                                                                                                |
| Number of auxiliary contacts (normally open contacts)                            |  |  | 0                                                                                                                                |
| Actuator                                                                         |  |  |                                                                                                                                  |
| Actuator color                                                                   |  |  | Red                                                                                                                              |
| Actuator type                                                                    |  |  | Short thumb-grip                                                                                                                 |
| Design verification                                                              |  |  |                                                                                                                                  |
| Equipment heat dissipation, current-dependent Pvid                               |  |  | 1.1 W                                                                                                                            |
| Heat dissipation capacity Pdis                                                   |  |  | 0 W                                                                                                                              |
| Heat dissipation per pole, current-dependent Pvid                                |  |  | 1.1 W                                                                                                                            |
| Rated operational current for specified heat dissipation (In)                    |  |  | 25 A                                                                                                                             |
| Static heat dissipation, non-current-dependent Pvs                               |  |  | 0 W                                                                                                                              |
| 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                                 |  |  | UV resistance only in connection with protective shield.                                                                         |
| 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                                          |  |  | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 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.                                                                                           |
| 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. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility                                              |  |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.13 Mechanical function                                                        |  |  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

Technical data ETIM 9.0

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| Low-voltage industrial components (EG000017) / Switch disconnecter (low voltage) (EC000216)                                                                                                               |  |  |     |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss13-27-37-14-03 [AKF060018]) |  |  |     |
| Version as main switch                                                                                                                                                                                    |  |  | No  |
| Version as maintenance-/service switch                                                                                                                                                                    |  |  | No  |
| Version as safety switch                                                                                                                                                                                  |  |  | No  |
| Version as emergency stop installation                                                                                                                                                                    |  |  | Yes |
| Version as reversing switch                                                                                                                                                                               |  |  | No  |

|                                                         |    |                            |
|---------------------------------------------------------|----|----------------------------|
| Number of switches                                      |    | 1                          |
| Max. rated operation voltage Ue AC                      | V  | 690                        |
| Rated operating voltage                                 | V  | 690 - 690                  |
| Rated permanent current Iu                              | A  | 25                         |
| Rated permanent current at AC-23, 400 V                 | A  | 25                         |
| Rated permanent current at AC-21, 400 V                 | A  | 25                         |
| Rated operation power at AC-3, 400 V                    | kW | 7.5                        |
| Rated short-time withstand current Icw                  | kA | 0.64                       |
| Rated operation power at AC-23, 400 V                   | kW | 13                         |
| Switching power at 400 V                                | kW | 13                         |
| Conditioned rated short-circuit current Iq              | kA | 80                         |
| Number of poles                                         |    | 3                          |
| Number of auxiliary contacts as normally closed contact |    | 0                          |
| Number of auxiliary contacts as normally open contact   |    | 0                          |
| Number of auxiliary contacts as change-over contact     |    | 0                          |
| Motor drive optional                                    |    | No                         |
| Motor drive integrated                                  |    | No                         |
| Voltage release optional                                |    | No                         |
| Device construction                                     |    | Complete device in housing |
| Suitable for floor mounting                             |    | Yes                        |
| Suitable for front mounting 4-hole                      |    | No                         |
| Suitable for front mounting centre                      |    | No                         |
| Suitable for distribution board installation            |    | No                         |
| Suitable for intermediate mounting                      |    | No                         |
| Colour control element                                  |    | Red                        |
| Type of control element                                 |    | Short thumb-grip           |
| Interlockable                                           |    | No                         |
| Type of electrical connection of main circuit           |    | Screw connection           |
| With pre-assembled cabling                              |    | No                         |
| Degree of protection (IP), front side                   |    | IP65                       |
| Degree of protection (NEMA)                             |    | 12                         |
| Width                                                   | mm | 100                        |
| Height                                                  | mm | 180                        |
| Depth                                                   | mm | 107                        |
| Width in number of modular spacings                     |    |                            |