## DATASHEET - T5B-1-102/EA/SVB-SW



Main switch, T5B, 63 A, flush mounting, 1 contact unit(s), 2 pole, STOP function, With black rotary handle and locking ring, Lockable in the 0 (Off) position  $\frac{1}{2}$ 



Part no. T5B-1-102/EA/SVB-SW

Catalog No. 094468

Dolivory program			
Delivery program  Product range			Main switch maintenance switch Repair switch
Part group reference			T5B
Stop Function			STOP function
			With black rotary handle and locking ring
Number of poles			2 pole
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP65
Design			flush mounting
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Switching angle		0	90
Design number			102
Function			OFF ION
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 $I_u$ 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			
Open		°C	-25 - +50
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	$U_{\text{imp}}$	V AC	6000

Mechanical shock resistance		g	15
Mounting position			As required
Contacts			
Mechanical variables			
Number of poles			2 pole
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	Iu	Α	63
Note on rated uninterrupted current !u			Rated uninterrupted current $I_u$ 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 l <sub>e</sub>	1.6
AB 60 % DF		x I <sub>e</sub>	1.3
Short-circuit rating		e	
Fuse		A gG/gL	80
Rated short-time withstand current (1 s current)		A <sub>rms</sub>	1300
	·cw	rins	
Note on rated short-time withstand current lcw  Rated conditional short-circuit current		kA	Current for a time of 1 second 2
Switching capacity	Iq	KA.	_
cos φ rated making capacity as per IEC 60947-3		Α	800
Rated breaking capacity cos φ to IEC 60947-3		Α	
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 <sub>e</sub> (AC-15/230 V)		CO	4.5
	0	_	
Lifespan, mechanical		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	Р	kW	15
230 V Star-delta	Р	kW	18.5
400 V 415 V	Р	kW	22
400 V Star-delta	Р	kW	30
500 V	P	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	l <sub>e</sub>	Α	51
230 V star-delta	le	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>	Α	57.2
690 V	I <sub>e</sub>	Α	17
690 V star-delta	I <sub>e</sub>	A	29.4
AC-21A	1e		
Rated operational current switch			
Hated operational current switch  440 V		Α	63
TTU V	l <sub>e</sub>	^	00

AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	18.5
400 V 415 V	Р	kW	30
500 V	P	kW	22
690 V	Р	kW	22
Rated operational current motor load switch			
230 V	l <sub>e</sub>	Α	63
400 V 415 V	I <sub>e</sub>	A	63
500 V	I <sub>e</sub>	Α	33
690 V			23.8
	l <sub>e</sub>	Α	23.0
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	I <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
	'e		
Contacts		Quantity	3
120 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	3
240 V			
Rated operational current	l <sub>e</sub>	Α	20
Contacts		Quantity	6
DC-13, Control switches L/R = 50 ms			
Rated operational current	l <sub>e</sub>	Α	25
Voltage per contact pair in series		٧	24
Control circuit reliability at 24 V DC, 10 mA	Fault	H <sub>F</sub>	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
	probability		CTO 7.7 Figure III 100,000 ONICOTING OPERACION
Terminal capacities		_	4 (0.5 05)
Solid or stranded		mm <sup>2</sup>	1 x (2,5 - 35) 2 x (2,5 - 16)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1 - 25)
			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			
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
120 V A0		111	

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	$P_{\text{vid}}$	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	50
IEC/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 switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. $\label{eq:continuous}$

### **Technical data ETIM 7.0**

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

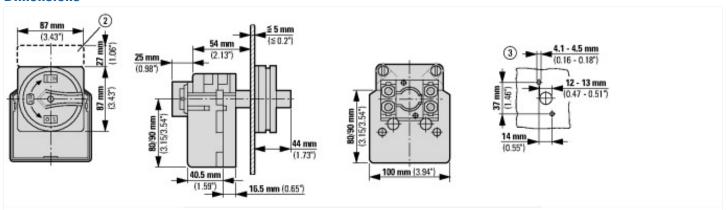
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

Version as main switch			Yes
Version as maintenance-/service switch			Yes
Version as safety switch			No
Version as emergency stop installation			No
Version as reversing switch			No
Number of switches			1
Max. rated operation voltage Ue AC	١	<b>/</b>	690
Rated operating voltage	١	<b>/</b>	690 - 690
Rated permanent current lu	A	4	63
Rated permanent current at AC-23, 400 V	A	4	63
Rated permanent current at AC-21, 400 V	A	4	63
Rated operation power at AC-3, 400 V	k	κW	22
Rated short-time withstand current lcw	k	κA	1.3
Rated operation power at AC-23, 400 V	k	κW	30
Switching power at 400 V	k	κW	30
Conditioned rated short-circuit current Iq	k	kΑ	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			Built-in device fixed built-in technique
Suitable for ground mounting			No
Suitable for front mounting 4-hole			No
Suitable for front mounting centre			Yes
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Black
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

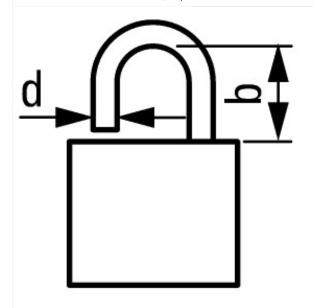
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Product Standards	UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	12528
CSA Class No.	3211-05
North America Certification	UL listed, CSA certified
Specially designed for North America	Yes, with an alternative front plate and/or terminal markings to those of the IEC type in combination with "+NA" (105864)
Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

### **Dimensions**



- ② ZFS-... Label mount not included as standard
- ③ Drilling dimensions door

Cam switches T5B and T5 are same size, 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** 

IL03801009Z2018\_05

#### **Additional product information (links)**

IL03801009Z (AWA1150-1692) Cam switch: swit	ch-disconnector	
IL03801009Z (AWA1150-1692) Cam switch: switch-disconnector	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801009Z2018_05.pdf	
Display flip catalog page.	http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=130	
Technical overview cam switch, switch- disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.2	
System overview cam switch T	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.4	
System overview switch-disconnector P	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6	
Key to part numbers Cam switch	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8	
Key to part numbers Switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8	
Switches for ATEX	http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html	
Ordering form for SOND switches and SOND front plates(DE_EN)	ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf	
Ordering form for SOND switches and SOND front plates(DE_EN)	ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf	