#### DATASHEET - T0-1-15431/I1



Changeoverswitches, Contacts: 2, 20 A, front plate: HAND-0-AUTO, 45  $^\circ,$  maintained, surface mounting



EL-Nummer (Norway)

Part no. Catalog No. T0-1-15431/l1 207070

0001456295

Similar to illustration

Product range Product mage Product mage for matching Defend on a subscription Defend on a subscrip is a subscription Defend on a subscrip is	Delivery program			
Basic function Image: space switches   Contacts Image: spice sp				Control switches
Contacts   Contacts   Contacts   Contacts   Contacts   Contacts   Contacts   Contacts   Fig   Contacts   Cont	Part group reference			ТО
Centacts Centacts Centacts Centacts FBS   Design International Control of Contr	Basic function			Changeoverswitches
Design Image: sequence Image: sequence Image: sequence   Contact sequence Image: sequence Image: sequence   Svitching angle Image: sequence Image: sequence   Tot sequence Image: sequence Image: sequence   Image: sequence Image: sequence Image: sequence   Image: sequence Image: sequence Image: sequence				with black thumb grip and front plate
Image: sequence Image: sequence Image: sequence Image: sequence   Switching angle Image: sequence Image: sequence   Fort plate no. Image: sequence Image: sequence   Motor rating AC-23A, Sol - 60 Hz Image: sequence Image: sequence   Motor rating uninterupted current I_is specified for max. cross-section. Image: sequence   Number of commutin	Contacts			2
Design   Image: Section of the sectin of the section of the section of the section	Degree of Protection			IP65
Contact sequence AUTO   Contact sequence AUTO   Switching angle AUTO   Switching performance AUTO   Design number 5   Rotor plate no. HAND_GAUTO   Motor reting AC-23A, 50 - 60 Hz HAND_GAUTO   40 V P KAD-0-AUTO   Rote or reting duriner upted current 1 P KAD-0-AUTO   Note or cated uninterrupted current 1 P KAD-0-AUTO   Read uninterrupted current 1 P KAD-0-AUTO   Rote or reting duriner no. P KAD   Motor reting AC-23A, 50 - 60 Hz MAD-0-AUTO   Motor reting AC-23A, 50 - 60 Hz MAD-0-AUTO   Rote or reting duriner no. F S   Nome or corrett 1 Mano-0-AUTO				totally insulated
Switching angle   Image: Switching performance   Imag	Design			surface mounting
Switching angle   Image: Switching performance   Imag				
Switching performance initial ined within 0 (Off) position   Design number 5431   Fort plate no. Image:	Contact sequence			
Pesign number   Image: Protect of the position     Front plate no.   Image: Protect of the position     Front plate no.   Image: Protect of the position     font plate   Image: Protect of the position     font plate   Image: Protect of the position     Motor rating AC-23A, 50 - 60 Hz   Image: Protect of the position     400 V   P   KV     Add V   P   KV     Rated uninterrupted current lu   Iu   A     Note on rated uninterrupted current lu   Iu   A     Number of contact units   Image: Protect of the position	Switching angle		0	45
Front plate no.   Image: Ima	Switching performance			
font plate   HANDO-AUTO     Motor rating AC-23A, 50 - 60 Hz   HANDO-AUTO     400 V   P   KW   5.5     Rated uninterrupted current Iu   Iu   P   AU     Note on rated uninterrupted current Iu   Iu   P   20     Number of contact units   Contact   1	Design number			15431
Motor rating AC-23A, 50 - 60 Hz Image: Constant of the system of the system of the system of contact units Part of the system o	Front plate no.			HAND AUTO
400 V P kW 5.5   Rated uninterrupted current Iu A 20   Note on rated uninterrupted current !u Rated uninterrupted current Iu is specified for max. cross-section. Rated uninterrupted current Iu is specified for max. cross-section.	front plate			HAND-0-AUTO
Rated uninterrupted current Iu A 20   Note on rated uninterrupted current Iu Rated uninterrupted current Iu is specified for max. cross-section.   Number of contact units contact 1	Motor rating AC-23A, 50 - 60 Hz			
Note on rated uninterrupted current !u Rated uninterrupted current lu is specified for max. cross-section.   Number of contact units contact	400 V	Р	kW	5.5
Number of contact units contact 1	Rated uninterrupted current	lu	A	20
Number of contact units contact 1	Note on rated uninterrupted current !u			Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
	Number of contact units		contact unit(s)	1

# **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			111/3
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	lu	A	20
Note on rated uninterrupted current !u			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	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			Current for a time of 1 second
Rated conditional short-circuit current	Ιq	kA	6
Switching capacity			
$\cos\phi$ 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		Α	110
500 V		A	80
690 V		Α	60
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at l <sub>e</sub>		W	0.6
Current heat loss per auxiliary circuit at $I_{e}$ (AC-15/230 V)		C0	0.6
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.4
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	Р	kW	
220 V 230 V	Р	kW	3
230 V Star-delta	Р	kW	5.5
400 V 415 V	Р	kW	5.5
400 V Star-delta	Р	kW	7.5
500 V	Р	kW	5.5
500 V Star-delta	Р	kW	7.5
690 V	Р	kW	4
690 V Star-delta	Р	kW	5.5
Rated operational current motor load switch			
230 V	Ι <sub>e</sub>	A	11.5
230 V star-delta	Ι <sub>e</sub>	A	20
400V 415 V	I <sub>e</sub>	A	11.5
400 V star-delta	۱ <sub>e</sub>	A	20
500 V	l <sub>e</sub>	A	9
500 V star-delta	l <sub>e</sub>	A	15.6
690 V		A	4.9
UJU V	le	~	T.U

