

# Specifications

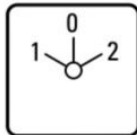


Photo is representative

## Eaton 092386

Eaton Moeller® series T5B  
Changeoverswitches, T5B, 63 A, flush  
mounting, 3 contact unit(s), Contacts: 6, 60 °,  
maintained, With 0 (Off) position, 1-0-2,  
Design number 8212

### General specifications

|                         |                                                                                                                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRODUCT NAME            | Eaton Moeller® series T5B<br>Changeover switch                                                                                                                                                                                                                   |
| CATALOG NUMBER          | 092386                                                                                                                                                                                                                                                           |
| MODEL CODE              | T5B-3-8212/E                                                                                                                                                                                                                                                     |
| EAN                     | 4015080923862                                                                                                                                                                                                                                                    |
| PRODUCT<br>LENGTH/DEPTH | 124 mm                                                                                                                                                                                                                                                           |
| PRODUCT HEIGHT          | 88 mm                                                                                                                                                                                                                                                            |
| PRODUCT WIDTH           | 88 mm                                                                                                                                                                                                                                                            |
| PRODUCT WEIGHT          | 0.59 kg                                                                                                                                                                                                                                                          |
| CERTIFICATIONS          | IEC/EN 60204<br>UL Category Control No.:<br>NLRV<br>IEC/EN 60947<br>UL File No.: E36332<br>CSA Class No.: 3211-05<br>UL 60947-4-1<br>CSA-C22.2 No. 60947-4-1-<br>14<br>IEC/EN 60947-3<br>CE<br>CSA File No.: 012528<br>CSA<br>CSA-C22.2 No. 94<br>UL<br>VDE 0660 |
| CATALOG NOTES           | Rated Short-time<br>Withstand Current (Icw)<br>for a time of 1 second                                                                                                                                                                                            |

## Actuator

|                          |                                     |
|--------------------------|-------------------------------------|
| <b>ACTUATOR FUNCTION</b> | Maintained<br>With 0 (Off) position |
| <b>ACTUATOR TYPE</b>     | Short thumb-grip                    |

## Contacts

|                                                                |                                                                                         |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>CONTROL CIRCUIT RELIABILITY</b>                             | 1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA) |
| <b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>     | 0                                                                                       |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0                                                                                       |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>   | 0                                                                                       |
| <b>NUMBER OF CONTACTS</b>                                      | 6                                                                                       |

## Climatic environmental conditions

|                                                       |                                                                                |
|-------------------------------------------------------|--------------------------------------------------------------------------------|
| <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>CLIMATIC PROOFING</b>                              | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78 |

## Design verification

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <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.                                                                                       |

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|----------------------------------------------------------------------|--------------------------------------------------------------------|
| <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 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>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0 W                                                                |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                                                |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 4.5 W                                                              |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 63 A                                                               |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>            | 0 W                                                                |

## Electrical rating

|                                                                              |       |
|------------------------------------------------------------------------------|-------|
| <b>RATED BREAKING<br/>CAPACITY AT 220/230 V<br/>(COS PHI TO IEC 60947-3)</b> | 520 A |
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| <b>RATED BREAKING<br/>CAPACITY AT 400/415 V<br/>(COS PHI TO IEC 60947-3)</b> | 600 A |
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| <b>RATED BREAKING<br/>CAPACITY AT 500 V (COS<br/>PHI TO IEC 60947-3)</b> | 480 A |
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| <b>RATED BREAKING<br/>CAPACITY AT 660/690 V<br/>(COS PHI TO IEC 60947-3)</b> | 340 A |
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| <b>RATED OPERATIONAL<br/>CURRENT (IE)</b> | 29.4 A at AC-3, 690 V star-<br>delta<br>63 A at AC-3, 230 V star-<br>delta<br>63 A at AC-3, 400 V star-<br>delta<br>57.2 A at AC-3, 500 V star-<br>delta |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|

