

# Main switch, 12-pole, 32 A, Emergency-Stop function, 90 °, flush mounting

Powering Business Worldwide\*

Part no. T3-6-8348/EA/SVB Article no. 090310

Delivery program	
Product range	Main switch maintenance switch Repair switch
Part group reference	Т3
Stop Function	Emergency switching off function
	With red rotary handle and yellow locking ring
Number of poles	12-pole
Degree of Protection	Front IP65
Design	flush mounting
Switching angle Punction	0 1 1 0
Motor rating AC-23A, 50 - 60 Hz	

400 V	P	kW	15
Rated uninterrupted current	I <sub>u</sub>	Α	32
Number of contact units		contact unit(s)	6

# **Technical data**

400 V 415 V

500 V

400 V Star-delta

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 <sub>imp</sub>	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Contacts			
Mechanical variables			
Number of poles			12-pole
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	I <sub>u</sub>	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current lu 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			
Fuse		A gG/gL	35
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	650
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	1
Switching capacity			
$\cos\phi$ rated making capacity as per IEC 60947-3		Α	320
Rated breaking capacity $\cos \phi$ to IEC 60947-3		Α	
230 V		Α	260
400/415 V		Α	260
500 V		Α	240
690 V		Α	170
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	1.1
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO	1.1
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	5.5
230 V Star-delta	P	kW	7.5

kW

kW

11

15

15

Р

500 V Star-delta	Р	kW	18.5
690 V	P	kW	11
690 V Star-delta	P	kW	22
Rated operational current motor load switch	•	KVV	
230 V	I <sub>e</sub>	A	23.7
230 V star-delta	I <sub>e</sub>	A	32
400V 415 V	I <sub>e</sub>	A	23.7
400 V star-delta		A	32
500 V	l <sub>e</sub>		23.7
	l <sub>e</sub>	A	
500 V star-delta	l <sub>e</sub>	A	32
690 V	l <sub>e</sub>	Α	14.7
690 V star-delta	l <sub>e</sub>	Α	25.5
AC-21A			
Rated operational current switch			
440 V	l <sub>e</sub>	Α	32
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	7.5
400 V 415 V	P	kW	15
500 V	P	kW	15
690 V	Р	kW	15
Rated operational current motor load switch			
230 V	l <sub>e</sub>	Α	32
400 V 415 V	l <sub>e</sub>	Α	32
500 V	l <sub>e</sub>	Α	26.4
690 V	l <sub>e</sub>	Α	17
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	Α	25
Voltage per contact pair in series		V	60
DC-21A	l <sub>e</sub>	Α	
Rated operational current	I <sub>e</sub>	Α	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	1
48 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	2
60 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	3
120 V			
Rated operational current	l <sub>e</sub>	Α	12
Contacts		Quantity	3
240 V			
Rated operational current	le	Α	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	l <sub>e</sub>	Α	20
Voltage per contact pair in series		V	24
Control circuit reliability at 24 V DC, 10 mA	Fault	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 fault in 100000 operations
	probability		

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Terminal capacities			
Solid or stranded		$\text{mm}^2$	1 x (1 - 6) 2 x (1 - 6)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 4) 2 x (0.75 - 4)
Terminal screw			M4
Max. tightening torque		Nm	1.6
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	lu	Α	25
Auxiliary contacts			
General Use	I <sub>U</sub>	Α	10
Pilot Duty			A 600 P 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	1.5
200 V AC		HP	3
240 V AC		HP	3
Three-phase			
200 V AC		HP	3
240 V AC		HP	3
480 V AC		HP	7.5
600 V AC		НР	10
Short Circuit Current Rating		SCCR	
Basic Rating		kA	5
max. Fuse		Α	40
High fault rating		kA	10
max. Fuse		Α	40, Class J
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	14 - 10

## **Design verification as per IEC/EN 61439**

Terminal screw

Tightening torque

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	32
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.1
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	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.
$10.2.3.3  \text{Verification of resistance of insulating materials to abnormal heat} \\ \text{and fire due to internal electric effects}$			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Please enquire

M4

lb-in 17.6

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 observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

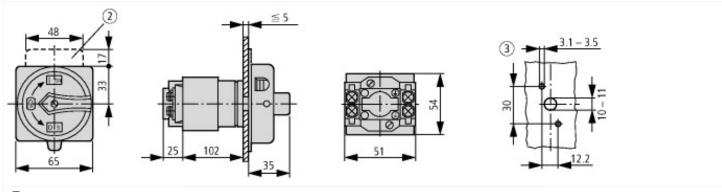
### **Technical data ETIM 6.0**

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Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)				
Electric engineering, automation, process control engineering / Low-voltage switch technol [AKF060010])	ology / Off-load s	witch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03		
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		
Max. rated operation voltage Ue AC	V	690		
Rated operating voltage	V	690 - 690		
Rated permanent current lu	Α	32		
Rated permanent current at AC-21, 400 V	Α	32		
Rated operation power at AC-3, 400 V	kW	11		
Rated short-time withstand current lcw	kA	0.65		
Rated operation power at AC-23, 400 V	kW	15		
Switching power at 400 V	kW	15		
Conditioned rated short-circuit current Iq	kA	1		
Number of poles		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		
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 center		Yes		
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		

#### **Approvals**

Product Standards	UL 508; CSA-C22.2 No. 14-05; 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
Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

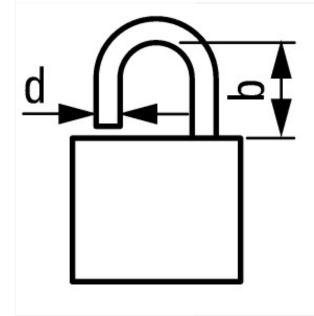
#### **Dimensions**



2 ZFS-... Label mount not included as standard

3 Drilling dimensions door

≤ 3 padlocks



d = 4 - 8 mm  $b + d \le 47 \text{ mm}$  d = 0.16 - 0.31 d = 0.85

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

#### IL03801020Z (AWA1150-0586) Cam switches: flush mounting IL03801020Z (AWA1150-0586) Cam switches: ftp://ftp.moeller.net/DOCUMENTATION/AWA\_INSTRUCTIONS/IL03801020Z2016\_07.pdf flush mounting Display flip catalog page. http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=41 Technical overview cam switch, switchhttp://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 http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6 System overview switch-disconnector P http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8 Key to part numbers Cam switch http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8 Key to part numbers Switch-disconnector Switches for ATEX http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html