



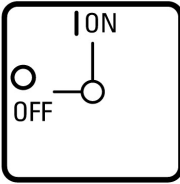
**On-Off switch, T0, 20 A, rear mounting, Basic switch, 6 contact unit(s), 9-pole, 2 N/O, 1 N/C**

**Part no. T0-6-15168/XZ**  
**Catalog No. 015377**

Similar to illustration

**Delivery program**

Product range		On-Off switch																																																																											
Part group reference		T0																																																																											
Number of poles		9-pole																																																																											
<b>Auxiliary contacts</b>																																																																													
	N/O	2																																																																											
	N/C	1																																																																											
Design		rear mounting Basic switch																																																																											
Contact sequence		<table border="1"> <thead> <tr> <th></th> <th>0</th> <th>1</th> </tr> </thead> <tbody> <tr><td>1 o</td><td></td><td>X</td></tr> <tr><td>2 o</td><td>X</td><td></td></tr> <tr><td>3 o</td><td></td><td>X</td></tr> <tr><td>4 o</td><td>X</td><td></td></tr> <tr><td>5 o</td><td></td><td>X</td></tr> <tr><td>6 o</td><td>X</td><td></td></tr> <tr><td>7 o</td><td></td><td>X</td></tr> <tr><td>8 o</td><td>X</td><td></td></tr> <tr><td>9 o</td><td></td><td>X</td></tr> <tr><td>10 o</td><td>X</td><td></td></tr> <tr><td>11 o</td><td></td><td>X</td></tr> <tr><td>12 o</td><td>X</td><td></td></tr> <tr><td>13 o</td><td></td><td>X</td></tr> <tr><td>14 o</td><td>X</td><td></td></tr> <tr><td>15 o</td><td></td><td>X</td></tr> <tr><td>16 o</td><td>X</td><td></td></tr> <tr><td>17 o</td><td></td><td>X</td></tr> <tr><td>18 o</td><td>X</td><td></td></tr> <tr><td>23 o</td><td></td><td>X</td></tr> <tr><td>24 o</td><td>X</td><td></td></tr> <tr><td>31 o</td><td>X</td><td></td></tr> <tr><td>32 o</td><td></td><td>X</td></tr> <tr><td>33 o</td><td></td><td>X</td></tr> <tr><td>34 o</td><td>X</td><td></td></tr> </tbody> </table>		0	1	1 o		X	2 o	X		3 o		X	4 o	X		5 o		X	6 o	X		7 o		X	8 o	X		9 o		X	10 o	X		11 o		X	12 o	X		13 o		X	14 o	X		15 o		X	16 o	X		17 o		X	18 o	X		23 o		X	24 o	X		31 o	X		32 o		X	33 o		X	34 o	X	
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Switching angle	°	90																																																																											
Design number		15168																																																																											

Front plate no.				
				<b>FS 908</b>
<b>Motor rating AC-23A, 50 - 60 Hz</b>				
400 V	P	kW	5.5	
Rated uninterrupted current	$I_u$	A	20	
Note on rated uninterrupted current $I_u$				Rated uninterrupted current $I_u$ is specified for max. cross-section.
Number of contact units		contact unit(s)	6	

## Technical data

### General

Standards				IEC/EN 60947, VDE 0660, IEC/EN 60204 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	$U_{imp}$	V AC	6000	
Mechanical shock resistance		g	15	
Mounting position				As required

### Contacts

Mechanical variables				
Number of poles				9-pole
Auxiliary contacts				
		N/O	2	
		N/C	1	
Electrical characteristics				
Rated operational voltage	$U_e$	V AC	690	
Rated uninterrupted current	$I_u$	A	20	
Note on rated uninterrupted current $I_u$				Rated uninterrupted current $I_u$ is specified for max. cross-section.
Load rating with intermittent operation, class 12				
AB 25 % DF		$x I_e$	2	
AB 40 % DF		$x I_e$	1.6	
AB 60 % DF		$x I_e$	1.3	
Short-circuit rating				
Fuse		A gG/gL	20	
Rated short-time withstand current (1 s current)	$I_{cw}$	$A_{rms}$	320	
Note on rated short-time withstand current $I_{cw}$				Current for a time of 1 second
Rated conditional short-circuit current	$I_q$	kA	6	

