

# Specifications

## Eaton 081438

Eaton Moeller® series P1 Main switch, P1, 32 A, flush mounting, 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position

### General specifications

|                             |   |
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| <b>PRODUCT NAME</b>         | Eaton Moeller® series P1 Main switch  |
| <b>CATALOG NUMBER</b>       | 081438  |
| <b>MODEL CODE</b>           | P1-32/EA/SVB  |
| <b>EAN</b>                  | 4015080814382   |
| <b>PRODUCT LENGTH/DEPTH</b> | 120 mm  |
| <b>PRODUCT HEIGHT</b>       | 70 mm   |
| <b>PRODUCT WIDTH</b>        | 49 mm   |
| <b>PRODUCT WEIGHT</b>       | 0.192 kg  |
| <b>CERTIFICATIONS</b>       | UL 60947-4-1<br>UL Category Control No.: NLRV<br>CSA<br>CSA-C22.2 No. 60947-4-1-14<br>UL<br>CSA Class No.: 3211-05<br>IEC/EN 60204<br>IEC/EN 60947<br>IEC/EN 60947-3<br>CE<br>CSA File No.: 012528<br>CSA-C22.2 No. 94<br>VDE 0660<br>UL File No.: E36332 |
| <b>CATALOG NOTES</b>        | Rated Short-time Withstand Current (Icw) for a time of 1 second   |
| <b>GLOBAL CATALOG</b>       | 081438  |

## Product specifications

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| <b>PRODUCT CATEGORY</b>   | Main switch  |
| <b>FEATURES</b>   | Version as emergency stop installation<br>Version as main switch<br>Version as maintenance-/service switch                       |
| <b>ACTUATOR COLOR</b>   | Red  |
| <b>10.10 TEMPERATURE RISE</b>   | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>   | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>  | Meets the product standard's requirements.   |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.   |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.   |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.   |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | UV resistance only in connection with protective shield.   |
| <b>10.2.5 LIFTING</b>   | Does not apply, since the entire switchgear needs to be evaluated.   |
| <b>10.2.6 MECHANICAL IMPACT</b>   | Does not apply, since the entire switchgear needs to be evaluated.   |
| <b>10.2.7 INSCRIPTIONS</b>  | Meets the product  |

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|   | standard's requirements.   |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                  | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                                     |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.   |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.   |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.   |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.   |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.   |
| <b>FITTED WITH:</b>   | Red rotary handle and yellow locking ring                                      |
| <b>OPERATING FREQUENCY</b>                                      | 1200 Operations/h  |
| <b>POLLUTION DEGREE</b>   | 3  |
| <b>CLIMATIC PROOFING</b>  | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78 |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC  |
| <b>RATED PERMANENT CURRENT AT AC-21, 400 V</b>                  | 32 A   |
| <b>RATED PERMANENT CURRENT AT AC-23, 400 V</b>                  | 32 A   |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b>                         | 32 A   |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>       | 0 W  |
| <b>SWITCHING POWER AT 400 V</b>                                 | 15 kW  |
| <b>VOLTAGE PER CONTACT PAIR IN SERIES</b>                       | 60 V   |
| <b>ACCESSORIES</b>  | Auxiliary contact or   |

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|   | neutral conductor fitted by user.        |
| <b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>      | 18.5 kW                                  |
| <b>DEVICE CONSTRUCTION</b>                                | Built-in device fixed built-in technique |
| <b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>           | 640 A, Contacts, 1 second<br>0.64 kA     |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>         | Screw connection                         |
| <b>MOUNTING POSITION</b>                                  | As required                              |
| <b>ACTUATOR TYPE</b>                                      | Door coupling rotary drive               |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                | 50 °C                                    |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                | -25 °C                                   |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>     | 40 °C                                    |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>     | -25 °C                                   |
| <b>ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE</b>  | 1 HP                                     |
| <b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 1-PHASE</b>  | 2 HP                                     |
| <b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE</b>  | 3 HP                                     |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b>  | 3 HP                                     |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b>  | 7.5 HP                                   |
| <b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>  | 10 HP                                    |
| <b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>  | 15 HP                                    |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b> | 0 W                                      |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                    | 0 W                                      |

