DATASHEET - T3-3-8222/E



Changeoverswitches, Contacts: 6, 32 A, front plate: 1-2, 90 $^\circ,$ maintained, flush mounting



EL-Nummer

Part no.

Catalog No.

(Norway)

052346 0001456818

T3-3-8222/E

Similar to illustration

Delivery program

Derivery program			
Product range			Control switches
Part group reference			T3
Basic function			Changeoverswitches
			with black thumb grip and front plate
Contacts			6
Degree of Protection			Front IP65
Design			flush mounting
Contact sequence			
Switching angle		0	90
Switching performance			maintained Without 0 (Off) position
Design number			8222
Front plate no.			¹ y ² FS 943
front plate			1-2
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	15
Rated uninterrupted current	lu	А	32
Note on rated uninterrupted current !u			Rated uninterrupted current I _u 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		111/3

Rated impulse withstand voltage	н	V AC	6000
	U _{imp}		
Mechanical shock resistance		g	15
Mounting position Contacts			As required
Electrical characteristics			
Rated operational voltage	Ue	V AC	690
Rated uninterrupted current		A	32
	Iu	~	
Note on rated uninterrupted current !u			Rated uninterrupted current ${\boldsymbol{I}}_{\boldsymbol{u}}$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x l _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	35
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	650
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Ιq	kA	1
Switching capacity			
$\cos\phi$ rated making capacity as per IEC 60947-3		А	320
Rated breaking capacity $\cos \phi$ to IEC 60947-3		А	
230 V		А	260
400/415 V		А	260
500 V		А	240
690 V		A	170
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at l _e		W	1.1
Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		CO	1.1
	Operations	CO x 10 ⁶	1.1 > 0.5
Current heat loss per auxiliary circuit at $\rm I_{e}$ (AC-15/230 V)	Operations Operations/h		
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical			> 0.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency			> 0.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC			> 0.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3	Operations/h	x 10 ⁶	> 0.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch	Operations/h	x 10 ⁶ kW	> 0.5 1200
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V	Operations/h P P	x 10 ⁶ kW kW	> 0.5 1200 5.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta	Operations/h P P P	x 10 ⁶ kW kW kW	> 0.5 1200 5.5 7.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V	Operations/h P P P P	x 10 ⁶ kW kW kW kW	> 0.5 1200 5.5 7.5 11
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta	Operations/h P P P P P	x 10 ⁶ kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V	Operations/h P P P P P P P	x 10 ⁶ kW kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15 15
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V Star-delta	Operations/h P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15 15 15 18.5
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V	Operations/h P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15 15 18.5 11
Current heat loss per auxiliary circuit at l _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V 690 V Star-delta	Operations/h P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15 15 18.5 11
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V 690 V Rated operational current motor load switch	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW kW	> 0.5 1200 5.5 7.5 11 15 15 18.5 11 18.5 11 22
Current heat loss per auxiliary circuit at l _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V Star-delta 690 V Rated operational current motor load switch 230 V	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW kW kW	> 0.5 1200 1200 5.5 7.5 7.5 11 15 15 15 15 18.5 11 22 2
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V 690 V 690 V 230 V Star-delta 230 V Star-delta 200 V Star-delta 200 V Star-delta 200 V Star-delta 200 V 200 V Star-delta 200 V Star-delta 200 V 200 V Star-delta 200 V Star-delta 200 V Star-delta 200 V Star-delta 200 V 200 V Star-delta	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW kW kW kW kW	 > 0.5 1200 1200 1200 5.5 5.5 5.5 7.5 7.5<
