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## Eaton 022245

Eaton Moeller series T0 Changeover switch,  
20 A, Center mounting, 1 contact unit(s),  
Contacts: 2, Maintained, HAND-0-AUTO,  
Design: 15431

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<b>PRODUCT NAME</b>	Eaton Moeller® series T0 Changeover switch
<b>CATALOG NUMBER</b>	022245
<b>PRODUCT LENGTH/DEPTH</b>	96 mm
<b>PRODUCT HEIGHT</b>	48 mm
<b>PRODUCT WIDTH</b>	48 mm
<b>PRODUCT WEIGHT</b>	0.101 kg
<b>CERTIFICATIONS</b>	UL Category Control No.: NLRV CSA CSA-C22.2 No. 60947-4-1- 14 VDE 0660 IEC/EN 60947 CSA Class No.: 3211-05 CSA-C22.2 No. 94 UL CSA File No.: 012528 IEC/EN 60204 CE IEC/EN 60947-3 UL 60947-4-1 UL File No.: E36332
<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>ACTUATOR FUNCTION</b>	With 0 (Off) position 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 ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.

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<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-step-switch-declaration-of-conformity-uk251327en.pdf</a>
□□□□□	<a href="#">IL03801020Z</a>
□□□	<a href="#">eaton-rotary-switches-switch-t0-changeover-switch-wiring-diagram.eps</a>
□□	<a href="#">eaton-rotary-switches-mounting-t0-step-switch-dimensions-009.eps</a>
□□	<a href="#">eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-017.eps</a>

<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>	0 (off) position Black thumb grip and front plate
<b>OPERATING FREQUENCY</b>	1200 Operations/h
<b>POLLUTION DEGREE</b>	3
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>RATED UNINTERRUPTED CURRENT (IU)</b>	20 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	0 W
<b>SWITCHING ANGLE</b>	45 °
<b>VOLTAGE PER CONTACT PAIR IN SERIES</b>	60 V
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	0
<b>PRODUCT CATEGORY</b>	Control switches
<b>NUMBER OF POLES</b>	Single-pole
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	5.5 kW
<b>DEVICE CONSTRUCTION</b>	Built-in device
<b>SWITCH TYPE</b>	Reverser

<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	320 A, Contacts, 1 second
<b>ACTUATOR TYPE</b>	Toggle
<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>	0.5 HP
<b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 1-PHASE</b>	1 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>	1.5 HP
<b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b>	3 HP
<b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>	7.5 HP
<b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>	7.5 HP
<b>EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID</b>	0 W
<b>MOUNTING POSITION</b>	As required
<b>MOUNTING METHOD</b>	Center mounting
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b>	6 kA
<b>DEGREE OF PROTECTION</b>	IP65 NEMA 1 NEMA 12
<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 NEMA 12
<b>NUMBER OF CONTACTS</b>	2
<b>SUITABLE FOR</b>	Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID</b>	0.6 W
<b>NUMBER OF CONTACT UNITS</b>	1
<b>NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V</b>	1
<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>	5
<b>FRONT SHIELD SIZE</b>	48x48 mm
<b>SAFE ISOLATION</b>	440 V AC, Between the contacts, According to EN 61140
<b>SCREW SIZE</b>	M3.5, Terminal screw
<b>INSCRIPTION</b>	" HAND-0-AUTO "
<b>SHOCK RESISTANCE</b>	15 g, Mechanical, According to IEC/EN 60068-2-27, Half- sinusoidal shock 20 ms
<b>LIFESPAN, MECHANICAL</b>	400,000 Operations
<b>NUMBER OF SWITCH POSITIONS</b>	3
<b>LOAD RATING</b>	1.6 x I <sub>e</sub> (with intermittent operation class 12, 40 % duty factor) 2 x I <sub>e</sub> (with intermittent operation class 12, 25 % duty factor) 1.3 x I <sub>e</sub> (with intermittent operation class 12, 60 % duty factor)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b>	10A, IU, (UL/CSA)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS,</b>	A600 (UL/CSA) P300 (UL/CSA)

**PILOT DUTY)**

**NUMBER OF CONTACTS** 2  
**IN SERIES AT DC-23A, 48 V**

**NUMBER OF CONTACTS** 3  
**IN SERIES AT DC-23A, 60 V**

**RATED BREAKING**  
**CAPACITY AT 220/230 V** 100 A  
**(COS PHI TO IEC 60947-3)**

**RATED BREAKING**  
**CAPACITY AT 400/415 V** 110 A  
**(COS PHI TO IEC 60947-3)**

**RATED BREAKING**  
**CAPACITY AT 500 V (COS** 80 A  
**PHI TO IEC 60947-3)**

**RATED BREAKING**  
**CAPACITY AT 660/690 V** 60 A  
**(COS PHI TO IEC 60947-3)**

**RATED MAKING**  
**CAPACITY UP TO 690 V** 130 A  
**(COS PHI TO IEC/EN**  
**60947-3)**

**RATED OPERATING**  
**VOLTAGE (UE) AT AC -** 690 V  
**MAX**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-21,** 20 A  
**440 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-23A,** 13.3 A  
**230 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-23A,** 13.3 A  
**400 V, 415 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-23A,** 13.3 A  
**500 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-23A,** 7.6 A  
**690 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-3,** 11.5 A  
**220 V, 230 V, 240 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-3,** 11.5 A  
**380 V, 400 V, 415 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-3,** 9 A  
**500 V**

