



Eaton 012280

Eaton Moeller® series T0 Reversing switches, T0, 20 A, rear mounting, 3 contact unit(s), Contacts: 6, 60 °, maintained, With 0 (Off) position, 2-0-1, SOND 30, Design number 123



PRODUCT NAME	Eaton Moeller® series T0 Reversing switch
CATALOG NUMBER	012280
PRODUCT LENGTH/DEPTH	137 mm
PRODUCT HEIGHT	48 mm
PRODUCT WIDTH	48 mm
PRODUCT WEIGHT	0.163 kg
CERTIFICATIONS	IEC/EN 60947-3 UL 60947-4-1 UL File No.: E36332 IEC/EN 60947 UL CSA Class No.: 3211-05 UL Category Control No.: NLRV CSA-C22.2 No. 94 CSA File No.: 012528 CSA CE VDE 0660 IEC/EN 60204 CSA-C22.2 No. 60947-4-1-14



Powering Business Worldwide

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TYPE	Reversing switch
PRODUCT CATEGORY	Control switches
FEATURES	Version as reversing switch
ACTUATOR COLOR	Black
ACTUATOR FUNCTION	With 0 (Off) position Maintained
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.
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.

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DECLARATIONS OF CONFORMITY	eaton-step-switch-declaration-of-conformity-uk251327en.pdf
□□□□□	IL03801021Z
□□□	eaton-rotary-switches-t0-reversing-switch-wiring-diagram-011.eps
□□□	eaton-rotary-switches-t0-reversing-switch-wiring-diagram-012.eps
□□	eaton-rotary-switches-mounting-t0-step-switch-dimensions-020.eps
□□	eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-010.eps

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.
FITTED WITH:	Black thumb grip and front plate
OPERATING FREQUENCY	1200 Operations/h
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
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
RATED PERMANENT CURRENT AT AC-21, 400 V	20 A
RATED UNINTERRUPTED CURRENT (IU)	20 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

SWITCHING ANGLE	60 °
SWITCHING POWER AT 400 V	5.5 kW
VOLTAGE PER CONTACT PAIR IN SERIES	60 V
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	5.5 kW
DEVICE CONSTRUCTION	Built-in device fixed built-in technique
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	0.32 kA 320 A, Contacts, 1 second
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
DESIGN	123
MOUNTING POSITION	As required
ACTUATOR TYPE	Short thumb-grip
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	0.5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 1-PHASE	1 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	1.5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	3 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	7.5 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	7.5 HP
EQUIPMENT HEAT	0 W

DISSIPATION, CURRENT-DEPENDENT PVID	
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.6 W
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	6 kA
OVERVOLTAGE CATEGORY	III
CONTROL CIRCUIT RELIABILITY	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
DEGREE OF PROTECTION (FRONT SIDE)	IP65
NUMBER OF POLES	3
MOUNTING METHOD	Rear mounting
DEGREE OF PROTECTION	NEMA 12
SUITABLE FOR	Intermediate mounting Ground mounting Branch circuits, suitable as motor disconnect, (UL/CSA)
NUMBER OF SWITCHES	1
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140
SCREW SIZE	M3.5, Terminal screw
INSCRIPTION	2-0-1
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
LIFESPAN, MECHANICAL	400,000 Operations
LOAD RATING	2 x I _e (with intermittent operation class 12, 25 % duty factor) 1.3 x I _e (with intermittent operation class 12, 60 % duty factor) 1.6 x I _e (with intermittent operation class 12, 40 % duty factor)

SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	10A, IU, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	P300 (UL/CSA) A600 (UL/CSA)
TERMINAL CAPACITY	2 x (0.75 - 2.5) mm ² , flexible with ferrules to DIN 46228 18 - 14 AWG, solid or flexible with ferrule 1 x (0.75 - 2.5) mm ² , flexible with ferrules to DIN 46228 2 x (1 - 2.5) mm ² , solid or stranded 1 x (1 - 2.5) mm ² , solid or stranded
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
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACT UNITS	3
NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V	1
NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V	3
NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V	1
NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V	5
NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V	2
NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V	3
RATED BREAKING CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)	100 A
RATED BREAKING CAPACITY AT 400/415 V (COS PHI TO IEC 60947-3)	110 A
RATED BREAKING CAPACITY AT 500 V (COS PHI TO IEC 60947-3)	80 A
RATED BREAKING	60 A

CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)	
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	130 A
RATED OPERATING VOLTAGE (UE) - MAX	690 V
RATED OPERATING VOLTAGE (UE) - MIN	690 V
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
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
RATED OPERATIONAL CURRENT (IE) AT AC-21, 440 V	20 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 230 V	13.3 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 400 V, 415 V	13.3 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 500 V	13.3 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 690 V	7.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	11.5 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	11.5 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	4.9 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES L/R = 1 MS	10 A

RATED OPERATIONAL CURRENT (IE) AT DC-13, CONTROL SWITCHES L/R = 50 MS	10 A
RATED OPERATIONAL CURRENT (IE) AT DC-21, 240 V	1 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	5 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	10 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	5 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	10 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	10 A
RATED OPERATIONAL CURRENT (IE) STAR-DELTA AT AC-3, 220/230 V	20 A
RATED OPERATIONAL CURRENT (IE) STAR-DELTA AT AC-3, 380/400 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 HEAT DISSIPATION (IN)	20 A
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	5.5 kW
RATED OPERATIONAL	5.5 kW

POWER AT AC-3, 415 V, 50 HZ	
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
TIGHTENING TORQUE	1 Nm, Screw terminals 8.8 lb-in, Screw terminals
UNINTERRUPTED CURRENT	Rated uninterrupted current I _u is specified for max. cross-section.
HOUSING COLOR	Black
HOUSING MATERIAL	Plastic

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