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|---------------------------------------------------------------|------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-21,<br/>440 V</b> | 63 A |
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|----------------------------------------------------------------|------|
| <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 |
|-----------------------------------------------------------------------|------|

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|----------------------------------------------------------------|------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>500 V</b> | 33 A |
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|                                                                |        |
|----------------------------------------------------------------|--------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>690 V</b> | 23.8 A |
|----------------------------------------------------------------|--------|

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|----------------------------------------------------------------------------|------|
| <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 |
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|--------------------------------------------------------------|------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>500 V</b> | 33 A |
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|---------------------------------------------------------------------|------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>660 V, 690 V</b> | 17 A |
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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 |
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|                          |      |
|--------------------------|------|
| <b>RATED OPERATIONAL</b> | 25 A |
|--------------------------|------|

## Features & functions

|                           |         |
|---------------------------|---------|
| <b>ENCLOSURE MATERIAL</b> | Plastic |
|---------------------------|---------|

|                     |                                                         |
|---------------------|---------------------------------------------------------|
| <b>FITTED WITH:</b> | Black thumb grip and<br>front plate<br>0 (off) position |
|---------------------|---------------------------------------------------------|

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|--------------------|-------|
| <b>INSCRIPTION</b> | 1-0-2 |
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|                        |   |
|------------------------|---|
| <b>NUMBER OF POLES</b> | 3 |
|------------------------|---|

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| <b>CURRENT (IE) AT DC-13,<br/>CONTROL SWITCHES L/R<br/>= 50 MS</b>    |         |
| <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/>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 |
| <b>RATED OPERATIONAL<br/>POWER STAR-DELTA AT<br/>380/400 V, 50 HZ</b> | 30 kW   |
| <b>RATED OPERATIONAL<br/>POWER STAR-DELTA AT<br/>500 V, 50 HZ</b>     | 37 kW   |
| <b>RATED OPERATIONAL<br/>POWER STAR-DELTA AT<br/>690 V, 50 HZ</b>     | 22 kW   |
| <b>RATED OPERATIONAL<br/>VOLTAGE (UE) AT AC -</b>                     | 690 V   |

|                                         |                                                                                 |
|-----------------------------------------|---------------------------------------------------------------------------------|
| <b>MAX</b>                              |                                                                                 |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b> | 63 A                                                                            |
| <b>UNINTERRUPTED CURRENT</b>            | Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section. |

| General information                           |                                                                               |
|-----------------------------------------------|-------------------------------------------------------------------------------|
| <b>DEGREE OF PROTECTION</b>                   | NEMA 1<br>IP65<br>NEMA 12                                                     |
| <b>DEGREE OF PROTECTION (FRONT SIDE)</b>      | IP65<br>NEMA 12                                                               |
| <b>LIFESPAN, MECHANICAL</b>                   | 500,000 Operations                                                            |
| <b>MODEL</b>                                  | Reverser                                                                      |
| <b>MOUNTING METHOD</b>                        | Flush mounting                                                                |
| <b>MOUNTING POSITION</b>                      | As required                                                                   |
| <b>NUMBER OF CONTACT UNITS</b>                | 3                                                                             |
| <b>OPERATING FREQUENCY</b>                    | 1200 Operations/h                                                             |
| <b>OVERVOLTAGE CATEGORY</b>                   | III                                                                           |
| <b>POLLUTION DEGREE</b>                       | 3                                                                             |
| <b>PRODUCT CATEGORY</b>                       | Control switches                                                              |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b> | 6000 V AC                                                                     |
| <b>SAFE ISOLATION</b>                         | 440 V AC, Between the contacts, According to EN 61140                         |
| <b>SAFETY PARAMETER (EN ISO 13849-1)</b>      | B10d values as per EN ISO 13849-1, table C.1                                  |
| <b>SHOCK RESISTANCE</b>                       | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms |
| <b>SUITABLE FOR</b>                           | Branch circuits, suitable as motor disconnect, (UL/CSA)<br>Front mounting     |
| <b>SWITCHING ANGLE</b>                        | 60 °                                                                          |
| <b>TYPE</b>                                   | Changeover switch                                                             |

| Motor rating                                             |        |
|----------------------------------------------------------|--------|
| <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 |
| <b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE</b> | 15 HP  |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b> | 10 HP  |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b> | 15 HP  |
| <b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b> | 40 HP  |
| <b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b> | 40 HP  |