**RATED OPERATIONAL**  
**CURRENT (IE) AT AC-3,** 4.9 A  
**660 V, 690 V**

**RATED OPERATIONAL** 10 A

**CURRENT (IE) AT DC-1,**

**LOAD-BREAK SWITCHES**

**L/R = 1 MS**

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-13,**

**CONTROL SWITCHES L/R**

**= 50 MS**

10 A

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-21,**

1 A

**240 V**

**SWITCHING CAPACITY**

**(MAIN CONTACTS,**

**GENERAL USE)**

16 A, Rated uninterrupted  
current max. (UL/CSA)

**SAFETY PARAMETER (EN**

**ISO 13849-1)**

B10d values as per EN ISO  
13849-1, table C.1

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-23A,**

5 A

**120 V**

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-23A,**

10 A

**24 V**

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-23A,**

5 A

**240 V**

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-23A,**

10 A

**48 V**

**RATED OPERATIONAL**

**CURRENT (IE) AT DC-23A,**

10 A

**60 V**

**RATED OPERATIONAL**

**CURRENT (IE) STAR-**

**DELTA AT AC-3, 230 V**

20 A

**RATED OPERATIONAL**

**CURRENT (IE) STAR-**

**DELTA AT AC-3, 400 V**

20 A

**RATED OPERATIONAL**

**CURRENT (IE) STAR-**

**DELTA AT AC-3, 500 V**

15.6 A

**RATED OPERATIONAL**

**CURRENT (IE) STAR-**

**DELTA AT AC-3, 690 V**

8.5 A

**RATED OPERATIONAL**

**CURRENT FOR SPECIFIED**

20 A

**HEAT DISSIPATION (IN)**

**RATED OPERATIONAL**

**POWER AT AC-23A,**

3 kW

**220/230 V, 50 Hz**

**RATED OPERATIONAL**

**POWER AT AC-23A, 400 V,**

5.5 kW

**50 Hz**

**RATED OPERATIONAL**

**POWER AT AC-23A, 500 V,**

7.5 kW

**50 HZ****RATED OPERATIONAL**

**POWER AT AC-23A, 690 V, 50 HZ** 5.5 kW

**RATED OPERATIONAL**

**POWER AT AC-3, 415 V, 50 HZ** 5.5 kW

**RATED OPERATIONAL**

**POWER AT AC-3, 690 V, 50 HZ** 4 kW

**RATED OPERATIONAL**

**POWER STAR-DELTA AT 220/230 V, 50 HZ** 5.5 kW

**RATED OPERATIONAL**

**POWER STAR-DELTA AT 380/400 V, 50 HZ** 7.5 kW

**RATED OPERATIONAL**

**POWER STAR-DELTA AT 500 V, 50 HZ** 7.5 kW

**RATED OPERATIONAL**

**POWER STAR-DELTA AT 690 V, 50 HZ** 5.5 kW

**TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)** 1 x (0.75 - 2.5) mm<sup>2</sup>, ferrules to DIN 46228  
2 x (0.75 - 2.5) mm<sup>2</sup>, ferrules to DIN 46228

**SHORT-CIRCUIT CURRENT RATING (BASIC RATING)** 50A, max. Fuse, SCCR (UL/CSA)  
5 kA, SCCR (UL/CSA)

**SHORT-CIRCUIT CURRENT RATING (HIGH FAULT)** 10 kA, SCCR (UL/CSA)  
20 A, Class J, max. Fuse, SCCR (UL/CSA)

**SHORT-CIRCUIT PROTECTION RATING** 20 A gG/gL, Fuse, Contacts

**TERMINAL CAPACITY (SOLID/FLEXIBLE WITH FERRULE AWG)** 18 - 14

**TERMINAL CAPACITY (SOLID/STRANDED)** 1 x (1 - 2.5) mm<sup>2</sup>  
2 x (1 - 2.5) mm<sup>2</sup>

**TIGHTENING TORQUE** 8.8 lb-in, Screw terminals  
1 Nm, Screw terminals

**UNINTERRUPTED CURRENT** Rated uninterrupted current lu is specified for max. cross-section.

**DESIGN** 15431

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