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| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>       | 1.8 W   |
| <b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>     | 0   |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0   |
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b>            | 80 kA   |
| <b>OVERVOLTAGE CATEGORY</b>                                    | III   |
| <b>CONTROL CIRCUIT RELIABILITY</b>                             | 1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)   |
| <b>DEGREE OF PROTECTION (FRONT SIDE)</b>                       | IP65  |
| <b>NUMBER OF POLES</b>   | 3   |
| <b>MOUNTING METHOD</b>   | Flush mounting  |
| <b>DEGREE OF PROTECTION</b>                                    | NEMA 1  |
| <b>SUITABLE FOR</b>  | Branch circuits, suitable as motor disconnect, (UL/CSA)<br>Front mounting 4-hole  |
| <b>LOCKING FACILITY</b>  | Lockable in the 0 (Off) position  |
| <b>FUNCTIONS</b>   | Interlockable<br>Emergency switching off function   |
| <b>NUMBER OF SWITCHES</b>                                      | 1   |
| <b>SAFE ISOLATION</b>  | 440 V AC, Between the contacts, According to EN 61140   |
| <b>SCREW SIZE</b>  | M4, Terminal screw  |
| <b>SHOCK RESISTANCE</b>  | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms   |
| <b>LIFESPAN, MECHANICAL</b>                                    | 300,000 Operations  |
| <b>LOAD RATING</b>   | 2 x I <sub>e</sub> (with intermittent operation class 12, 25 % duty factor)<br>1.3 x I <sub>e</sub> (with intermittent operation class 12, 60 % duty factor)<br>1.6 x I <sub>e</sub> (with intermittent operation class 12, 40 % duty factor) |
| <b>SWITCHING CAPACITY</b>                                      | 10A, IU, (UL/CSA)   |

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| <b>(AUXILIARY CONTACTS,<br/>GENERAL USE)</b>                                     |   |
| <b>SWITCHING CAPACITY<br/>(AUXILIARY CONTACTS,<br/>PILOT DUTY)</b>               | A600 (UL/CSA)<br>P600 (UL/CSA)  |
| <b>TERMINAL CAPACITY</b>   | 1 x (1 - 4) mm <sup>2</sup> , flexible<br>with ferrules to DIN 46228<br>2 x (1 - 4) mm <sup>2</sup> , flexible<br>with ferrules to DIN 46228<br>14 - 8 AWG, solid or<br>flexible with ferrule<br>2 x (1.5 - 6) mm <sup>2</sup> , solid or<br>stranded<br>1 x (1.5 - 6) mm <sup>2</sup> , solid or<br>stranded |
| <b>SWITCHING CAPACITY<br/>(MAIN CONTACTS,<br/>GENERAL USE)</b>                   | 30 A, Rated uninterrupted<br>current max. (UL/CSA)  |
| <b>SAFETY PARAMETER (EN<br/>ISO 13849-1)</b>                                     | B10d values as per EN ISO<br>13849-1, table C.1   |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>OPEN CONTACTS)</b>             | 0   |
| <b>NUMBER OF CONTACTS<br/>IN SERIES AT DC-23A, 120<br/>V</b>                     | 3   |
| <b>NUMBER OF CONTACTS<br/>IN SERIES AT DC-23A, 24 V</b>                          | 1   |
| <b>NUMBER OF CONTACTS<br/>IN SERIES AT DC-23A, 48 V</b>                          | 2   |
| <b>NUMBER OF CONTACTS<br/>IN SERIES AT DC-23A, 60 V</b>                          | 2   |
| <b>RATED BREAKING<br/>CAPACITY AT 220/230 V<br/>(COS PHI TO IEC 60947-3)</b>     | 260 A   |
| <b>RATED BREAKING<br/>CAPACITY AT 400/415 V<br/>(COS PHI TO IEC 60947-3)</b>     | 300 A   |
| <b>RATED BREAKING<br/>CAPACITY AT 500 V (COS<br/>PHI TO IEC 60947-3)</b>         | 290 A   |
| <b>RATED BREAKING<br/>CAPACITY AT 660/690 V<br/>(COS PHI TO IEC 60947-3)</b>     | 250 A   |
| <b>RATED MAKING<br/>CAPACITY UP TO 690 V<br/>(COS PHI TO IEC/EN<br/>60947-3)</b> | 320 A   |
| <b>RATED OPERATING<br/>VOLTAGE (UE) - MAX</b>                                    | 690 V   |
| <b>RATED OPERATING<br/>VOLTAGE (UE) - MIN</b>                                    | 690 V   |
| <b>RATED OPERATIONAL</b>   | 690 V   |

