Specifications

Photo is representative

Eaton 086335

Eaton Moeller® series T0 Main switch, 3 pole + N + 1 N/O + 1 N/C, 20 A, Emergency-Stop function, 90 °, flush mounting T0-3-15681/EA/SVB

General specifications		
PRODUCT NAME	Eaton Moeller® series T0 Main switch	
CATALOG NUMBER	086335	
EAN	4015080863359	
PRODUCT LENGTH/DEPTH	120 mm	
PRODUCT HEIGHT	74 mm	
PRODUCT WIDTH	65 mm	
PRODUCT WEIGHT	0.142 kg	
CERTIFICATIONS	IEC/EN 60204 IEC/EN 60947-3 CSA-C22.2 No. 94 CSA Class No.: 3211-05 CSA File No.: 012528 UL File No.: E36332 CSA-C22.2 No. 60947-4-1- 14 UL Category Control No.: NLRV CE CSA UL 60947-4-1 IEC/EN 60947 UL VDE 0660	
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second	
MODEL CODE	T0-3-15681/EA/SVB	



Features & Functions

FEATURES	Version as emergency stop installation Version as maintenance- /service switch Version as main switch
FITTED WITH:	Red rotary handle and yellow locking ring
FUNCTIONS	Emergency switching off function Interlockable
NUMBER OF POLES	4

General		
DEGREE OF PROTECTION	NEMA 12	
DEGREE OF PROTECTION (FRONT SIDE)	IP65	
LIFESPAN, MECHANICAL	400,000 Operations	
MOUNTING METHOD	Flush mounting	
MOUNTING POSITION	As required	
NUMBER OF CONTACT UNITS	3	
OPERATING FREQUENCY	1200 Operations/h	
OVERVOLTAGE CATEGORY	Ш	
POLLUTION DEGREE	3	
PRODUCT CATEGORY	Main switch	
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC	
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140	
SAFETY PARAMETER (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1	
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, Half- sinusoidal shock 20 ms	
SUITABLE FOR	Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting center	
SWITCHING ANGLE	90 °	

Climatic environme	ntal conditions	Terminal capaciti	ies
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C	TERMINAL CAPACITY	2 x (0.75 - 2.5) mm², flexible with ferrules to
AMBIENT OPERATING TEMPERATURE - MAX	50 °C		DIN 46228 18 - 14 AWG, solid or flexible with ferrule
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C		1 x (0.75 - 2.5) mm ² , flexible with ferrules to DIN 46228
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C		1 x (1 - 2.5) mm², solid or stranded 2 x (1 - 2.5) mm², solid or stranded
CLIMATIC PROOFING Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30	SCREW SIZE	M3.5, Terminal screw	
	TIGHTENING TORQUE	1 Nm, Screw terminals 8.8 lb-in, Screw terminals	

Electrical rating

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 CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)	60 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 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 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,	1 A

Short-circuit rating

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	6 kA
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	320 A, Contacts, 1 second 0.32 kA
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	5 kA, SCCR (UL/CSA) 50A, max. Fuse, 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

240 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	10 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) AT DC-23A, 120 V	5 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	5 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 POWER AT AC-3, 380/400 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 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	5.5 kW

POWER STAR-DELTA AT 220/230 V, 50 HZ	
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
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	20 A
UNINTERRUPTED CURRENT	Rated uninterrupted current lu is specified for max. cross-section.

Switching capacity

LOAD RATING	1.6 x I_e (with intermittent operation class 12, 40 % duty factor) 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)
NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V	1
NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V	1
NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V	2
NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V	3
NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V	3
NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V	5
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	16 A, Rated uninterrupted current max. (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	10A, IU, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600 (UL/CSA) P300 (UL/CSA)
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	130 A
VOLTAGE PER CONTACT PAIR IN SERIES	60 V

Motor rating

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

Contacts

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

Actuator	
ACTUATOR COLOR	Red
ACTUATOR TYPE	Door coupling rotary drive

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID	0.6 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	20 A
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS	0 W
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.
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	ls the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	ls the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	ls the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	ls the panel builder's responsibility.
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.

Resources	
BROCHURES	Brochure - T Rotary Cam switch and P Switch- disconnector
CATALOGUES	<u>P Switch-disconnectors and T Rotary cam</u> switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	DA-DC-00004895.pdf DA-DC-00004927.pdf
DRAWINGS	<u>eaton-rotary-switches-mounting-t0-main-switch-</u> <u>dimensions-003.eps</u>

	<u>eaton-rotary-switches-padlock-t0-main-switch-</u> <u>dimensions.eps</u>
	<u>eaton-rotary-switches-t0-main-switch-</u> <u>symbol.eps</u>
	<u>eaton-general-mounting-p1-main-switch-</u> <u>symbol.eps</u>
ECAD MODEL	ETN.086335.edz
INSTALLATION INSTRUCTIONS	<u>IL03801020Z</u>
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-t0_3_ea DA-CD-t0_3_ea
PRODUCT	MZ008006ZU Orderform Customized Switch.pdf
NOTIFICATIONS	MZ008005ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-switch-t0-main-switch- wiring-diagram-004.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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