## **DATASHEET - T0-1-15482/XZ**



ON-OFF switches, T0, 20 A, rear mounting, Basic switch, 1 contact unit(s), Contacts: 2, 90 °, Design number 15482



Part no. T0-1-15482/XZ Catalog No. 009318

Similar to illustration

Delivery program			
Product range			Control switches
Part group reference			ТО
Basic function			ON-OFF switches
Contacts			2
Design			rear mounting Basic switch
Contact sequence			0 1 1 0 X 2 0 X 3 0 X
Switching angle		0	90
Design number			15482
Front plate no.			FS 907
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	5.5
Rated uninterrupted current	I <sub>u</sub>	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\text{U}}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	1

### **Technical data**

Load rating with intermittent operation, class 12

C	6	n	0	re	ы

		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
	°C	-25 - +50
	°C	-25 - +40
		III/3
$U_{imp}$	V AC	6000
	g	15
		As required
U <sub>e</sub>	V AC	690
I <sub>u</sub>	Α	20
		Rated uninterrupted current $I_{\text{u}}$ is specified for max. cross-section.
	U <sub>e</sub>	°C U <sub>imp</sub> V AC g

AB 25 % DF		x l <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		^ 'e	1.0
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	·cw	7 41115	Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	6
Switching capacity	·d	10.1	
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		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 $I_{\rm e}$		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		1200
AC			
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	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	P _	kW	4
690 V Star-delta	P	kW	5.5
Rated operational current motor load switch 230 V		^	115
	l <sub>e</sub>	A	11.5
230 V star-delta	l <sub>e</sub>	A	20
400V 415 V	l <sub>e</sub>	Α	11.5
400 V star-delta	l <sub>e</sub>	Α	20
500 V	l <sub>e</sub>	Α	9
500 V star-delta	l <sub>e</sub>	Α	15.6
690 V	l <sub>e</sub>	Α	4.9
690 V star-delta	le	Α	8.5
AC-21A			
Rated operational current switch			
440 V	l <sub>e</sub>	Α	20
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	3
400 V 415 V	P	kW	5.5
500 V	P	kW	7.5
690 V	Р	kW	5.5
Rated operational current motor load switch			100
230 V	l <sub>e</sub>	A	13.3
400 V 415 V	l <sub>e</sub>	Α	13.3
500 V	l <sub>e</sub>	Α	13.3