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 500 V Star-delta 690 V 690 V 690 V 230 V Star-delta 400 V 415 V 400 V 415 V 400 V 5tar-delta 500 V 500 V 500 V Star-delta 690 V 230 V Star-delta 400 V 415 V	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kW kW A A A	 > 0.5 1200 1200 1200 5.5 5.5 7.5 7.5<
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V Star-delta 690 V 690 V Star-delta 230 V Star-delta 690 V 690 V Star-delta 400 V 415 V 400 V Star-delta 690 V 690 V Star-delta 690 V 690 V Star-delta 400 V Star-delta 690 V 690 V 690 V 690 V 690 V Star-delta 230 V 230 V star-delta 400V 415 V 400 V star-delta 400 V star-delta 500 V	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kA kW kW kA kW kA kA kA A A A	> 0.5 1200 1200 5.5 7.5 11 15 15 15 16 17 18.5 11 22 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V 690 V 690 V 230 V Star-delta 400 V 415 V 400 V 5tar-delta 500 V 500 V 500 V 690 V 230 V 230 V 230 V 230 V 230 V star-delta 400V 415 V 400 V star-delta 500 V 500 V 500 V star-delta	Operations/h P P P P P P P P P P P I e I e I e I e I	x 10 ⁶ kW kW kW kW kW kW kW kW kW kA kW kA kA kA A A A	 > 0.5 1200 1200 1200 5.5 5.5 7.5 7.5<
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Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V 690 V 690 V 230 V Star-delta 230 V 230 V Star-delta 690 V 690 V 230 V Star-delta 690 V 230 V Star-delta 690 V 230 V Star-delta 690 V 230 V 230 V 230 V Star-delta 690 V 690 V 690 V star-delta 690 V 500 V star-delta 600 V star-delta 600 V star-delta 600 V star-delta 600 V 600 V star-delta 690 V 690 V 690 V star-delta 690 V 690 V star-delta <td>Operations/h P P P P P P P P P P P I e I e I e I e I</td> <td>x 10⁶ kW kW kW kW kW kW kW kW kW kA kW kA kA kA A A A</td> <td>> 0.5 1200 1200 5 5.5 7.5 10 15 15 18.5 11 22 23.7 2</td>	Operations/h P P P P P P P P P P P I e I e I e I e I	x 10 ⁶ kW kW kW kW kW kW kW kW kW kA kW kA kA kA A A A	> 0.5 1200 1200 5 5.5 7.5 10 15 15 18.5 11 22 23.7 2
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V Star-delta 690 V 690 V 230 V Star-delta 690 V 230 V Star-delta 690 V 690 V 230 V Star-delta 690 V 690 V 230 V Star-delta 690 V 690 V 690 V 690 V 500 V Star-delta 690 V 230 V 500 V star-delta 600 V 690 V star-delta 690 V 690 V star-delta 690 V star-delta 69	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kA kW kW kA kW kA kA kA A A A	> 0.5 1200 1200 5.5 7.5 7.5 11 15 15 16 17 18.5 11 22 23.7 32 23.7 32 23.7 32 33.7 32 33.7 32 33.7 32 33.7 34.1 35.2 36.2 37.3 37.4 38.5 39.5 31.6 32.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 34.2 <tr td=""> <tr td=""></tr></tr>
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V Star-delta 500 V 500 V 500 V Star-delta 690 V 690 V Star-delta 690 V Star-delta 690 V 230 V Star-delta 690 V 500 V 230 V Star-delta 690 V 690 V Star-delta 690 V 690 V Star-delta 690 V 230 V 500 V star-delta 600 V 500 V star-delta 690 V 690 V star-delta 690 V star-delta 690 V star-delta 690 V star-delta 690 V star-delt	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kW kW kW kW kW kW kA kW kW kA kW kA	> 0.5 1200 1201 5.5 7.5 7.5 7.5 11 15 15 18.5 11 22 23.7 32 23.7 32 23.7 32 23.7 32 23.7 32 23.7 32 33.7 34 35 36 37 38 39 30 31.1 32 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 34.7 35.7 35.7 36.7 37.7 37.7
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) Lifespan, mechanical Maximum operating frequency AC AC-3 Rating, motor load switch 220 V 230 V 230 V Star-delta 400 V 415 V 400 V Star-delta 500 V 500 V Star-delta 690 V 690 V Star-delta 690 V 230 V Star-delta 690 V 500 V Star-delta 690 V 500 V Star-delta 690 V 690 V Star-delta 690 V 500 V star-delta 600 V 500 V star-delta 690 V 500 V star-delta 690 V 690 V star-delta	Operations/h P P P P P P P P P P P P P P P P P P P	x 10 ⁶ kW kA kW kW kA kW kA kA kA A A A	> 0.5 1200 1200 5.5 7.5 7.5 11 15 15 16 17 18.5 11 22 23.7 32 23.7 32 23.7 32 33.7 32 33.7 32 33.7 32 33.7 34.7 35.7 36.7 37.7 38.7 39.7 31.7 32.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 33.7 34.7 <tr td=""> <tr td=""></tr></tr>

