

Reversing switches, T5B, 63 A, flush mounting, 3 contact unit(s), Contacts: 5, 45 °, momentary, With 0 (Off) position, with spring-return from both directions to 0, 1>0<2, Design number 8228

Part no. **T5B-3-8228/E**
092374

General specifications		
Product name		Eaton Moeller® series T5B Reversing switch
Part no.		T5B-3-8228/E
EAN		4015080923749
Product Length/Depth		124 millimetre
Product height		88 millimetre
Product width		88 millimetre
Product weight		0.59 kilogram
Certifications		CSA-C22.2 No. 60947-4-1-14 VDE 0660 CSA-C22.2 No. 94 CSA CSA Class No.: 3211-05 CE IEC/EN 60947 UL File No.: E36332 IEC/EN 60947-3 UL Category Control No.: NLRV IEC/EN 60204 UL UL 60947-4-1 CSA File No.: 012528
Product Tradename		T5B
Product Type		Reversing switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (Icw) for a time of 1 second
Features & Functions		
Enclosure material		Plastic
Fitted with:		Black thumb grip and front plate 0 (off) position Retraction in 0-position
Inscription		1>0<2
Number of poles		3
General information		
Degree of protection		NEMA 1 IP65 NEMA 12
Degree of protection (front side)		IP65 NEMA 12
Lifespan, mechanical		500,000 Operations
Model		Reversing switch
Mounting method		Flush mounting
Mounting position		As required
Number of contact units		3
Operating frequency		1200 Operations/h
Overvoltage category		III
Pollution degree		3
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
Switching angle		45 °
Type		Reversing switch

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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities		
Terminal capacity (flexible with ferrule)		2 x (1.5 - 10) mm ² , ferrule to DIN 46228 1 x (1 - 25) mm ² , ferrules to DIN 46228
Terminal capacity (solid/flexible with ferrule AWG)		12 - 4
Terminal capacity (solid/stranded)		1 x (2.5 - 35) mm ² 2 x (2.5 - 16) mm ²
Screw size		M6, Terminal screw
Tightening torque		4 Nm, Screw terminals 35.4 lb-in, Screw terminals
Electrical rating		
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		520 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		600 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		480 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		340 A
Rated operational current (Ie)		29.4 A at AC-3, 690 V star-delta 57.2 A at AC-3, 500 V star-delta 63 A at AC-3, 230 V star-delta 63 A at AC-3, 400 V star-delta
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		51 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		41 A
Rated operational current (Ie) at AC-3, 500 V		33 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		17 A
Rated operational current (Ie) at AC-21, 440 V		63 A
Rated operational current (Ie) at AC-23A, 230 V		63 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		63 A
Rated operational current (Ie) at AC-23A, 500 V		33 A
Rated operational current (Ie) at AC-23A, 690 V		23.8 A
Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms		63 A
Rated operational current (Ie) at DC-13, control switches L/R = 50 ms		25 A
Rated operational current (Ie) at DC-23A, 24 V		50 A
Rated operational current (Ie) at DC-23A, 48 V		50 A
Rated operational current (Ie) at DC-23A, 60 V		50 A
Rated operational current (Ie) at DC-23A, 120 V		25 A
Rated operational current (Ie) at DC-23A, 240 V		20 A
Rated operational power at AC-3, 380/400 V, 50 Hz		22 kW
Rated operational power at AC-3, 415 V, 50 Hz		22 kW
Rated operational power at AC-3, 690 V, 50 Hz		15 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		18.5 kW
Rated operational power at AC-23A, 400 V, 50 Hz		30 kW
Rated operational power at AC-23A, 500 V, 50 Hz		22 kW
Rated operational power at AC-23A, 690 V, 50 Hz		22 kW
Rated operational power star-delta at 220/230 V, 50 Hz		18.5 kW
Rated operational power star-delta at 380/400 V, 50 Hz		30 kW
Rated operational power star-delta at 500 V, 50 Hz		37 kW
Rated operational power star-delta at 690 V, 50 Hz		22 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		63 A
Uninterrupted current		Rated uninterrupted current Iu is specified for max. cross-section.
Short-circuit rating		
Rated conditional short-circuit current (Iq)		2 kA

Rated short-time withstand current (I _{cw})	1,3 kA, Contacts, 1 second
Short-circuit current rating (high fault)	10 kA, SCCR (UL/CSA) 100 A, Class J, max. Fuse, SCCR (UL/CSA)
Short-circuit protection rating	80 A gG/gL, Fuse, Contacts
Switching capacity	
Load rating	2 x I _# (with intermittent operation class 12, 25 % duty factor) 1.6 x I _# (with intermittent operation class 12, 40 % duty factor) 1.3 x I _# (with intermittent operation class 12, 60 % duty factor)
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	6
Switching capacity (main contacts, general use)	63 A, Rated uninterrupted current max. (UL/CSA)
Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)	800 A
Voltage per contact pair in series	60 V
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	3 HP
Assigned motor power at 200/208 V, 60 Hz, 1-phase	7.5 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase	15 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	10 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	15 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	40 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	40 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
Number of contacts	5
Actuator	
Actuator function	Momentary With 0 (Off) position Spring-return from both directions to 0
Actuator type	Short thumb-grip
Design verification	
Equipment heat dissipation, current-dependent P _{vid}	0 W
Heat dissipation capacity P _{diss}	0 W
Heat dissipation per pole, current-dependent P _{vid}	4.5 W
Rated operational current for specified heat dissipation (I _n)	63 A
Static heat dissipation, non-current-dependent P _{vs}	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	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.
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.

Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Off-load switch (EC001105)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Load-break switch (ecl@ss13-27-37-14-05 [AKF062018])

Model			Reversing switch
Number of poles			3
With zero (off) position			Yes
With retraction in 0-position			Yes
Rated permanent current I _u		A	63
Rated operation current I _e at AC-3, 400 V		A	41
Rated operation power at AC-3, 400 V		kW	22
Degree of protection (IP), front side			IP65
Degree of protection (NEMA), front side			12
Number of auxiliary contacts as normally closed contact			0
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as change-over contact			0
Suitable for floor mounting			No
Suitable for front mounting			Yes
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Complete device in housing			No
Housing material			Plastic
Type of control element			Short thumb-grip
Type of electrical connection of main circuit			Screw connection