DC-1, Load-break switches L/R = 1 ms				
DC-1, Load-break switches L/R = 1 ms	690 V	l <sub>e</sub>	Α	7.6
Rated operational current	DC			
Voltage per contact pair in series         V         60           DC-21A         I <sub>0</sub> A           Rated operational current         I <sub>0</sub> A         1           Contacts         Quantity         1           DC-23A, motor load switch L/R = 15 ms         Quantity         1           24 V         Rated operational current         I <sub>0</sub> A         10           Contacts         Quantity         1           8 V         Quantity         2           Rated operational current         I <sub>0</sub> A         10           Contacts         Quantity         2           60 V         Quantity         3           120 V         Quantity         3           Rated operational current         I <sub>0</sub> A         5           Contacts         Quantity         3           240 V         Quantity         3           Rated operational current         I <sub>0</sub> A         5           Contacts         Quantity         5           Contacts         Quantity         5           DC-13, Control switches L/R = 50 ms         Rated operational current         I <sub>0</sub> A         10           Voltage per co	DC-1, Load-break switches L/R = 1 ms			
DC-21A	Rated operational current	l <sub>e</sub>	Α	10
Rated operational current   Ie   A   1   Contacts   Quantity   1   Rated operational current   Ie   A   10   Contacts   Quantity   1   Rated operational current   Ie   A   10   Contacts   Quantity   1   Rated operational current   Ie   A   10   Contacts   Quantity   2   Rated operational current   Ie   A   10   Contacts   Quantity   2   Rated operational current   Ie   A   10   Contacts   Quantity   2   Rated operational current   Ie   A   10   Contacts   Quantity   3   I20 V   Rated operational current   Ie   A   5   Contacts   Quantity   3   Rated operational current   Ie   A   5   Contacts   Quantity   3   Rated operational current   Ie   A   5   Contacts   Quantity   7   Contacts	Voltage per contact pair in series		V	60
Contacts	DC-21A	le	Α	
DC-23A, motor load switch L/R = 15 ms  24 V  Rated operational current  Contacts  Rated operational current  Contacts  Rated operational current  Contacts  Rated operational current  Rated operational current  Contacts  Rated operational current  Le A 10  Contacts  Contacts  Contacts  Contacts  Rated operational current  Le A 10  Contacts  Contacts  Contacts  Contacts  Contacts  Rated operational current  Le A 5  Contacts	Rated operational current	l <sub>e</sub>	Α	1
Rated operational current	Contacts		Quantity	1
Rated operational current   Ie	DC-23A, motor load switch L/R = 15 ms			
Contacts  48 V  Rated operational current Contacts  60 V  Rated operational current Ie A  Contacts  Guantity	24 V			
Rated operational current Rated operational	Rated operational current	l <sub>e</sub>	Α	10
Rated operational current Contacts 60 V  Rated operational current  Contacts  Contacts  Contacts  Rated operational current  Rated operational current  Rated operational current  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Rated operational current  Pault  Contacts  Conta	Contacts		Quantity	1
Contacts 60 V  Rated operational current le A 10  Contacts Quantity 3  120 V  Rated operational current le A 5  Contacts Quantity 3  240 V  Rated operational current le A 5  Contacts Quantity 3  Contacts Quantity 5  Contacts Quantity 3  Con	48 V			
Rated operational current  Contacts  Rated operational current  PoC-13, Control switches L/R = 50 ms  Rated operational current  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probabil	Rated operational current	l <sub>e</sub>	Α	10
Rated operational current  Contacts Quantity Rated operational current  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Rated operational current  Voltage per contact pair in series  V 32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities  Solid or stranded	Contacts		Quantity	2
Contacts Quantity 120 V  Rated operational current le A 5  Contacts Quantity 3  240 V  Rated operational current le A 5  Contacts Quantity 5  Contacts Quantity 5  DC-13, Control switches L/R = 50 ms Rated operational current le A 10  Voltage per contact pair in series Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA Fault probability Fault PF  Voltage PR  Volta	60 V			
Rated operational current  Contacts Quantity Rated operational current  Rated operational current  Rated operational current  Contacts Quantity  Rated operational current  Contacts  DC-13, Control switches L/R = 50 ms  Rated operational current  I <sub>e</sub> A 5 Quantity 5  DC-13, Control switches L/R = 50 ms  Rated operational current  I <sub>e</sub> A 10  Voltage per contact pair in series  V 32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Ferminal capacities  Solid or stranded	Rated operational current	l <sub>e</sub>	Α	10
Rated operational current  Contacts  Quantity  A  5  Quantity  Rated operational current  Rated operational current  Ie  A  5  Contacts  Quantity  5  DC-13, Control switches L/R = 50 ms  Rated operational current  Ie  A  10  Voltage per contact pair in series  V  32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Terminal capacities  Solid or stranded  A  5  Quantity  5  4  10  10  10  10  10  10  10  10  10	Contacts		Quantity	3
Contacts  Quantity  Rated operational current  Contacts  DC-13, Control switches L/R = 50 ms  Rated operational current  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities  Solid or stranded  Quantity  3  4  5  Quantity  5  Quantity  5  Contacts  V  32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  HF  contacts  A  10  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities	120 V			
Rated operational current  Rated operational current  Contacts  DC-13, Control switches L/R = 50 ms  Rated operational current  Rated operational current  Ie  A  10  Voltage per contact pair in series  V  32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Terminal capacities  Solid or stranded  A  1 × (1 - 2,5)	Rated operational current	le	Α	5
Rated operational current  Contacts  DC-13, Control switches L/R = 50 ms  Rated operational current  Ie A 10  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Terminal capacities  Solid or stranded  A 5  Ouantity 5  V 32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Terminal capacities  Solid or stranded	Contacts		Quantity	3
Contacts  DC-13, Control switches L/R = 50 ms  Rated operational current  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Fault probability  Terminal capacities  Solid or stranded  Duantity  5  U	240 V			
DC-13, Control switches L/R = 50 ms  Rated operational current  Voltage per contact pair in series  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Terminal capacities  Solid or stranded  Solid or stranded  Rated operations   Le	Rated operational current	l <sub>e</sub>	Α	5
Rated operational current  Voltage per contact pair in series  Vol	Contacts		Quantity	5
Voltage per contact pair in series  V 32  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Fault probability  Terminal capacities  Solid or stranded  V 32 <a href="https://www.energy.com/specifications.org/linearing-contactions">T (10<sup>-5</sup>,&lt; 1 failure in 100,000 switching operations)</a> Terminal capacities	DC-13, Control switches L/R = 50 ms			
Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault HF < 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations  Terminal capacities  Solid or stranded  To stranded  Solid or stranded  To stranded	Rated operational current	l <sub>e</sub>	Α	10
probability  Terminal capacities  Solid or stranded	Voltage per contact pair in series		V	32
Solid or stranded $mm^2 1 \times (1-2,5)$			H <sub>F</sub>	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
Solid or stranded $mm^2 1 \times (1-2.5)$ $2 \times (1-2.5)$	Terminal capacities			
	Solid or stranded		mm <sup>2</sup>	2 x (1 - 2,5)
2 x (0.75 - 2.5)	Flexible with ferrules to DIN 46228		mm <sup>2</sup>	2 x (0.75 - 2.5)
	Terminal screw			M3.5
	Tightening torque for terminal screw		Nm	1
	Technical safety parameters:			Day 1 ENLIGO 19919 4 1 1 1 C
	Notes			BIU <sub>d</sub> values as per EN ISU 13849-1, table C1
	Rating data for approved types  Terminal capacity			

Terminal capacity M3.5 Terminal screw

# 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 <sub>vid</sub>	W	0.6
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	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])

Type of switch		On/Off switch
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		Yes
With retraction in 0-position		No
Device construction		Built-in 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		Yes
Complete device in housing		No
Type of control element		Other
Front shield size		48x48 mm
Degree of protection (IP), front side		IP00
Degree of protection (NEMA), front side		Other

## **Assets (links)**

**Declaration of CE Conformity** 

00003075

## **Additional product information (links)**

Display flip catalog page.	http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=42
Ordering form for SOND switches and SOND front plates(DE_EN)	$ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU\_Orderform\_Customized\_Switch.pdf$
Ordering form for SOND switches and SOND front plates(DE_EN)	$ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU\_Orderform\_Customized\_Switch.pdf$