## **DATASHEET - T0-2-15432/I1**



Changeoverswitches, T0, 20 A, surface mounting, 2 contact unit(s), Contacts: 4, 45  $^{\circ}$ , maintained, With 0 (Off) position, HAND-0-AUTO, design no. 15432



Part no. Catalog No. T0-2-15432/I1 207091

EL-Nummer (Norway)

0001456297

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			IP65
			totally insulated
Design			surface mounting
Contact sequence			AUTO HAND X X
Switching angle		0	45
Switching performance			maintained With 0 (Off) position
Design number			15432
Front plate no.			FS 1401
front plate			HAND-0-AUTO
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	5.5
Rated uninterrupted current	Iu	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\rm u}$ 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 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			
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	Iu	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ 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	20
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	320
Note on rated short-time withstand current lcw	CAA	11113	Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	6
Switching capacity	·d	Ю	
cos φ rated making capacity as per IEC 60947-3		Α	130
Rated breaking capacity cos $\phi$ to IEC 60947-3		Α	
230 V		Α	100
400/415 V		A	110
500 V		Α	80
690 V		Α	60
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	0.6
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.4
Maximum operating frequency	Operations/h	X 10	1200
AC	Operations/ii		1200
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	3
230 V Star-delta	P	kW	5.5
400 V 415 V	P	kW	5.5
400 V Star-delta	P	kW	7.5
500 V	P	kW	5.5
500 V Star-delta	P	kW	7.5
690 V	P	kW	4
690 V Star-delta	P	kW	5.5
Rated operational current motor load switch			
230 V	I <sub>e</sub>	A	11.5
230 V star-delta	l <sub>e</sub>	A	20
400V 415 V		A	11.5
	l <sub>e</sub>		
400 V star-delta	l <sub>e</sub>	A	20
500 V	l <sub>e</sub>	Α	9
500 V star-delta	I <sub>e</sub>	Α	15.6
690 V	le	Α	4.9
690 V star-delta	I <sub>e</sub>	Α	8.5

P	kW	
Р	kW	3
P	kW	5.5
P	kW	7.5
Р	kW	5.5
l <sub>o</sub>	Α	13.3
		13.3
l <sub>e</sub>		13.3
l <sub>e</sub>	Α	7.6
l <sub>e</sub>	Α	10
	V	60
Ie	Α	
I <sub>e</sub>	Α	1
	Quantity	1
la	Δ	10
'e		
	uuantity	l .
le		10
	Quantity	2
l <sub>e</sub>	Α	10
	Quantity	3
I <sub>e</sub>	Α	5
	Quantity	3
l <sub>e</sub>	Α	5
Ü	Quantity	5
	Zuumay	•
1	۸	10
'e		
F 14		32
	HF	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
	$mm^2$	1 x (1 - 2,5)
		2 x (1 - 2,5)
	mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
		M3.5
	Nm	1
	14.11	
		B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
		M3.5
	P P P Ie Ie Ie Ie Ie Ie Ie	P KW P KW P KW  Ie A Ie

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	20
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.6

Equipment heat dissipation, current-dependent	$P_{\text{vid}}$	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	40
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

