DATASHEET - T0-2-15452/E



Changeoverswitches, Contacts: 4, 20 A, front plate: HAND-AUTO, 90 °, maintained, flush mounting





Part no. T0-2-15452/E Catalog No. 091062

EL-Nummer (Norway) 0001456280

Similar to illustration

Delivery program			
Product range			Control switches
Part group reference			ТО
Basic function			Changeoverswitches
			with black thumb grip and front plate
Contacts			4
Degree of Protection			Front IP65
Design			flush mounting
Contact sequence			AUTO AUTO
Switching angle		0	90
Switching performance			maintained Without 0 (Off) position
Design number			15452
Front plate no.			FS 19334
front plate			HAND-AUTO
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	5.5
Rated uninterrupted current	l _u	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current I _u is specified for max. cross-section.
Number of contact units		contact unit(s)	2

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

Meaning position No. 100 month position position (pass of the position position) (pass of the posit	ulse withstand voltage	U _{imp}	V AC	6000
Non-mitting position Formation of contracted preferred in the contraction of contraction and voltage Use V AC Position of contraction and voltage Use V AC Position of contraction and voltage Use V AC Position contraction of contracting contract		·	g	15
Detection of the restriction に	position			As required
Rated operational voltage U _e V AC 680 Rated numberinghed current l _w l _w A 20 Note on rated uninterringhed current l _w AB 25 % 0F x l _w 2 AB 25 % 0F x l _w 1 3.2 AB 69 % 0F x l _w 1 3.2 Sheet-circuit rating x l _w 3 220 Sheet-disposed district current l _w A _{si} 220 Note on rated short-time withstand current thew l _w A _{si} 220 Note on rated short-time withstand current thew l _w A _{si} 220 Note on rated short-time withstand current thew l _w A _{si} 220 Note on rated short-time withstand current thew l _w A _{si} 220 Note on rated short-time withstand current thew l _w A _{si} 12 Rated to rate a since of time with time current thew l _w A _{si} 12 Step time contacts time current time current time time c				
Note on rated uninterrupted current	haracteristics			
Note on rated uninterrupted current In	perational voltage	U _e	V AC	690
Lead rating with intermittent operation, class 12 x k c 2 AB 80 % DF x k c 1.6 AB 80 % DF x k c 1.2 Floor x k c 1.2 Nate of a body of the withstand current (1 s current) x k c 20 Nate de abort-time withstand current (1 s current) k c c x c 20 Nate de abort-time withstand current (1 s current) k c c x c 20 20 Nate de conditional short-circuit current k c c x c 40 30	ninterrupted current	I _u	Α	20
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AB 25 % DF	with intermittent operation, class 12			
AB 80 % DF			x l _e	2
Note Part	6 DF			1.6
Note or rated short-time withstand current (1 s current)				
Rated short-time withstand current s current low Rated short-time withstand current low Rated short-time withstand current low Rated conditional short-circuit current low Rated making capacity as per IEC 60947-3 Rated breaking capacity as per IEC 60947-3 A 130 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 100 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated breaking capacity as per IEC 60947-3 A 80 Rated brea			e	
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Name		'CW	rms	
Switching capacity			1. 4	
ccs g rated making capacity as per IEC 60947-3 A 100 230 V A 100 400/415 V A 100 500 V A 80 690 V A 60 Safe isolation to EN 61140 V 440 between the contacts V 440 Current heat loss per auxiliary circuit at I ₀ (AC-15/230 V) C 0 Lifespan, mechanical Operations Name Change of Properties of Properti		Iq	KA	ь
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Solid Soli	V			
Bego V Safe isolation to EN 61140 Safe	•			
Safe isolation to EN 61140 VAC 440 between the contacts VAC 440 Current heat loss per contact at I ₀ W 0.6 Current heat loss per auxiliary circuit at I ₀ (AC-15/230 V) CO 0.6 Lifespan, mechanical Operations/h x 10 ⁶ > 0.4 Maximum operating frequency Operations/h 1200 AC-3 1200 1200 Rating, motor load switch P kW 3 220 V 230 V P kW 5.5 400 V 415 V P kW 5.5 400 V 5tar-delta P kW 7.5 500 V P kW 7.5 690 V P kW 4 690 V Star-delta P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch I ₀ A 11.5 230 V star-delta I ₀ A 11.5 400 V 415 V I ₀ A 11.5				
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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				
230 V		۲	kW	5.5
230 V star-delta				
400V 415 V				
	230 V star-delta	le	Α	20
	400V 415 V	le	Α	11.5
400 V star-delta I _e A 20	400 V star-delta	l _e	Α	20
500 V I _e A 9	500 V	l _e	Α	9
500 V star-delta I _e A 15.6	500 V star-delta	le	Α	15.6
690 V I _e A 4.9	690 V	I _e	Α	4.9
690 V star-delta I _e A 8.5	690 V star-delta	l _e	Α	8.5
AC-21A				
Rated operational current switch				
440 V I _e A 20		l _e	Α	20
AC-23A		-		

Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	3
400 V 415 V	Р	kW	5.5
500 V	Р	kW	7.5
690 V	Р	kW	5.5
Rated operational current motor load switch			
230 V	l _e	Α	13.3
400 V 415 V	l _e	Α	13.3
500 V	l _e	Α	13.3
690 V	I _e	Α	7.6
DC	-		
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l _e	A	10
Voltage per contact pair in series	-6	V	60
DC-21A	l _e	A	
			1
Rated operational current	l _e	A	
Contacts		Quantity	l .
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	le	Α	10
Contacts		Quantity	1
48 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	3
120 V			
Rated operational current	l _e	Α	5
Contacts		Quantity	3
240 V			
Rated operational current	l _e	Α	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	l _e	Α	10
Voltage per contact pair in series		٧	32
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	< 10 ⁻⁵ , < 1 fault in 100000 operations
Tauminal association	probability		·
Terminal capacities Solid or stranded		2	1 x (1 - 2,5)
5.33 5. Shanada		mm ²	2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm ²	1 x (0.75 - 2.5)
Tomical com			2 x (0.75 - 2.5)
Terminal screw		N	M3.5
Tightening torque for terminal screw		Nm	1
Technical safety parameters: Notes			B10 _d values as per EN ISO 13849-1, table C1
Rating data for approved types			v
Contacts			
Rated operational voltage	U _e	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		A	16
Auxiliary contacts			
General Use	lu	A	10
Pilot Duty	Ü		A 600
i not buty			

		P 600
Switching capacity		
Maximum motor rating		
Single-phase		
120 V AC	HP	0.5
200 V AC	HP	1
240 V AC	НР	1.5
Three-phase		
200 V AC	НР	3
240 V AC	НР	3
480 V AC	НР	7.5
600 V AC	НР	7.5
Short Circuit Current Rating	SCCR	
Basic Rating	kA	5
max. Fuse	А	50
High fault rating	kA	10
max. Fuse	А	20, Class J
Terminal capacity		
Solid or flexible conductor with ferrule	AWG	18 - 14
Terminal screw		M3.5
Tightening torque	lb-in	8.8

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	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 7.0

Low-voltage industrial components (EG000017) / Control switch (EC002611)

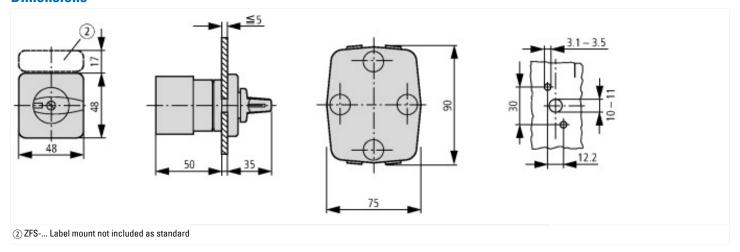
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Control switch (ecl@ss10.0.1-27-37-14-14 [ACN998011])

[.c.tcccc]		
Type of switch		Reverser
Number of poles		2
Max. rated operation voltage Ue AC	V	690
Rated permanent current lu	Α	20
Number of switch positions		2
With 0 (off) position		No
With retraction in 0-position		No
Device construction		Built-in device
Width in number of modular spacings		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
Type of control element		Toggle
Front shield size		48x48 mm
Degree of protection (IP), front side		IP65
Degree of protection (NEMA), front side		12

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



Assets (links)

Declaration of CE Conformity

00003075

Instruction Leaflets

IL03801020Z2018_05