690 V star-delta	le	А	8.5
AC-21A			
Rated operational current switch			
440 V	Ie	A	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	Ι <sub>e</sub>	A	13.3
400 V 415 V	le	A	13.3
500 V	l <sub>e</sub>	A	13.3
690 V	l <sub>e</sub>	A	7.6
DC	'e	~	
DC-1, Load-break switches L/R = 1 ms			
		A	10
Rated operational current	l <sub>e</sub>		
Voltage per contact pair in series		V	60
DC-21A	le	A	
Rated operational current	le	A	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	Ι <sub>e</sub>	A	10
Contacts		Quantity	1
48 V			
Rated operational current	Ι <sub>e</sub>	А	10
Contacts		Quantity	2
60 V			
Rated operational current	Ι <sub>e</sub>	А	10
Contacts		Quantity	3
120 V			
Rated operational current	le	А	5
Contacts		Quantity	3
240 V			
Rated operational current	Ι <sub>e</sub>	A	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	le	A	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 fault in 100000 operations
	probability		
Terminal capacities		0	4 (4 05)
Solid or stranded		mm <sup>2</sup>	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 2.5)
			2 x (0.75 - 2.5)
Terminal screw			M3.5
Tightening torque for terminal screw		Nm	1
Technical safety parameters:			P10, volume on per EN ISO 12840 1 table C1
Notes Rating data for approved types			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Terminal capacity			
Terminal screw			M3.5
Tightening torque		lb-in	8.83
nyntoning torquo		10 111	0.00

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	20
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.6
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	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 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.

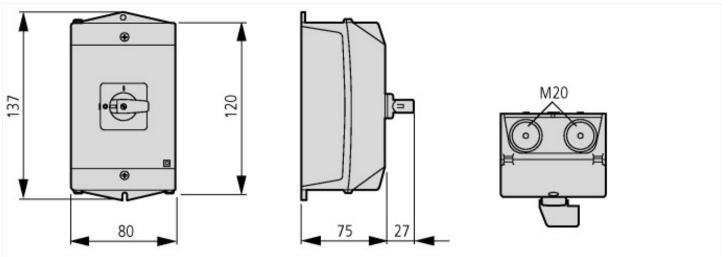
#### **Technical data ETIM 7.0**

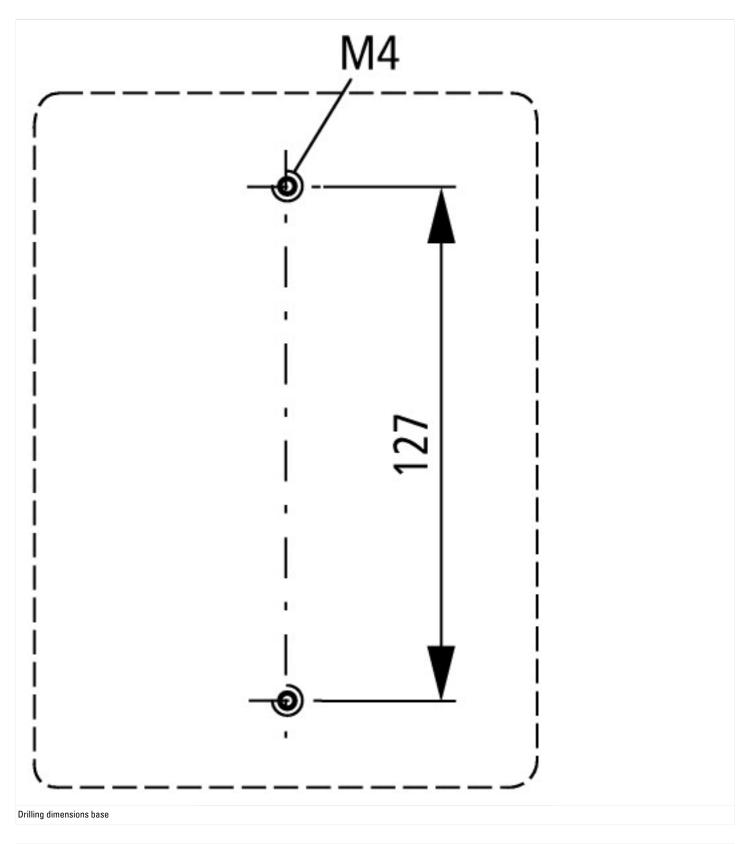
Low-voltage industrial components (EG000017) / Control switch (EC002611)

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])			
Type of switch			Reverser
Number of poles			1
Max. rated operation voltage Ue AC	V		690
Rated permanent current lu	A		20
Number of switch positions			3
With 0 (off) position			Yes
With retraction in 0-position			No
Device construction			Surface mounted device
Width in number of modular spacings			0
Suitable for ground mounting			Yes
Suitable for front mounting 4-hole			No
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Complete device in housing			Yes

Type of control element	Toggle
Front shield size	48x48 mm
Degree of protection (IP), front side	IP65
Degree of protection (NEMA), front side	Other

### Dimensions





## Assets (links)

Declaration of CE Conformity 00003075 Instruction Leaflets IL03801007Z2018\_05