## Short-circuit rating

|                                                     |                                                                  |
|-----------------------------------------------------|------------------------------------------------------------------|
| <b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b> | 2 kA                                                             |
| <b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>     | 1,3 kA, Contacts, 1 second                                       |
| <b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT)</b>    | 10 kA, SCCR (UL/CSA)<br>100 A, Class J, max. Fuse, SCCR (UL/CSA) |
| <b>SHORT-CIRCUIT PROTECTION RATING</b>              | 80 A gG/gL, Fuse, Contacts                                       |

## Switching capacity

|                    |                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>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 MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)</b> | 800 A                                           |
| <b>SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)</b>               | 63 A, Rated uninterrupted current max. (UL/CSA) |
| <b>VOLTAGE PER CONTACT PAIR IN SERIES</b>                            | 60 V                                            |

## Terminal capacities

|                                                            |                                                                                                               |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>SCREW SIZE</b>                                          | M6, Terminal screw                                                                                            |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>           | 2 x (1.5 - 10) mm <sup>2</sup> , ferrule to DIN 46228<br>1 x (1 - 25) mm <sup>2</sup> , ferrules to DIN 46228 |
| <b>TERMINAL CAPACITY (SOLID/FLEXIBLE WITH FERRULE AWG)</b> | 12 - 4                                                                                                        |
| <b>TERMINAL CAPACITY (SOLID/STRANDED)</b>                  | 1 x (2.5 - 35) mm <sup>2</sup><br>2 x (2.5 - 16) mm <sup>2</sup>                                              |
| <b>TIGHTENING TORQUE</b>                                   | 4 Nm, Screw terminals<br>35.4 lb-in, Screw terminals                                                          |

## Resources

BROCHURES [Brochure - T Rotary Cam switch and P Switch-disconnector](#)

|                            |                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CATALOGUES                 | <a href="#">P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN</a>                                                                                                                                                                                                                                                                     |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-changeover-switch-declaration-of-conformity-eu251494en.pdf</a>                                                                                                                                                                                                                                                                          |
| DRAWINGS                   | <a href="#">eaton-rotary-switches-mounting-t5b-non-standard-switch-dimensions-003.eps</a><br><a href="#">eaton-rotary-switches-mounting-t0-changeover-switch-3d-drawing-002.eps</a><br><a href="#">eaton-general-rotary-switch-t0-step-switch-symbol-002.eps</a><br><a href="#">eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-009.eps</a> |
| ECAD MODEL                 | <a href="#">ETN.092386.edz</a>                                                                                                                                                                                                                                                                                                                            |
| INSTALLATION INSTRUCTIONS  | <a href="#">IL03801009Z</a>                                                                                                                                                                                                                                                                                                                               |
| INSTALLATION VIDEOS        | <a href="#">Eaton's P Switch-disconnectors used in a factory</a>                                                                                                                                                                                                                                                                                          |
| MCAD MODEL                 | <a href="#">DA-CS-t5(b) 3 e</a><br><a href="#">eaton-cam-switches-mcad-drawings-t5-b-3-e.dwg</a>                                                                                                                                                                                                                                                          |
| PRODUCT NOTIFICATIONS      | <a href="#">MZ008006ZU_Orderform_Customized_Switch.pdf</a><br><a href="#">MZ008005ZU_Orderform_Customized_Switch.pdf</a>                                                                                                                                                                                                                                  |
| WIRING DIAGRAMS            | <a href="#">eaton-rotary-switches-changeover-switch-t0-changeover-switch-wiring-diagram-003.eps</a>                                                                                                                                                                                                                                                       |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE: