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## Eaton 093044

Eaton Moeller® series T5B Changeover switch, 63 A, rear mounting, 2 contact units, Contacts: 4, 90 °, maintained, 1-2, Design number 8221

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| <b>PRODUCT NAME</b>         | Eaton Moeller® series T5B Changeover switch                                                                                                                                                                                                               |
| <b>CATALOG NUMBER</b>       | 093044                                                                                                                                                                                                                                                    |
| <b>PRODUCT LENGTH/DEPTH</b> | 149 mm                                                                                                                                                                                                                                                    |
| <b>PRODUCT HEIGHT</b>       | 88 mm                                                                                                                                                                                                                                                     |
| <b>PRODUCT WIDTH</b>        | 88 mm                                                                                                                                                                                                                                                     |
| <b>PRODUCT WEIGHT</b>       | 0.499 kg                                                                                                                                                                                                                                                  |
| <b>CERTIFICATIONS</b>       | CSA-C22.2 No. 60947-4-1-14<br>UL 60947-4-1<br>CSA-C22.2 No. 94<br>UL File No.: E36332<br>CSA File No.: 012528<br>IEC/EN 60947-3<br>UL Category Control No.: NLRV<br>CSA<br>IEC/EN 60204<br>IEC/EN 60947<br>VDE 0660<br>CE<br>CSA Class No.: 3211-05<br>UL |
| <b>CATALOG NOTES</b>        | Rated Short-time Withstand Current (Icw) for a time of 1 second                                                                                                                                                                                           |

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| <b>TYPE</b>                                                                             | Changeover switch                                                                                                                |
| <b>PRODUCT CATEGORY</b>                                                                 | Control switches                                                                                                                 |
| <b>ACTUATOR FUNCTION</b>                                                                | Without 0 (Off) position<br>Maintained                                                                                           |
| <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 standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF PROTECTION OF</b>                                                     | Does not apply, since the entire switchgear needs to                                                                             |

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| □□□□□ | <a href="#">IL03801009Z</a>                                                               |
| □□□   | <a href="#">eaton-rotary-switches-contact-t0-changeover-switch-wiring-diagram-004.eps</a> |
| □□    | <a href="#">eaton-rotary-switches-mounting-t5b-non-standard-switch-dimensions-011.eps</a> |
|       | <a href="#">eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-014.eps</a>     |

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| <b>ASSEMBLIES</b>                                               | 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>                                             | Black thumb grip and front plate                                               |
| <b>OPERATING FREQUENCY</b>                                      | 1200 Operations/h                                                              |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                              |
| <b>CLIMATIC PROOFING</b>                                        | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| <b>ENCLOSURE MATERIAL</b>                                       | Plastic                                                                        |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC                                                                      |
| <b>ACTUATOR TYPE</b>                                            | Short thumb-grip                                                               |
| <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>        | 3 HP                                                                           |
| <b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 1-PHASE</b>        | 7.5 HP                                                                         |

