



**Changeoverswitches, T5B, 63 A, rear mounting, Basic switch, 4 contact unit(s), Contacts: 8, 60 °, design no. 8213**

**Part no. T5B-4-8213/X**  
**Catalog No. 092110**

**Delivery program**

Product range			Control switches
Part group reference			T5B
Basic function			Changeoverswitches
Contacts			8
Design			rear mounting Basic switch
Contact sequence			
Switching angle		°	60
Design number			8213
Front plate no.			 <b>FS 684</b>
<b>Motor rating AC-23A, 50 - 60 Hz</b>			
400 V	P	kW	30
Rated uninterrupted current	$I_u$	A	63
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)	4

**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**

Electrical characteristics			
Rated operational voltage	$U_e$	V AC	690
Rated uninterrupted current	$I_u$	A	63
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	80
Rated short-time withstand current (1 s current)	$I_{cw}$	$A_{rms}$	1300
Note on rated short-time withstand current $I_{cw}$			Current for a time of 1 second
Rated conditional short-circuit current	$I_q$	kA	2
<b>Switching capacity</b>			
$\cos \varphi$ rated making capacity as per IEC 60947-3		A	800
Rated breaking capacity $\cos \varphi$ to IEC 60947-3		A	
230 V		A	520
400/415 V		A	600
500 V		A	480
690 V		A	340
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at $I_e$		W	4.5
Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V)		CO	4.5
Lifespan, mechanical	Operations	$\times 10^6$	> 0.5
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	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
500 V	P	kW	22
500 V Star-delta	P	kW	37
690 V	P	kW	15
690 V Star-delta	P	kW	22
Rated operational current motor load switch			
230 V	$I_e$	A	51
230 V star-delta	$I_e$	A	63
400V 415 V	$I_e$	A	41
400 V star-delta	$I_e$	A	63
500 V	$I_e$	A	33
500 V star-delta	$I_e$	A	57.2
690 V	$I_e$	A	17
690 V star-delta	$I_e$	A	29.4
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	18.5
400 V 415 V	P	kW	30
500 V	P	kW	22
690 V	P	kW	22
Rated operational current motor load switch			
230 V	$I_e$	A	63
400 V 415 V	$I_e$	A	63
500 V	$I_e$	A	33
690 V	$I_e$	A	23.8
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	$I_e$	A	63
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			

24 V				
Rated operational current	$I_e$	A		50
Contacts			Quantity	1
48 V				
Rated operational current	$I_e$	A		50
Contacts			Quantity	2
60 V				
Rated operational current	$I_e$	A		50
Contacts			Quantity	3
120 V				
Rated operational current	$I_e$	A		25
Contacts			Quantity	3
240 V				
Rated operational current	$I_e$	A		20
Contacts			Quantity	6
DC-13, Control switches L/R = 50 ms				
Rated operational current	$I_e$	A		25
Voltage per contact pair in series		V		24
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 <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:

<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				M6

## Design verification as per IEC/EN 61439

Technical data for design verification				
Rated operational current for specified heat dissipation	$I_n$	A		63
Heat dissipation per pole, current-dependent	$P_{vid}$	W		4.5
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 7.0

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 / Changeover switch (ec!@ss10.0.1-27-37-14-05 [AKF062013])

Model		Reverser
Number of poles		4
With 0 (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	22
Degree of protection (IP), front side		Other
Degree of protection (NEMA), front side		Other
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 ground mounting		No
Suitable for front mounting 4-hole		Yes
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Complete device in housing		No
Material housing		Plastic
Type of control element		Other
Type of electrical connection of main circuit		Screw connection

## Additional product information (links)

Display flip catalog page.	<a href="http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=135">http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=135</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>