Changeoverswitches, T0, 20 A, surface mounting, 1 contact unit(s), Contacts: 2, 90 °, maintained, Without 0 (Off) position, 1-2, Design number 15441



Part no. T0-1-15441/l1 218968

General specifications	
Product name	Eaton Moeller® series T0 Changeover switch
Part no.	T0-1-15441/I1
EAN	4015082189686
Product Length/Depth	137 millimetre
Product height	102 millimetre
Product width	80 millimetre
Product weight	0.253 kilogram
Compliances	VDE
Certifications	EN 60204 EN 60947 IEC 60947 VDE IEC/EN 60947-3 VDE 0660 IEC/EN 60947 IEC/EN 60204
Product Tradename	ТО
Product Type	Changeover switch
Product Sub Type	None
Catalog Notes	Rated Short-time Withstand Current (Icw) for a time of 1 second
eatures & Functions	
Features	Complete device in housing
Fitted with:	Black thumb grip and front plate
Inscription	1-2
Number of poles	Single-pole
eneral information	
Degree of protection	IP65
Degree of protection (front side)	IP65 NEMA 12
Lifespan, mechanical	400,000 Operations
Mounting method	Surface mounting
Mounting position	As required
Number of contact units	1
Operating frequency	1200 Operations/h
Overvoltage category	III
Pollution degree	3
Product category	Control switches
Rated impulse withstand voltage (Uimp)	6000 V AC
Safe isolation	440 V AC, Between the contacts, According to EN 61140
Safety parameter (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
Shock resistance	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
Suitable for	Ground mounting
Switching angle	90 °
Туре	Changeover switch
limatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	40 °C
Ambient operating temperature - max Ambient operating temperature (enclosed) - min	-25 °C
oporazing comporazaro (orrorodou) mini	40 °C

Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Tarminal canacities	טמוויף וופמן, טטוואנמוון, נט וובט טטטטט־ב־זט
Terminal capacities	
Terminal capacity (flexible with ferrule)	1 x (0.75 - 2.5) mm², ferrules to DIN 46228 2 x (0.75 - 2.5) mm², ferrules to DIN 46228
Terminal capacity (solid/stranded)	2 x (1 - 2.5) mm² 1 x (1 - 2.5) mm²
Screw size	M3.5, Terminal screw
Tightening torque	1 Nm, Screw terminals
Electrical rating	
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)	100 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)	110 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)	80 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)	60 A
Rated operating voltage (Ue) at AC - max	690 V
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V	11.5 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V	11.5 A
Rated operational current (Ie) at AC-3, 500 V	9 A
Rated operational current (Ie) at AC-3, 660 V, 690 V	4.9 A
Rated operational current (Ie) at AC-21, 440 V	20 A
Rated operational current (Ie) at AC-23A, 230 V	13.3 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V	13.3 A
Rated operational current (Ie) at AC-23A, 500 V	13.3 A
Rated operational current (Ie) at AC-23A, 690 V	7.6 A
Rated operational current (Ie) at DC-1, load-break switches $I/r = 1 \text{ ms}$	10 A
Rated operational current (Ie) at DC-13, control switches $L/R = 50 \text{ ms}$	10 A
Rated operational current (Ie) at DC-21, 240 V	1 A
Rated operational current (Ie) at DC-23A, 24 V	10 A
Rated operational current (Ie) at DC-23A, 48 V	10 A
Rated operational current (Ie) at DC-23A, 60 V	10 A
Rated operational current (Ie) at DC-23A, 120 V	5 A
Rated operational current (Ie) at DC-23A, 240 V	5 A
Rated operational current (Ie) star-delta at AC-3, 230 V	20 A
Rated operational current (Ie) star-delta at AC-3, 400 V	20 A
Rated operational current (Ie) star-delta at AC-3, 500 V	15.6 A
Rated operational current (Ie) star-delta at AC-3, 690 V	8.5 A
Rated operational power at AC-3, 415 V, 50 Hz	5.5 kW
Rated operational power at AC-3, 500 V, 50 Hz	5.5 kW
Rated operational power at AC-3, 690 V, 50 Hz	4 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz	3 kW
Rated operational power at AC-23A, 400 V, 50 Hz	5.5 kW
Rated operational power at AC-23A, 500 V, 50 Hz	7.5 kW
Rated operational power at AC-23A, 690 V, 50 Hz	5.5 kW
Rated operational power star-delta at 220/230 V, 50 Hz	5.5 kW
Rated operational power star-delta at 380/400 V, 50 Hz	7.5 kW
Rated operational power star-delta at 500 V, 50 Hz Rated operational power star-delta at 690 V, 50 Hz	7.5 kW 5.5 kW
Rated operational power star-delta at 690 V, 50 Hz Rated uninterrupted current (Iu)	9.5 KW 20 A
Uninterrupted current (III)	20 A Rated uninterrupted current lu is specified for max. cross-section.
Short-circuit rating	nated uninterrupted current to is specified for max. Closs-section.
<u> </u>	6 kA
Rated conditional short-circuit current (Iq) Rated short-time withstand current (Icw)	320 A, Contacts, 1 second
Short-circuit protection rating	20 A gG/qL, Fuse, Contacts
· · · · · · · · · · · · · · · · · · ·	20 A gu/gL, i use, cultacts
Switching capacity	2 v 1# / vith int
Load rating	2 x $\#$ (with intermittent operation class 12, 25 % duty factor) 1.6 x $\#$ (with intermittent operation class 12, 40 % duty factor) 1.3 x $\#$ (with intermittent operation class 12, 60 % duty factor)