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| <b>ASSIGNED MOTOR<br/>POWER AT 200/208 V, 60<br/>HZ, 3-PHASE</b>       | 15 HP                                                                                            |
| <b>ASSIGNED MOTOR<br/>POWER AT 230/240 V, 60<br/>HZ, 1-PHASE</b>       | 10 HP                                                                                            |
| <b>ASSIGNED MOTOR<br/>POWER AT 230/240 V, 60<br/>HZ, 3-PHASE</b>       | 15 HP                                                                                            |
| <b>ASSIGNED MOTOR<br/>POWER AT 460/480 V, 60<br/>HZ, 3-PHASE</b>       | 40 HP                                                                                            |
| <b>ASSIGNED MOTOR<br/>POWER AT 575/600 V, 60<br/>HZ, 3-PHASE</b>       | 40 HP                                                                                            |
| <b>EQUIPMENT HEAT<br/>DISSIPATION, CURRENT-<br/>DEPENDENT PVID</b>     | 0 W                                                                                              |
| <b>HEAT DISSIPATION<br/>CAPACITY PDISS</b>                             | 0 W                                                                                              |
| <b>HEAT DISSIPATION PER<br/>POLE, CURRENT-<br/>DEPENDENT PVID</b>      | 4.5 W                                                                                            |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (CHANGE-<br/>OVER CONTACTS)</b>    | 0                                                                                                |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>CLOSED CONTACTS)</b> | 0                                                                                                |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>OPEN CONTACTS)</b>   | 0                                                                                                |
| <b>NUMBER OF CONTACT<br/>UNITS</b>                                     | 2                                                                                                |
| <b>RATED SHORT-TIME<br/>WITHSTAND CURRENT<br/>(ICW)</b>                | 1,3 kA, Contacts, 1 second                                                                       |
| <b>ELECTRICAL<br/>CONNECTION TYPE OF<br/>MAIN CIRCUIT</b>              | Screw connection                                                                                 |
| <b>MOUNTING POSITION</b>                                               | As required                                                                                      |
| <b>RATED CONDITIONAL<br/>SHORT-CIRCUIT CURRENT<br/>(IQ)</b>            | 2 kA                                                                                             |
| <b>MOUNTING METHOD</b>                                                 | Rear mounting                                                                                    |
| <b>OVERVOLTAGE<br/>CATEGORY</b>                                        | III                                                                                              |
| <b>CONTROL CIRCUIT<br/>RELIABILITY</b>                                 | 1 failure per 100,000<br>switching operations<br>statistically determined, at<br>24 V DC, 10 mA) |
| <b>NUMBER OF POLES</b>                                                 | 2                                                                                                |

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| <b>DEGREE OF PROTECTION</b>                                          | IP65<br>NEMA 12<br>NEMA 1                                                                                                                                                                                                                     |
| <b>NUMBER OF CONTACTS</b>                                            | 4                                                                                                                                                                                                                                             |
| <b>MODEL</b>                                                         | Reverser                                                                                                                                                                                                                                      |
| <b>DEGREE OF PROTECTION (FRONT SIDE)</b>                             | IP65<br>NEMA 12                                                                                                                                                                                                                               |
| <b>INSCRIPTION</b>                                                   | 1-2                                                                                                                                                                                                                                           |
| <b>LIFESPAN, MECHANICAL</b>                                          | 500,000 Operations                                                                                                                                                                                                                            |
| <b>SAFE ISOLATION</b>                                                | 440 V AC, Between the contacts, According to EN 61140                                                                                                                                                                                         |
| <b>RATED OPERATIONAL CURRENT (IE)</b>                                | 57.2 A at AC-3, 500 V star-delta<br>29.4 A at AC-3, 690 V star-delta<br>63 A at AC-3, 230 V star-delta<br>63 A at AC-3, 400 V star-delta                                                                                                      |
| <b>SCREW SIZE</b>                                                    | M6, Terminal screw                                                                                                                                                                                                                            |
| <b>SHOCK RESISTANCE</b>                                              | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms                                                                                                                                                                 |
| <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>TIGHTENING TORQUE</b>                                             | 35.4 lb-in, Screw terminals<br>4 Nm, Screw terminals                                                                                                                                                                                          |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V</b>                 | 3                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V</b>                  | 1                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V</b>                 | 6                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V</b>                  | 2                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V</b>                  | 3                                                                                                                                                                                                                                             |
| <b>RATED BREAKING CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)</b> | 520 A                                                                                                                                                                                                                                         |
| <b>RATED BREAKING</b>                                                | 600 A                                                                                                                                                                                                                                         |

