DATASHEET - T0-2-8182/I1



Spring-return switch, T0, 20 A, surface mounting, 2 contact unit(s), Contacts: 4, 45 °, momentary/maintained, With 0 (Off) position, with spring-return from both directions, START>1-0-2<START, Design no. 8182



Part no. T0-2-8182/I1 Catalog No. 226793



Similar to illustration

Delivery program			
Product range			Control switches
Part group reference			ТО
Basic function			Spring-return switch
			with black thumb grip and front plate
Contacts			4
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact sequence			
Switching angle		0	45
Switching performance			momentary/maintained With 0 (Off) position with spring-return from both directions
Design number			8182
Front plate no.			FS 140660
front plate			START>1-0-2 <start< th=""></start<>
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 $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	2

Technical data General

Climatic proofing

donorai		
Standards		

IEC/EN 60947, VDE 0660, IEC/EN 60204
Switch-disconnector according to IEC/EN 60947-3

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 _{imp}	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Contacts			
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	I _u	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 _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	20
Rated short-time withstand current (1 s current)	I _{cw}	A_{rms}	320
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	I_q	kA	6
Switching capacity			
cos φ rated making capacity as per IEC 60947-3		Α	130
Rated breaking capacity cos φ 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
			440
Current heat loss per contact at I _e Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		W CO	0.6 0.6
	Onevetiene		
Lifespan, mechanical	Operations	x 10 ⁶	> 0.4
Maximum operating frequency	Operations/h		1200
AC			
AC-3	D	LAAZ	
Rating, motor load switch	P	kW	2
220 V 230 V 230 V Star-delta	P P	kW	3 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	l _e	Α	11.5
230 V star-delta	I _e	Α	20
400V 415 V	I _e	Α	11.5
400 V star-delta	I _e	Α	20
500 V	I _e	Α	9
500 V star-delta	I _e	A	15.6
690 V	l _e	A	4.9
690 V star-delta		A	8.5
ooo + otal doitu	l _e	′`	

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	P	kW	5.5
Rated operational current motor load switch		KVV	J.0
230 V	l _e	Α	13.3
400 V 415 V		A	13.3
	l _e		
500 V	l _e	Α	13.3
690 V	l _e	Α	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l _e	Α	10
Voltage per contact pair in series		V	60
DC-21A	l _e	Α	
Rated operational current	l _e	Α	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	1
48 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	le	Α	10
Contacts		Quantity	3
120 V			
Rated operational current	I _e	Α	5
Contacts		Quantity	3
240 V		,	
Rated operational current	I _e	A	5
Contacts	C	Quantity	
DC-13, Control switches L/R = 50 ms			-
Rated operational current	l _e	Α	10
Voltage per contact pair in series	C	V	32
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	
	probability		< 10 ⁻⁵ ,< 1 failure in 100,000 switching operations
Terminal capacities			
Solid or stranded		mm ²	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm ²	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:			
Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rating data for approved types			
Terminal capacity			
Terminal screw			M3.5

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	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. $\label{eq:continuous}$
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.

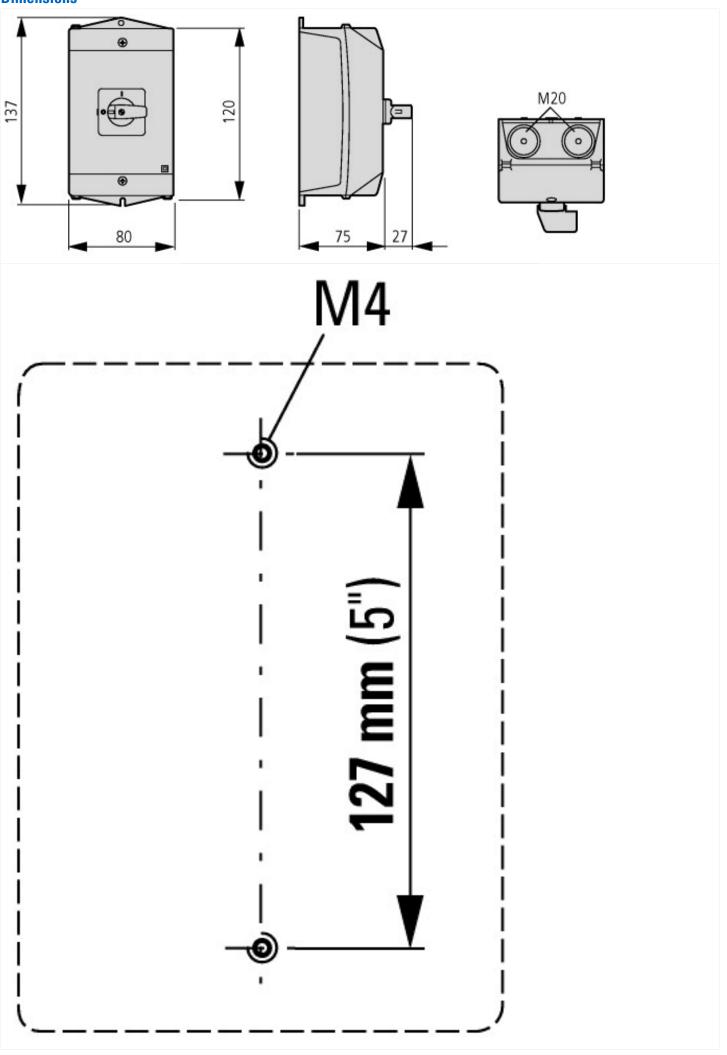
Technical data ETIM 7.0

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 Complete device in housing Type of control element Front shield size Degree of protection (IP), front side	Type of switch		On/Off switch
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 5 No Yes No No No Yes Toggle 48x48 mm Jep65	Number of poles		0
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 State of Motor of	Max. rated operation voltage Ue AC	V	690
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	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 Type Available for intermediate mounting No No Suitable for intermediate mounting Yes Type of control element Front shield size Degree of protection (IP), front side	Number of switch positions		5
Device construction Surface mounted device 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 Surface mounted device No Surface mounted device Yes Yes Yes Type 48x48 mm IP65	With 0 (off) position		Yes
Width in number of modular spacings Suitable for ground mounting Yes 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 1066 1086	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 Yes 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 Yes 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



Additional product information (links)

Display flip catalog page.	http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=105
Technical overview cam switch, switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.2
System overview cam switch T	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.4
System overview switch-disconnector P	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6
Key to part numbers Cam switch	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8
Key to part numbers Switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8
Switches for ATEX	http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html