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| <b>VOLTAGE (UE) AT AC - MAX</b>   |   |
| <b>SHORT-CIRCUIT CURRENT RATING (BASIC RATING)</b>                            | 5 kA, SCCR (UL/CSA)<br>110A, max. Fuse, SCCR (UL/CSA)           |
| <b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT)</b>                              | 50 A, Class J, max. Fuse, SCCR (UL/CSA)<br>10 kA, SCCR (UL/CSA) |
| <b>SHORT-CIRCUIT PROTECTION RATING</b>  | 50 A gG/gL, Fuse, Contacts                                      |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-21, 440 V</b>                         | 32 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-23A, 230 V</b>                        | 32 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-23A, 400 V, 415 V</b>                 | 32 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-23A, 500 V</b>                        | 30 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-23A, 690 V</b>                        | 19.8 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>            | 26.4 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>            | 26.4 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>                          | 23.4 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>                   | 14.7 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES L/R = 1 MS</b> | 32 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V</b>                        | 12 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V</b>                         | 25 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V</b>                         | 25 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V</b>                         | 25 A  |

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| <b>RATED OPERATIONAL<br/>CURRENT FOR SPECIFIED<br/>HEAT DISSIPATION (IN)</b> | 32 A  |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A,<br/>220/230 V, 50 HZ</b>           | 7.5 kW  |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 400 V,<br/>50 HZ</b>               | 15 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 500 V,<br/>50 HZ</b>               | 18.5 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 690 V,<br/>50 HZ</b>               | 15 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 380/400<br/>V, 50 HZ</b>             | 13 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 415 V, 50<br/>HZ</b>                 | 13 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 690 V, 50<br/>HZ</b>                 | 15 kW   |
| <b>TIGHTENING TORQUE</b>   | 1.6 Nm, Screw terminals<br>14.1 lb-in, Screw terminals                                |
| <b>UNINTERRUPTED<br/>CURRENT</b>   | Rated uninterrupted<br>current I <sub>u</sub> is specified for<br>max. cross-section. |
| <b>HOUSING MATERIAL</b>  | Plastic   |

## Resources

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| BROCHURES                        | <a href="#">Brochure - T Rotary Cam switch and P Switch-disconnector</a>   |
| CATALOGS                         | <a href="#">P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN</a>  |
| DECLARATIONS<br>OF<br>CONFORMITY | <a href="#">eaton-main-switch-declaration-of-conformity-eu250807en.pdf</a><br><a href="#">eaton-main-switch-declaration-of-conformity-uk251290en.pdf</a>   |
| DRAWINGS                         | <a href="#">eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps</a><br><a href="#">eaton-rotary-switches-mounting-p1-main-switch-dimensions.eps</a><br><a href="#">eaton-rotary-switches-t0-main-switch-symbol.eps</a><br><a href="#">eaton-rotary-switches-mounting-p1-main-switch-3d-drawing.eps</a><br><a href="#">eaton-general-mounting-p1-main-switch-symbol.eps</a> |



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| ECAD MODEL                | <a href="#">ETN.081438.edz</a>   |
| INSTALLATION INSTRUCTIONS | <a href="#">eaton-switch-disconnector-p1-flush-mounting-il03802003z.pdf</a>  |
| INSTALLATION VIDEOS       | <a href="#">Eaton's P Switch-disconnectors used in a factory</a>   |
| MCAD MODEL                | <a href="#">DA-CS-p1_zz10 DA-CD-p1_zz10</a>  |
| PEP ECO-PASSPORT          | <a href="#">EATO-00169-V01.01-EN.pdf</a>   |
| PRODUCT NOTIFICATIONS     | <a href="#">MZ008005ZU_Orderform_Customized_Switch.pdf</a><br><a href="#">MZ008006ZU_Orderform_Customized_Switch.pdf</a> |
| WIRING DIAGRAMS           | <a href="#">eaton-rotary-switches-on-off-switch-p3-main-switch-wiring-diagram.eps</a>                                    |

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**



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