### Switching capacity

$\cos \varphi$ rated making capacity as per IEC 60947-3		A	130
Rated breaking capacity $\cos \varphi$ to IEC 60947-3		A	
230 V		A	100
400/415 V		A	110
500 V		A	80
690 V		A	60
Safe isolation to EN 61140			
between the contacts		V AC	440

Current heat loss per contact at $I_e$		W	0.6
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations	$\times 10^6$	> 0.4
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	3
230 V Star-delta	P	kW	5.5
400 V 415 V	P	kW	5.5
400 V Star-delta	P	kW	7.5
500 V	P	kW	5.5
500 V Star-delta	P	kW	7.5
690 V	P	kW	4
690 V Star-delta	P	kW	5.5
Rated operational current motor load switch			
230 V	$I_e$	A	11.5
230 V star-delta	$I_e$	A	20
400V 415 V	$I_e$	A	11.5
400 V star-delta	$I_e$	A	20
500 V	$I_e$	A	9
500 V star-delta	$I_e$	A	15.6
690 V	$I_e$	A	4.9
690 V star-delta	$I_e$	A	8.5
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	3
400 V 415 V	P	kW	5.5
500 V	P	kW	7.5
690 V	P	kW	5.5
Rated operational current motor load switch			
230 V	$I_e$	A	13.3
400 V 415 V	$I_e$	A	13.3
500 V	$I_e$	A	13.3
690 V	$I_e$	A	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	$I_e$	A	10
Voltage per contact pair in series		V	60
DC-21A			
Rated operational current	$I_e$	A	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	$I_e$	A	10
Contacts		Quantity	1
48 V			
Rated operational current	$I_e$	A	10
Contacts		Quantity	2
60 V			
Rated operational current	$I_e$	A	10
Contacts		Quantity	3
120 V			

Rated operational current	$I_e$	A	5
Contacts		Quantity	3
240 V			
Rated operational current	$I_e$	A	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	$I_e$	A	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault probability	$H_F$	$< 10^{-5}$ , $< 1$ failure in 100,000 switching operations

### Terminal capacities

Solid or stranded		$mm^2$	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		$mm^2$	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Terminal screw			M3.5
Tightening torque for terminal screw		Nm	1

### Technical safety parameters:

<b>Notes</b>			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
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### Rating data for approved types

Terminal capacity			
Terminal screw			M3.5

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	20
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0.6
Equipment heat dissipation, current-dependent	$P_{vid}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	$P_{diss}$	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 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 6.0

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ec@ss8.1-27-37-14-03 [AKF060010])		
Version as main switch		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current Iu	A	20
Rated permanent current at AC-21, 400 V	A	20
Rated operation power at AC-3, 400 V	kW	5.5
Rated short-time withstand current Icw	kA	0.32
Rated operation power at AC-23, 400 V	kW	5.5
Switching power at 400 V	kW	5.5
Conditioned rated short-circuit current Iq	kA	6
Number of poles		9
Number of auxiliary contacts as normally closed contact		1
Number of auxiliary contacts as normally open contact		2
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		Yes
Suitable for front mounting 4-hole		No
Suitable for front mounting center		No
Suitable for distribution board installation		Yes
Suitable for intermediate mounting		Yes
Colour control element		Black
Type of control element		Toggle
Interlockable		No
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP00

## Additional product information (links)

Display flip catalog page.	<a href="http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=41">http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=41</a>
Technical overview cam switch, switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2</a>
System overview cam switch T	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4</a>
System overview switch-disconnector P	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6</a>
Key to part numbers Cam switch	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Key to part numbers Switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Switches for ATEX	<a href="http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html">http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html</a>
Ordering form for SOND switches and SOND front plates(DE_EN)	<a href="https://es-assets.eaton.com/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf">https://es-assets.eaton.com/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf</a>
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