## Specifications

## Eaton 003170

Eaton Moeller® series T3 Main switch, T3, 32 A, flush mounting, 5 contact unit(s), 9-pole, Emergency switching off function, With red rotary handle and yellow locking ring

General specificati	ons
PRODUCT NAME	Eaton Moeller® series T3 Main switch
CATALOG NUMBER	003170
EAN	4015080031703
PRODUCT LENGTH/DEPTH	150 mm
PRODUCT HEIGHT	74 mm
PRODUCT WIDTH	65 mm
PRODUCT WEIGHT	0.322 kg
CERTIFICATIONS	CSA IEC/EN 60947-3 UL File No.: E36332 UL Category Control No.: NLRV CE IEC/EN 60204 CSA-C22.2 No. 94 CSA Class No.: 3211-05 UL UL 60947-4-1 VDE 0660 CSA-C22.2 No. 60947-4-1-14 CSA File No.: 012528 IEC/EN 60947
CATALOG NOTES	Rated Short-time Withstand Current (lcw) for a time of 1 second
MODEL CODE	T3-5-8345/EA/SVB



Features & Functio	ns
FEATURES	Version as main switch Version as emergency stop installation Version as maintenance- /service switch
FITTED WITH:	Red rotary handle and yellow locking ring
FUNCTIONS	Interlockable Emergency switching off function
NUMBER OF POLES	9

General	
DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	500,000 Operations
MOUNTING METHOD	Flush mounting
MOUNTING POSITION	As required
NUMBER OF CONTACT UNITS	5
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 environmental conditions	
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities	
TERMINAL CAPACITY	1 x (0.75 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228 1 x (1 - 6) mm <sup>2</sup> , solid or stranded 14 - 10 AWG, solid or flexible with ferrule 2 x (0.75 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (1 - 6) mm <sup>2</sup> , solid or stranded
SCREW SIZE	M4, Terminal screw
TIGHTENING TORQUE	1.6 Nm, Screw terminals 17.7 lb-in, Screw terminals

Electrical rating	
RATED BREAKING CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)	260 A
RATED BREAKING CAPACITY AT 400/415 V (COS PHI TO IEC 60947-3)	260 A
RATED BREAKING CAPACITY AT 500 V (COS PHI TO IEC 60947-3)	240 A
RATED BREAKING CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)	170 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	23.7 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	23.7 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	23.7 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	14.7 A
RATED OPERATIONAL CURRENT (IE) AT AC-21, 440 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 230 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 400 V, 415 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 500 V	26.4 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 690 V	17 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES L/R = 1 MS	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, CONTROL SWITCHES L/R = 50 MS	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-21,	1 A

Short-circuit rating	
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	1 kA
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	650 A, Contacts, 1 second 0.65 kA
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	40A, max. Fuse, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT)	40 A, Class J, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING	35 A gG/gL, Fuse, Contacts

240 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	12 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	5 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 220/230 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 380/400 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 500 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 690 V	25.5 A
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	15 kW
RATED OPERATIONAL	7.5 kW

POWER STAR-DELTA AT 220/230 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 380/400 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ  RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX  RATED UNINTERRUPTED CURRENT (IU)  UNINTERRUPTED CURRENT (IU)  Rated uninterrupted current lu is specified for max. cross-section.		
POWER STAR-DELTA AT 380/400 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ  RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX  RATED UNINTERRUPTED CURRENT (IU)  UNINTERRUPTED CURRENT Rated uninterrupted current lu is specified for		
POWER STAR-DELTA AT 500 V, 50 HZ  RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ  RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX  RATED UNINTERRUPTED CURRENT (IU)  UNINTERRUPTED CURRENT lu is specified for	POWER STAR-DELTA AT	15 kW
POWER STAR-DELTA AT 690 V, 50 HZ  RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX  RATED UNINTERRUPTED CURRENT (IU)  Rated uninterrupted current lu is specified for	POWER STAR-DELTA AT	18.5 kW
VOLTAGE (UE) AT AC - MAX  RATED UNINTERRUPTED CURRENT (IU)  UNINTERRUPTED CURRENT  Rated uninterrupted current lu is specified for	POWER STAR-DELTA AT	22 kW
CURRENT (IU)  UNINTERRUPTED CURRENT  Rated uninterrupted current lu is specified for	VOLTAGE (UE) AT AC -	690 V
CURRENT current lu is specified for		32 A
		current lu is specified for

Switching capacity	
LOAD RATING	$1.3 \times l_e$ (with intermittent operation class 12, 60 % duty factor) $2 \times l_e$ (with intermittent operation class 12, 25 % duty factor) $1.6 \times l_e$ (with intermittent operation class 12, 40 % 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)	25 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) P600 (UL/CSA)
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	320 A
VOLTAGE PER CONTACT PAIR IN SERIES	60 V

**PAIR IN SERIES** 

ASSIGNED MOTOR POWER AT 115/120 V, 60 1.5 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 200/208 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 200/208 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 7.5 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	Motor rating	
POWER AT 200/208 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 200/208 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	POWER AT 115/120 V, 60	1.5 HP
POWER AT 200/208 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	POWER AT 200/208 V, 60	3 HP
POWER AT 230/240 V, 60 3 HP HZ, 1-PHASE  ASSIGNED MOTOR POWER AT 230/240 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	POWER AT 200/208 V, 60	3 HP
POWER AT 230/240 V, 60 3 HP HZ, 3-PHASE  ASSIGNED MOTOR POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	POWER AT 230/240 V, 60	3 HP
POWER AT 460/480 V, 60 7.5 HP HZ, 3-PHASE	POWER AT 230/240 V, 60	3 HP
ASSIGNED MOTOR	POWER AT 460/480 V, 60	7.5 HP
POWER AT 575/600 V, 60 10 HP HZ, 3-PHASE		10 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)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0

d
or 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	1.1 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	32 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	Is the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls 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	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	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	DA-DC-00004894.pdf DA-DC-00004923.pdf
DRAWINGS	eaton-rotary-switches-mounting-t3-main-switch- dimensions-005.eps

	eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps  eaton-rotary-switches-t0-main-switch-symbol.eps  eaton-general-mounting-p1-main-switch-
	symbol.eps
ECAD MODEL	ETN.003170.edz
INSTALLATION INSTRUCTIONS	<u>IL03801020Z</u>
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-t3 5 ea DA-CD-t3 5 ea
PRODUCT	MZ008006ZU Orderform Customized Switch.pdf
NOTIFICATIONS	MZ008005ZU Orderform Customized Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-t0-on-off-switch-wiring-diagram-042.eps  eaton-rotary-switches-t0-on-off-switch-wiring-diagram-041.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	



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