Note allow (22A) 55 76 HzPNot200PNot5400 V15 VPNot5600 VPNot5600 VPNot5700 VPNot7700 VPNot7<				
dBX vis yiPNVSBXVPNVSBARM dipersional arrow muto load soutch	Motor rating AC-23A, 50 - 60 Hz	Р	kW	
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Rest operational current mode watchIn <td>690 V</td> <td>Р</td> <td>kW</td> <td>15</td>	690 V	Р	kW	15
111121000000000000000000000000000000000	Bated operational current motor load switch			
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Control circuit reliability at 24 V DC, 10 mA Fault probability HF 10-5, < 1 fault in 100000 operations Terminal capacities Solid or stranded Mm ² 1× (1 - 6) 2× (1 - 6) 1× (1 - 6) Flexible with ferrules to DIN 46228 mm ² 1× (0.75 - 4) 2× (0.75 - 4) Terminal screw M4 1 16 Tightening torque for terminal screw M4 16 Technical safety parameters: MM 16 Technical safety parameters: Me 16 Rated operational voltage Me Me Rated operational voltage Me 600 Rated uninterrupted current max. Main conducting paths 600 General use A Z	Rated operational current	l _e	A	20
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Flexible with ferrules to DIN 46228 imm2	Solid or stranded		mm ²	
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Terminal screw M4 Tightening torque for terminal screw Nm 1.6 Technical safety parameters: Technical safety parameters: Notes Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Image	Flexible with terrules to DIN 46228		mm ²	
Tightening torque for terminal screw Nm 1.6 Technical safety parameters: Image: Stream	Terminal screw			
Technical safety parameters: Notes Image: Section of the section			Nm	
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Rating data for approved types Contacts Image: Contact set of the set of t				B104 values as ner EN ISO 13849-1 table C1
Contacts Image: Contact set of the s				
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Rated uninterrupted current max. Main conducting paths General use A		11	VAC	003
Main conducting paths Image: Constraint of the second se		Ue	V AL	000
General use A 25				
	Main conducting paths			
Auxiliary contacts	General use		А	25
	Auxiliary contacts			
General Use IU A 10	General Use	lu	А	10
Pilot Duty A 600	Pilot Duty			A 600

			P 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC	HP	Р	1.5
200 V AC	HP	Р	3
240 V AC	HP	Р	3
Three-phase			
200 V AC	HP	Р	3
240 V AC	HP	Р	3
480 V AC	HP	Р	7.5
600 V AC	HP	Р	10
Short Circuit Current Rating	SC	CCR	
Basic Rating	kA	4	5
max. Fuse	А		40
High fault rating	kA	4	10
max. Fuse	A		40, Class J
Terminal capacity			
Solid or flexible conductor with ferrule	AV	NG	14 - 10
Terminal screw			M4
Tightening torque	lb-	-in	17.7

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	32
Heat dissipation per pole, current-dependent	P _{vid}	W	1.1
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.

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

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)

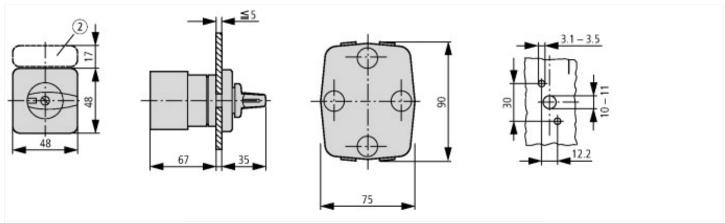
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Changeover switch (ecl@ss10.0.1-27-37-14-05 [AKF062013])

Model		Reverser
Number of poles		3
With 0 (off) position		No
With retraction in 0-position		No
Rated permanent current lu	А	32
Rated operation current le at AC-3, 400 V	А	23.7
Rated operation power at AC-3, 400 V	kW	12
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 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		Toggle
Type of electrical connection of main circuit		Screw connection

Approvals

Product Standards	UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; 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

Assets (links)

Declaration of CE Conformity 00003074 Instruction Leaflets IL03801020Z2018_05