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| <b>CAPACITY AT 400/415 V<br/>(COS PHI TO IEC 60947-3)</b>                        |                                                                                                                     |
| <b>RATED BREAKING<br/>CAPACITY AT 500 V (COS<br/>PHI TO IEC 60947-3)</b>         | 480 A                                                                                                               |
| <b>RATED BREAKING<br/>CAPACITY AT 660/690 V<br/>(COS PHI TO IEC 60947-3)</b>     | 340 A                                                                                                               |
| <b>RATED MAKING<br/>CAPACITY UP TO 690 V<br/>(COS PHI TO IEC/EN<br/>60947-3)</b> | 800 A                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-21,<br/>440 V</b>                    | 63 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>230 V</b>                   | 63 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>400 V, 415 V</b>            | 63 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>500 V</b>                   | 33 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>690 V</b>                   | 23.8 A                                                                                                              |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>220 V, 230 V, 240 V</b>       | 51 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>380 V, 400 V, 415 V</b>       | 41 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>500 V</b>                     | 33 A                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>660 V, 690 V</b>              | 17 A                                                                                                                |
| <b>SWITCHING CAPACITY<br/>(MAIN CONTACTS,<br/>GENERAL USE)</b>                   | 63 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>SHORT-CIRCUIT<br/>PROTECTION RATING</b>                                       | 80 A gG/gL, Fuse, Contacts                                                                                          |
| <b>TERMINAL CAPACITY<br/>(FLEXIBLE WITH<br/>FERRULE)</b>                         | 1 x (1 - 25) mm <sup>2</sup> , ferrules<br>to DIN 46228<br>2 x (1.5 - 10) mm <sup>2</sup> , ferrule<br>to DIN 46228 |
| <b>SUITABLE FOR</b>                                                              | Ground mounting<br>Branch circuits, suitable as<br>motor disconnect,                                                |

|                                                                                           | (UL/CSA)<br>Intermediate mounting<br>Front mounting |
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| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-1,<br/>LOAD-BREAK SWITCHES<br/>L/R = 1 MS</b> | 63 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-13,<br/>CONTROL SWITCHES L/R<br/>= 50 MS</b>  | 25 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>120 V</b>                            | 25 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>24 V</b>                             | 50 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>240 V</b>                            | 20 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>48 V</b>                             | 50 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>60 V</b>                             | 50 A                                                |
| <b>RATED OPERATIONAL<br/>CURRENT FOR SPECIFIED<br/>HEAT DISSIPATION (IN)</b>              | 63 A                                                |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A,<br/>220/230 V, 50 HZ</b>                        | 18.5 kW                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 400 V,<br/>50 HZ</b>                            | 30 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 500 V,<br/>50 HZ</b>                            | 22 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-23A, 690 V,<br/>50 HZ</b>                            | 22 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 380/400<br/>V, 50 HZ</b>                          | 22 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 415 V, 50<br/>HZ</b>                              | 22 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 690 V, 50<br/>HZ</b>                              | 15 kW                                               |
| <b>RATED OPERATIONAL<br/>POWER STAR-DELTA AT<br/>220/230 V, 50 HZ</b>                     | 18.5 kW                                             |

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| RATED OPERATIONAL<br>POWER STAR-DELTA AT<br>380/400 V, 50 HZ | 30 kW                                                                     |
| RATED OPERATIONAL<br>POWER STAR-DELTA AT<br>500 V, 50 HZ     | 37 kW                                                                     |
| RATED OPERATIONAL<br>POWER STAR-DELTA AT<br>690 V, 50 HZ     | 22 kW                                                                     |
| RATED OPERATIONAL<br>VOLTAGE (UE) AT AC -<br>MAX             | 690 V                                                                     |
| RATED UNINTERRUPTED<br>CURRENT (IU)                          | 63 A                                                                      |
| STATIC HEAT<br>DISSIPATION, NON-<br>CURRENT-DEPENDENT<br>PVS | 0 W                                                                       |
| SWITCHING ANGLE                                              | 90 °                                                                      |
| VOLTAGE PER CONTACT<br>PAIR IN SERIES                        | 60 V                                                                      |
| SHORT-CIRCUIT CURRENT<br>RATING (HIGH FAULT)                 | 100 A, Class J, max. Fuse,<br>SCCR (UL/CSA)<br>10 kA, SCCR (UL/CSA)       |
| TERMINAL CAPACITY<br>(SOLID/FLEXIBLE WITH<br>FERRULE AWG)    | 12 - 4                                                                    |
| TERMINAL CAPACITY<br>(SOLID/STRANDED)                        | 1 x (2.5 - 35) mm <sup>2</sup><br>2 x (2.5 - 16) mm <sup>2</sup>          |
| UNINTERRUPTED<br>CURRENT                                     | Rated uninterrupted<br>current Iu is specified for<br>max. cross-section. |
| DESIGN                                                       | 8221                                                                      |

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