Specifications





Eaton 064945

Eaton Moeller® series T0 Star-delta switch, 20 A, service distr. board mounting, 4 contact units, Contacts: 8, 60 °, maintained, 0 (Off) position, 0-Y-D, Design no. 8410

General specifications	
PRODUCT NAME	Eaton Moeller® series T0 Star-delta switch
CATALOG NUMBER	064945
MODEL CODE	T0-4-8410/IVS
EAN	4015080649458
PRODUCT LENGTH/DEPTH	111 mm
PRODUCT HEIGHT	55 mm
PRODUCT WIDTH	54 mm
PRODUCT WEIGHT	0.179 kg
CERTIFICATIONS	UL 60947-4-1 CE IEC/EN 60947 UL File No.: E36332 IEC/EN 60204 UL Category Control No.: NLRV VDE 0660 CSA Class No.: 3211-05 CSA-C22.2 No. 94 IEC/EN 60947-3 CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 UL CSA
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second
GLOBAL CATALOG	064945
PRODUCT TYPE	Star-delta switch

Product specifications

TYPE	Star-delta switch
PRODUCT CATEGORY	Control switches
ACTUATOR FUNCTION	Maintained With 0 (Off) position
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	Meets the product standard's requirements.
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	Is the panel builder's

ELECTRICAL CIRCUITS AND CONNECTIONS	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:	0 (off) position 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
ENCLOSURE MATERIAL	Plastic
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
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 DISSIPATION, CURRENT-DEPENDENT PVID	0 W
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
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACT UNITS	4
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	320 A, Contacts, 1 second
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
MOUNTING POSITION	As required
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	6 kA
MOUNTING METHOD	Service distribution board mounting
OVERVOLTAGE CATEGORY	III
CONTROL CIRCUIT RELIABILITY	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
NUMBER OF POLES	3
DEGREE OF PROTECTION	IP30
NUMBER OF CONTACTS	8
MODEL	Star-delta switch
DEGREE OF PROTECTION (FRONT SIDE)	IP30 NEMA 2
INSCRIPTION	0-Y-D
LIFESPAN, MECHANICAL	400,000 Operations
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140
RATED OPERATIONAL CURRENT (IE)	20 A at AC-3, 400 V star-delta 8.5 A at AC-3, 690 V star-delta 20 A at AC-3, 230 V star-delta 15.6 A at AC-3, 500 V star-delta
SCREW SIZE	M3.5, Terminal screw

SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
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)
TIGHTENING TORQUE	8.8 lb-in, Screw terminals 1 Nm, Screw terminals
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600 (UL/CSA) P300 (UL/CSA)
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 CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)	60 A
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	130 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 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
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
SHORT-CIRCUIT PROTECTION RATING	20 A gG/gL, Fuse, Contacts
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 2.5) mm², ferrules to DIN 46228 1 x (0.75 - 2.5) mm², ferrules to DIN 46228
SUITABLE FOR	Ground mounting Distribution board installation Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting
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	10 A

CURRENT (IE) AT DC-23A, 60 V	
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 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
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	20 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
SWITCHING ANGLE	60 °
VOLTAGE PER CONTACT PAIR IN SERIES	60 V
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT)	10 kA, SCCR (UL/CSA) 20 A, Class J, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	50A, max. Fuse, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
TERMINAL CAPACITY (SOLID/FLEXIBLE WITH FERRULE AWG)	18 - 14

TERMINAL CAPACITY (SOLID/STRANDED)	1 x (1 - 2.5) mm² 2 x (1 - 2.5) mm²
UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.
DESIGN	8410

Resources

BROCHURES	Brochure - T Rotary Cam switch and P Switch-disconnector
CATALOGS	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	eaton-step-switch-declaration-of-conformity-eu260187en.pdf eaton-step-switch-declaration-of-conformity-uk260198en.pdf
DRAWINGS	eaton-rotary-switches-mounting-t0-step-switch-dimensions-005.eps eaton-rotary-switches-mounting-t0-step-switch-dimensions.eps eaton-rotary-switches-front-plate-t0-star-delta-switch-symbol-006.eps eaton-general-rotary-switch-t0-step-switch-symbol-005.eps eaton-rotary-switches-mounting-t0-changeover-switch-3d-drawing.eps
ECAD MODEL	ETN.064945.edz
INSTALLATION INSTRUCTIONS	IL03801006Z
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-t0_4_ivs
PRODUCT NOTIFICATIONS	MZ008005ZU_Orderform_Customized_Switch.pdf MZ008006ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-star-delta-t0-star-delta-switch-wiring-diagram.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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