DATASHEET - T8-3-8212/E/HI12

Changeoverswitches, T8, 315 A, flush mounting, 3 contact unit(s), Contacts: 9, 60 °, maintained, With 0 (Off) position, 1-0-2, design no. 8212

Powering Business Worldwide™

Part no.	**T8-3-8212/E/HI12**
Catalog No.	**214782**
EL-Nummer (Norway)	**1456954**

Delivery program

Product range			Control switches
Part group reference			T8
Basic function			Changeoverswitches
			with black thumb grip and front plate
Contacts			9
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
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	132
Rated uninterrupted current	I_u	A	315
Note on rated uninterrupted current $!_u$			Rated uninterrupted current I_u is specified for max. cross-section. Open = 315, enclosed= 275 A
Number of contact units		contact unit(s)	3

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	8000
Mounting position			As required

Contacts

Electrical characteristics			
Rated operational voltage	U_e	V AC	690
Rated uninterrupted current	I_u	A	315
Note on rated uninterrupted current $!_u$			Rated uninterrupted current I_u is specified for max. cross-section. Open = 315, enclosed= 275 A
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	315
Rated short-time withstand current (1 s current)	I_{cw}	A_{rms}	4200
Note on rated short-time withstand current Icw			Current for a time of 1 second
Rated conditional short-circuit current	I_q	kA	5

Switching capacity

cos φ rated making capacity as per IEC 60947-3		A	2390
Rated breaking capacity cos φ to IEC 60947-3		A	
230 V		A	1910
400/415 V		A	1800
500 V		A	1200
690 V		A	420
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I_e		W	11
Current heat loss per auxiliary circuit at I_e (AC-15/230 V)		CO	0.2
Lifespan, mechanical	Operations	x 10^6	> 0.1
Maximum operating frequency	Operations/h		50
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	37
230 V Star-delta	P	kW	37
400 V 415 V	P	kW	55
400 V Star-delta	P	kW	55
500 V	P	kW	37
500 V Star-delta	P	kW	37
690 V	P	kW	37
690 V Star-delta	P	kW	37
Rated operational current motor load switch			
230 V	I_e	A	126
400V 415 V	I_e	A	105
400 V star-delta	I_e	A	105
500 V	I_e	A	78
500 V star-delta	I_e	A	78
690 V	I_e	A	42
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	75
400 V 415 V	P	kW	132
500 V	P	kW	132
690 V	P	kW	37
Rated operational current motor load switch			
230 V	I_e	A	239
400 V 415 V	I_e	A	245
500 V	I_e	A	184
690 V	I_e	A	42
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I_e	A	315
Voltage per contact pair in series		V	42
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I_e	A	250
Contacts		Quantity	1
48 V			
Rated operational current	I_e	A	250
Contacts		Quantity	2
60 V			

Rated operational current	I_e	A	125
Contacts		Quantity	3
120 V			
Rated operational current	I_e	A	50
Contacts		Quantity	3
DC-13, Control switches L/R = 50 ms			
Rated operational current	I_e	A	250
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	185
Flat conductor connection with busbars		mm^2	1 x (25 x 5) 2 x (20 x 3)
Terminal screw			M12
Tightening torque for terminal screw		Nm	14

Technical safety parameters:

Notes			$B10_d$ values as per EN ISO 13849-1, table C1

Rating data for approved types

Terminal capacity			
Terminal screw			M12
Tightening torque		lb-in	125

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	315
Heat dissipation per pole, current-dependent	P_{vid}	W	11
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 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 [AKF062013])

Model			Reverser
Number of poles			3
With zero (off) position			Yes
With retraction in 0-position			No
Rated permanent current Iu		A	315
Rated operation current Ie at AC-3, 400 V		A	105
Rated operation power at AC-3, 400 V		kW	55
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
Type of electrical connection of main circuit			Screw connection

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