

**Changeoverswitches, T5B, 63 A, flush mounting, 3 contact unit(s),  
Contacts: 6, 60 °, maintained, With 0 (Off) position, 1-0-2, design no. 8212**



**Part no.** **T5B-3-8212/E**

**Catalog No.** **092386**

**EL-Nummer  
(Norway)** **1456948**

Similar to illustration

## Delivery program

Product range	Control switches		
Part group reference	T5B		
Basic function	Changeoverswitches		
	with black thumb grip and front plate		
Contacts	6		
Degree of Protection	Front IP65		
Design	flush mounting		
Switching angle	° 60		
Switching performance	maintained With 0 (Off) position		
Design number	8212		
front plate	1-0-2		
<b>Motor rating AC-23A, 50 - 60 Hz</b>			
400 V	P	kW	30
Rated uninterrupted current	I <sub>u</sub>	A	63
Note on rated uninterrupted current I <sub>u</sub>	Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.		
Number of contact units	contact unit(s) 3		

## 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 <sub>imp</sub>	V AC	6000
Mechanical shock resistance		g	15
Mounting position	As required		

### Contacts

Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	I <sub>u</sub>	A	63
Note on rated uninterrupted current I <sub>u</sub>	Rated uninterrupted current I <sub>u</sub> 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	80
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	1300

Note on rated short-time withstand current Icw			Current for a time of 1 second
Rated conditional short-circuit current	I <sub>q</sub>	kA	2
<b>Switching capacity</b>			
cos φ rated making capacity as per IEC 60947-3		A	800
Rated breaking capacity cos φ 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		V AC	440
between the contacts		W	4.5
Current heat loss per contact at I <sub>e</sub>		CO	4.5
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)			
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.5
Maximum operating frequency	Operations/h		1200
<b>AC</b>			
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 <sub>e</sub>	A	51
230 V star-delta	I <sub>e</sub>	A	63
400V 415 V	I <sub>e</sub>	A	41
400 V star-delta	I <sub>e</sub>	A	63
500 V	I <sub>e</sub>	A	33
500 V star-delta	I <sub>e</sub>	A	57.2
690 V	I <sub>e</sub>	A	17
690 V star-delta	I <sub>e</sub>	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 <sub>e</sub>	A	63
400 V 415 V	I <sub>e</sub>	A	63
500 V	I <sub>e</sub>	A	33
690 V	I <sub>e</sub>	A	23.8
<b>DC</b>			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I <sub>e</sub>	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 <sub>e</sub>	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:

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

Contacts			
Rated operational voltage	$U_e$	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		A	63
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	3
200 V AC		HP	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		A	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	$I_n$	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 <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 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 8.0

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 (ecl@ss10.0.1-27-37-14-05 [AKFO62013])

Model		Reverser
Number of poles		3
With zero (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		IP65
Degree of protection (NEMA), front side		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
Suitable for floor mounting		No
Suitable for front mounting		Yes
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Complete device in housing		No
Material housing		Plastic
Type of control element		Short thumb-grip

