DATASHEET - T0-2-15473/IVS



ON-OFF switches, T0, 20 A, service distribution board mounting, 2 contact unit(s), Contacts: 3, 90 $^{\circ}$, maintained, 0-1, design no. 15473



Part no. T0-2-15473/IVS Catalog No. 011420



Similar to illustration			
Delivery program			
Product range			Control switches
Part group reference			ТО
Basic function			ON-OFF switches
			with black thumb grip and front plate
Contacts			3
Degree of Protection			Front IP30
Design			service distribution board mounting
Contact sequence			0 1 10 20 X 30 40 X 50 60 X
Switching angle		0	90
Switching performance			maintained
Design number			15473
Front plate no.			FS 908
front plate			0-1
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	5.5
Rated uninterrupted current	I _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
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Climatic proofing			Damp heat, constant, to IEC 60068-2-78
Ambient temperature			Damp heat, cyclic, to IEC 60068-2-30
		on	25 .50
Open		°C	-25 - +50
Enclosed		- 0	-25 - +40
Overvoltage category/pollution degree		V A C	111/3
Rated impulse withstand voltage	U _{imp}	V AC	6000
Mechanical shock resistance		g	15
Mounting position Contacts			As required
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current		A	20
	lu	A	
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	Iq	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		Α	80
690 V		Α	60
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I _e		W	0.6
Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations	x 10 ⁶	> 0.4
Maximum operating frequency	Operations/h	X 10	1200
AC	Operations/ii		1200
AC-3			
Rating, motor load switch	Р	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 P	kW	7.5
500 V		kW	5.5
500 V Star-delta	P	kW	7.5
690 V	P	kW	4
690 V Star-delta	Р	kW	5.5
Rated operational current motor load switch			
230 V	l _e	Α	11.5
230 V star-delta	l _e	Α	20
400V 415 V	l _e	Α	11.5
400 V star-delta	l _e	Α	20
500 V	I _e	Α	9
		Α	15.6

COOL		٨	40
690 V	l _e	A	4.9
690 V star-delta	l _e	Α	8.5
AC-23A	D	134/	
Motor rating AC-23A, 50 - 60 Hz 230 V	P	kW	
400 V 415 V	P P	kW	5.5
500 V	P	kW	7.5
690 V	P	kW	5.5
Rated operational current motor load switch	•	KVV	3.0
230 V	I _e	Α	13.3
400 V 415 V	I _e	Α	13.3
500 V	I _e	A	13.3
690 V	I _e	A	7.6
DC	'e	^	7.0
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I _e	A	10
Voltage per contact pair in series	6	V	60
DC-21A	I _e	A	E-
Rated operational current	I _e	A	1
Contacts	. 6	Quantity	
DC-23A, motor load switch L/R = 15 ms		Quantity	
24 V			
Rated operational current	I _e	A	10
Contacts	C	Quantity	
48 V		,	
Rated operational current	I _e	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	I _e	Α	10
Contacts		Quantity	3
120 V			
Rated operational current	Ie	Α	5
Contacts		Quantity	3
240 V			
Rated operational current	le	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		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H _F	< 10 ⁻⁵ ,< 1 failure in 100,000 switching operations
Terminal capacities Solid or stranded		2	1 x (1 - 2,5)
Solid of Stranded		mm ²	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 Technical safety parameters:		Nm	1
Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rating data for approved types			
Contacts			
Rated operational voltage	U _e	V AC	600
Rated uninterrupted current max.			
Main conducting paths		^	10
General use		Α	16

Auxiliary contacts			
General Use	lu	Α	10
Pilot Duty			A 600 P 300
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	0.5
200 V AC		HP	1
240 V AC		HP	1.5
Three-phase			
200 V AC		HP	3
240 V AC		HP	3
480 V AC		HP	7.5
600 V AC		HP	7.5
Short Circuit Current Rating		SCCR	
Basic Rating		kA	5
max. Fuse		Α	50
High fault rating		kA	10
max. Fuse		Α	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

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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			Meets the product standard's requirements.
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])

Number of poles Max. rated operation voltage Ue AC Max. rated operation voltage Ue AC No 690 Number of switch positions With 0 (off) position With 10 (off) position With retraction 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 Complete device in housing Type of control element Front shield size Degree of protection (IP), front side 3 Ve 690 Roo Roo Roo Roo Roo Roo Roo R			
Max. rated operation voltage Ue AC Rated permanent current Iu Rated permanent current Iu Rumber of switch positions With 0 (off) position With ortraction in 0-position Device construction Width in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for firont mounting 4-hole 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		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 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	Number of poles		3
Number of switch positions With 0 (off) position With retraction in 0-position Device construction Built-in device Width in number of modular spacings With for ground mounting 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 2 Yes No Type Toggle Other IP30	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 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 Ves Other Degree of protection (IP), front side	Rated permanent current lu	А	20
With retraction in 0-position Device construction Width in number of modular spacings Suitable for ground mounting Suitable for ground 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 Built-in device Built-in device A Suitable for interindevice No No Type	Number of switch positions		2
Device construction Built-in device Width in number of modular spacings 4 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 Built-in device Built-in device A Built-in device No Yes No No Type Type Degree of protection (IP), front side Built-in device 1 A Page Page Page Page Page Built-in device A Page Page Page Page Page Page Built-in device A Page Page Page Page Built-in device A Page Page Page Page Page Page Built-in device A Page Page	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 No Type of control element Front shield size Degree of protection (IP), front side 4 A A A A A A A A A A A A	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 Type of control element Toggle Degree of protection (IP), front side	Device construction		Built-in device
Suitable for front mounting 4-hole Suitable for distribution board installation Yes Suitable for intermediate mounting No Complete device in housing No Type of control element Front shield size Degree of protection (IP), front side	Width in number of modular spacings		4
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 Yes No Toggle Toggle IP30	Suitable for ground mounting		Yes
Suitable for intermediate mounting Complete device in housing No Type of control element Front shield size Degree of protection (IP), front side No IP30	Suitable for front mounting 4-hole		No
Complete device in housing No Type of control element Toggle Front shield size Degree of protection (IP), front side No Toggle Other IP30	Suitable for distribution board installation		Yes
Type of control element Front shield size Degree of protection (IP), front side Toggle Other IP30	Suitable for intermediate mounting		No
Front shield size Other Degree of protection (IP), front side IP30	Complete device in housing		No
Degree of protection (IP), front side	Type of control element		Toggle
	Front shield size		Other
Degree of protection (NEMA), front side Other	Degree of protection (IP), front side		IP30
	Degree of protection (NEMA), front side		Other

Approvals

PP 5 5 5	
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: IP30; UL/CSA Type: –

Dimensions

