

Star-delta switches, T5B, 63 A, surface mounting, 4 contact unit(s),  
Contacts: 8, 60 °, maintained, With 0 (Off) position, 0-Y-D, Design number  
8410



**Part no.** T5B-4-8410/14  
207234  
**EL Number** 1456963  
(Norway)

General specifications	
Product name	Eaton Moeller® series T5B Star-delta switch
Part no.	T5B-4-8410/14
EAN	4015082072346
Product Length/Depth	240 millimetre
Product height	197 millimetre
Product width	160 millimetre
Product weight	1.435 kilogram
Certifications	CE UL Category Control No.: NLRV IEC/EN 60204 IEC/EN 60947-3 CSA-C22.2 No. 60947-4-1-14 CSA File No.: 012528 IEC/EN 60947 VDE 0660 CSA-C22.2 No. 94 CSA Class No.: 3211-05 UL 60947-4-1 CSA UL File No.: E36332 UL
Product Tradename	T5B
Product Type	Star-delta switch
Product Sub Type	None
Catalog Notes	Rated Short-time Withstand Current (Icw) for a time of 1 second
Features & Functions	
Enclosure material	Plastic
Features	Complete device in housing
Fitted with:	Black thumb grip and front plate 0 (off) position
Inscription	0-Y-D
Number of poles	3
General information	
Degree of protection	NEMA 1 NEMA 12 IP65
Degree of protection (front side)	IP65 NEMA 12
Lifespan, mechanical	500,000 Operations
Model	Star-delta switch
Mounting method	Surface mounting
Mounting position	As required
Number of contact units	4
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	Ground mounting Branch circuits, suitable as motor disconnect, (UL/CSA)

Switching angle		60 °
Type		Star-delta switch
<b>Climatic environmental conditions</b>		
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		40 °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
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		1 x (1 - 25) mm <sup>2</sup> , ferrules to DIN 46228 2 x (1.5 - 10) mm <sup>2</sup> , ferrule to DIN 46228
Terminal capacity (solid/flexible with ferrule AWG)		12 - 4
Terminal capacity (solid/stranded)		1 x (2.5 - 35) mm <sup>2</sup> 2 x (2.5 - 16) mm <sup>2</sup>
Screw size		M6, Terminal screw
Tightening torque		35.4 lb-in, Screw terminals 4 Nm, Screw terminals
<b>Electrical rating</b>		
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)		63 A at AC-3, 400 V star-delta 29.4 A at AC-3, 690 V star-delta 63 A at AC-3, 230 V star-delta 57.2 A at AC-3, 500 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		37 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.

<b>Short-circuit rating</b>		
Rated conditional short-circuit current (I <sub>q</sub> )		2 kA
Rated short-time withstand current (I <sub>cw</sub> )		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
<b>Switching capacity</b>		
Load rating		2 x I <sub>#</sub> (with intermittent operation class 12, 25 % duty factor) 1.6 x I <sub>#</sub> (with intermittent operation class 12, 40 % duty factor) 1.3 x I <sub>#</sub> (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
<b>Motor rating</b>		
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
<b>Contacts</b>		
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		8
<b>Actuator</b>		
Actuator function		With 0 (Off) position Maintained
Actuator type		Short thumb-grip
<b>Design verification</b>		
Equipment heat dissipation, current-dependent P <sub>vid</sub>		0 W
Heat dissipation capacity P <sub>diss</sub>		0 W
Heat dissipation per pole, current-dependent P <sub>vid</sub>		4.5 W
Rated operational current for specified heat dissipation (I <sub>n</sub> )		63 A
Static heat dissipation, non-current-dependent P <sub>vs</sub>		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 (ec1@ss13-27-37-14-05 [AKF062018])		
Model		Star-delta switch
Number of poles		3
With zero (off) position		Yes
With retraction in 0-position		No
Rated permanent current I <sub>u</sub>	A	63
Rated operation current I <sub>e</sub> at AC-3, 400 V	A	41
Rated operation power at AC-3, 400 V	kW	37
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		Yes
Suitable for front mounting		No
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Complete device in housing		Yes
Housing material		Plastic
Type of control element		Short thumb-grip
Type of electrical connection of main circuit		Screw connection