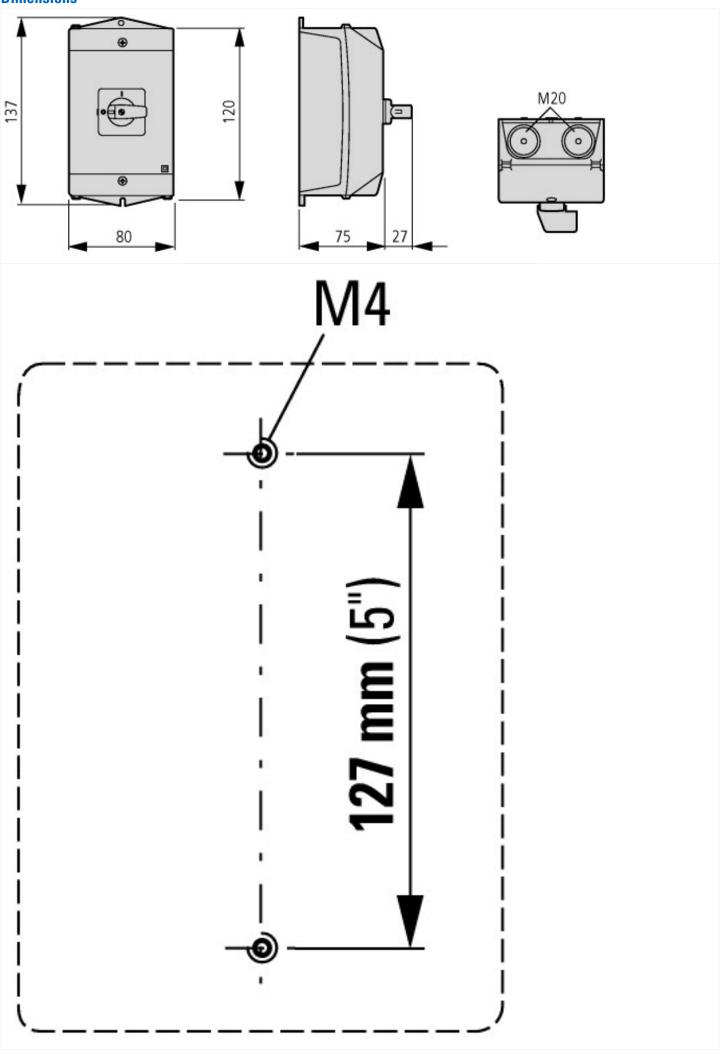
## **Technical data ETIM 7.0**

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])

Number of poles  Max. rated operation voltage Ue AC  Rated permanent current Iu  A 20  Number of switch positions  With 0 (off) position  With retraction in 0-position  Device construction  Width in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side	[ACN998011])		
Max. rated operation voltage Ue AC  Rated permanent current lu  A  20  Number of switch positions  With 0 (off) position  With oretraction in 0-position  Device construction  With in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side	Type of switch		Reverser
Rated permanent current lu  Number of switch positions  With 0 (off) position  With retraction in 0-position  Device construction  Width in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  A  20  3  3  3  With 20  Yes  No  No  Ves  No  No  Yes  Toggle  48x48 mm  Jef65	Number of poles		2
Number of switch positions  With 0 (off) position  With retraction in 0-position  No  Device construction  Width in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  Yes  3  No  Suitable for mumber of modular spacings  Suitable for ground mounting 4-hole  No  Toggle  48x48 mm  1965	Max. rated operation voltage Ue AC	V	690
With 0 (off) position  With retraction in 0-position  Device construction  Width in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  Yes  Yes  Yes  No  No  Type of control element  Toggle  48x48 mm  IP65	Rated permanent current lu	Α	20
With retraction in 0-position  Device construction  Width in number of modular spacings  O  Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  No  Suitable for interaction in 0-position  No  Surface mounted device  O  Surface mounted device  No  Yes  Yes  Types  Types  A8x48 mm  IP65	Number of switch positions		3
Device construction  Surface mounted device  O  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Toggle  Front shield size  Degree of protection (IP), front side  Surface mounted device  O  Surface mounted device  No  No  Surface mounted device  No  No  Surface mounted device  No  Surface mounted device  No  Surface mounted device  No  No  Surface mounted device  N	With 0 (off) position		Yes
Width in number of modular spacings  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  O  Yes  O  Avantable for intermediate mounting  No  Yes  Toggle  48x48 mm  IP65	With retraction in 0-position		No
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side  Yes  No  Toggle  48x48 mm  IP65	Device construction		Surface mounted device
Suitable for front mounting 4-hole Suitable for distribution board installation No Suitable for intermediate mounting No Complete device in housing Yes Type of control element Toggle Front shield size Degree of protection (IP), front side No INO IND	Width in number of modular spacings		0
Suitable for distribution board installation  Suitable for intermediate mounting  No  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  No  Yes  Toggle  48x48 mm  IP65	Suitable for ground mounting		Yes
Suitable for intermediate mounting  Complete device in housing  Type of control element  Front shield size  Degree of protection (IP), front side  No  Toggle  48x48 mm  IP65	Suitable for front mounting 4-hole		No
Complete device in housing Yes Type of control element Toggle Front shield size Degree of protection (IP), front side  Yes Toggle 48x48 mm IP65	Suitable for distribution board installation		No
Type of control element Toggle Front shield size 48x48 mm Degree of protection (IP), front side IP65	Suitable for intermediate mounting		No
Front shield size 48x48 mm  Degree of protection (IP), front side IP65	Complete device in housing		Yes
Degree of protection (IP), front side	Type of control element		Toggle
	Front shield size		48x48 mm
Degree of protection (NEMA), front side Other	Degree of protection (IP), front side		IP65
	Degree of protection (NEMA), front side		Other

## Dimensions



Drilling dimensions base