## **DATASHEET - T5B-1-102/I4/SVB**



Main switch, 2 pole, 63 A, Emergency-Stop function, 90 °, Lockable in the 0 (Off) position, surface mounting



T5B-1-102/I4/SVB Part no. Catalog No. 207238

**EL-Nummer** 0001417161 (Norway)

### **Delivery program**

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			T5B
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Number of poles			2 pole
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact sequence			1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Switching angle		o	90
Design number			102
Function			OFF O
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	30
Rated uninterrupted current	I <sub>u</sub>	Α	63
Note on rated uninterrupted current !u			Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
Number of contact units		contact unit(s)	1

# **Technical data**

General			
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL Switch-disconnector according to IEC/EN 60947-3
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Enclosed	°(	С	-25 - +40

Overvoltage category/pollution degree			III/3
		V AC	
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Contacts Machanian I waitables			
Mechanical variables			
Number of poles			2 pole
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	l <sub>u</sub>	Α	63
Note on rated uninterrupted current $!_{u}$			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x I <sub>e</sub>	2
AB 40 % DF		x I <sub>e</sub>	1.6
AB 60 % DF		x I <sub>e</sub>	1.3
Short-circuit rating		Ü	
Fuse		A gG/gL	80
Rated short-time withstand current (1 s current)	1		1300
	I <sub>cw</sub>	A <sub>rms</sub>	
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	2
Switching capacity		Α	800
cos φ rated making capacity as per IEC 60947-3			800
Rated breaking capacity cos φ to IEC 60947-3		A	
230 V		Α	520
400/415 V		Α	600
500 V		Α	480
690 V		Α	340
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	4.5
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO	4.5
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.5
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	Р	kW	
220 V 230 V	P	kW	15
230 V Star-delta	P	kW	18.5
400 V 415 V	P	kW	22
400 V Star-delta	P	kW	30
	P		
500 V		kW	22
500 V Star-delta	P	kW	37
690 V	P	kW	15
690 V Star-delta	Р	kW	22
Rated operational current motor load switch			
230 V	I <sub>e</sub>	Α	51
230 V star-delta	I <sub>e</sub>	Α	63
400V 415 V	I <sub>e</sub>	Α	41
400 V star-delta	I <sub>e</sub>	Α	63
500 V	I <sub>e</sub>	Α	33
500 V star-delta	I <sub>e</sub>	A	57.2
690 V	l <sub>e</sub>	A	17
690 V star-delta	l <sub>e</sub>	Α	29.4
AC-21A			

Rated operational current switch			
440 V	I <sub>e</sub>	Α	63
	'e	^	
AC-23A Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	18.5
	P		
400 V 415 V	P	kW	30
500 V 690 V	P	kW	22 22
Rated operational current motor load switch	r	kW	22
230 V		Α	63
	l <sub>e</sub>		
400 V 415 V	l <sub>e</sub>	A	63
500 V	l <sub>e</sub>	Α	33
690 V	l <sub>e</sub>	Α	23.8
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	Α	63
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l <sub>e</sub>	Α	50
Contacts		Quantity	1
48 V			
Rated operational current	I <sub>e</sub>	Α	50
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	Α	50
Contacts		Quantity	3
120 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	3
240 V			
Rated operational current	I <sub>e</sub>	Α	20
Contacts		Quantity	6
DC-13, Control switches L/R = 50 ms		, ,	
Rated operational current	I <sub>e</sub>	Α	25
Voltage per contact pair in series	-6	V	24
Control circuit reliability at 24 V DC, 10 mA	Fault	H <sub>F</sub>	
Control circuit reliability at 24 v bo, 10 min	probability	''F	< 10 <sup>-5</sup> , < 1 fault in 100000 operations
Terminal capacities			
Solid or stranded		$mm^2$	1 x (2,5 - 35) 2 x (2,5 - 16)
Flexible with ferrules to DIN 46228		2	1 x (1 - 25)
TOTAL STATE OF THE		mm <sup>2</sup>	2 x (1.5 - 10)
Terminal screw			M6
Tightening torque for terminal screw		Nm	4
Technical safety parameters:			
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Rating data for approved types			
Contacts		V 40	con
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		Α	63
Switching capacity			
Maximum motor rating			
Single-phase			

120 V AC	НР	3
200 V AC	НР	7.5
240 V AC	HP	10
Three-phase		
200 V AC	HP	15
240 V AC	HP	15
480 V AC	HP	40
600 V AC	HP	40
Short Circuit Current Rating	SCCR	
High fault rating	kA	10
max. Fuse	Α	100, Class J
Terminal capacity		
Solid or flexible conductor with ferrule	AWG	12 - 4
Terminal screw		M6
Tightening torque	lb-in	35.4

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	63
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	4.5
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
EC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties			
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 switch gear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear 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 7.0**

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

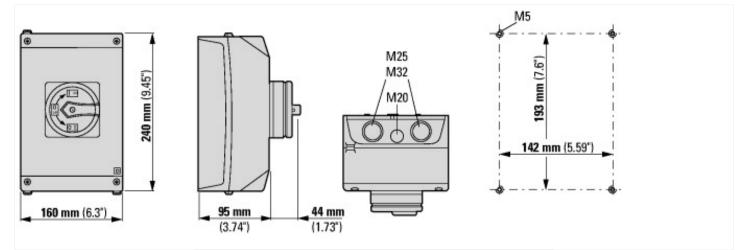
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

[AKF060013])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
Version as emergency stop installation		Yes
Version as reversing switch		No
Number of switches		1.
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	63
Rated permanent current at AC-23, 400 V	Α	63
Rated permanent current at AC-21, 400 V	Α	63
Rated operation power at AC-3, 400 V	kW	22
Rated short-time withstand current lcw	kA	1.3
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	30
Conditioned rated short-circuit current Iq	kA	2
Number of poles		2
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
Motor drive optional		No
Motor drive integrated		No
Voltage release optional		No
Device construction		Complete device in housing
Suitable for ground mounting		Yes
Suitable for front mounting 4-hole		No
Suitable for front mounting centre		No
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Colour control element		Red
Type of control element		Door coupling rotary drive
Interlockable		Yes
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		12

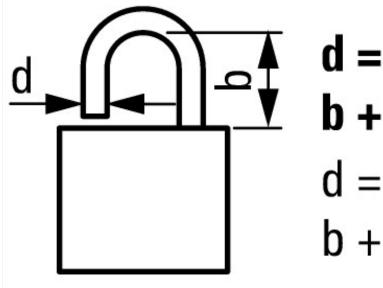
# Approvals

Product Standards	UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	12528
CSA Class No.	3211-05
North America Certification	UL listed, CSA certified
Specially designed for North America	Yes, with an alternative front plate and/or terminal markings to those of the IEC type and with additional labeling according to UL on the enclosure in combination with "+NA-I4" (105868)
Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

#### **Dimensions**



Cam switches T5B and T5 are of identical design, only their contacts are different



d = 4 - 8 mm b + d ≦ 47 mm

d = 0.16 - 0.31"

b + d ≤ 1.85"

≦3 padlocks

#### **Assets (links)**

**Declaration of CE Conformity** 00003073

**Instruction Leaflets** 

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