observed.		
Number of contacts in series at DC-20A, 85 V 3 Number of contacts in series at DC-20A, 80 V 3 Number of contacts in series at DC-20A, 80 V 5 Read making capacity up 50 V (co. phi to ECIEN 18947-3) 130 A Victings per contact pair in series Control circuit reliability 1 failure per 100,000 evitating operations statistically determined, at 24 V DC. 10 mAI Number of contacts 2 Control circuit reliability 1 failure per 100,000 evitating operations statistically determined, at 24 V DC. 10 mAI Number of contacts 2 Actuator function White-series 3 Actuator function White-series 2 Actuator function White-series 3 Actuator function Proper function white-series 3 Actuator function Proper function white-series 3 Actuator function Proper function white-series 3 Actuator function of white-series 4 Actuator function of white-series 4 Actuator function of series 4 Actuator function of	Number of contacts in series at DC-21A, 240 V	1
Number of contacts in series at DC-22A, 200 V Number of contacts in series at DC-22A, 200 V Fatad making capacity pto 680 V (cos phi to IEC/EN 6091-3) Voltage are contact to per in series Contacts Control circuit reliability I failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA/ Number of contacts Control circuit reliability Actuator Actuator Actuator Actuator Actuator ype Actuator Actuator ype Actuator Actuator ype Number of switch positions 2 Design verification Expinement hear dissipation, current-dependent Pvid Number of switch positions 2 Design verification Expinement hear dissipation, current-dependent Pvid Number of switch positions 10-23 Verification of relative and including materials to normal heart 10-23 Septian, con-current-dependent Pvid 10-22 Corresion resistance 10-23 Verification of relative and including materials to normal heart 10-23 Septian, con-current-dependent Pvid 10-22 Corresion resistance 10-23 Verification of relative and including materials to normal heart 10-23 Septian of resistance of including materials to normal heart 10-23 Septian of relative and including materials to normal heart 10-23 Septian of relative and including materials to normal heart 10-23 Septian of relative and including materials to normal heart 10-25 Lifting 10-26 Mechanical impact 10-27 mechanics and creepage distances 10-28 Mechanical impact 10-29 Mech	Number of contacts in series at DC-23A, 24 V	1
Number of contacts in series at DC-22A, 120 V Number of contacts in series at DC-22A, 200 V Sadad making capacity up to 800 Y (cos plin to ECyCN 93847-3) Voltage per contact pair in series Control circuit reliability Number of contacts 1 Salarine per 100,000 switching aperations statistically determined, at 24 V DC, 10 mA) Number of contacts 2 Actuator Actuator Actuator Actuator Insertion Maintained Actuator Insertion Maintained Actuator Insertion Actuator Act	Number of contacts in series at DC-23A, 48 V	2
Number of contacts in series at DC-23A, 240 V Rand making capacity up to 86 V (cos pit to IEC/EN 06947-3] 130 A Contacts Contracts Control circuit reliability Number of contacts Actuator Actuator Actuator Number of contacts 2 Actuator Actuator Number of contacts 2 Actuator Actuator Number of contacts 2 Actuator Number of south positions 2 Design verification Equipment head dissipation, current-dependent Pvid 4 Heat dissipation capacity Pdiss Heat dissipation or point, current-dependent Pvid 8 Rand operational current for specified heat dissipation (in 190 Position number of south positions) 102.2 Corrosion route, current-dependent Pvid 8 Rand operational current for specified heat dissipation (in 190 Position number of south positions) 102.2 Lorosion contacts contact of separational current for specified heat dissipation (in 190 Position number of south positions) 102.2 Lorosion contacts contact of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separational current for specified heat dissipation (in 190 Position number of separation number o	Number of contacts in series at DC-23A, 60 V	3
Restort making capacity up to 889 V (cost phi to IECEN 88947-3) Voltage per contact pair in series Contract Control circuit reliability Number of contacts 2 Actuator Actuator Incident Plant of Series (Series Series Seri	Number of contacts in series at DC-23A, 120 V	3
Voltage per centact pair in series Control circuit reliability Number of contects 2 Actuator Actuator function Actuator function Actuator function Actuator type Toggle Number of switch positions 2 Design verification Equipment heat dissipation, numerant dependent Pvid Heat dissipation per pole, current-dependent Pvid Asted operational current for specified heat dissipation (in) 102.2 Corrosion resistance 102.31 Verification of thermal stability of enclosures 102.32 Verification of enclosures 102.32 Verification of enclosures 102.32 Verification of enclosures Meets the product standard's requirements. 102.33 Pelasis of insul mat to abnormal heat/five by internal elect. effects 102.34 Verification of enclosures 102.35 Reliability of enclosures 102.45 Meets the product standard's requirements. 102.56 Meets and or disease envir in connection with protective shield. 102.57 Internal electrical or disease and components 102.58 Design or diprotection of assemblies 103.65 Protection of assemblies 104.65 Design or apply, since the entire swirtchpear needs to be evaluated. 105 Protection of assemblies 105 Protection of assemblies 106 Design or apply, since the entire swirtchpear needs to be evaluated. 107 Internal electrical circuits and components 108 Design or apply, since the entire swirtchpear needs to be evaluated. 109 Internal electrical circuits and connections 109 Design or apply, since the entire swirtchpear needs to be evaluated. 1010 Interpretative rise control assemblies 102.65 Recharded circuits and connections 103 Internal electrical circuits and connections 104 Design or apply, since the entire swirtchpear needs to be evaluated. 105 Interpretative size of the apple builder's responsibility. 107 Internal electrical circuits and connections 108 Interpretative rise entires swirtchpear needs to be evaluated. 109 Inte	Number of contacts in series at DC-23A, 240 V	5
Contracts Control circuit reliability Number of contacts Actuator Actuator Actuator which positions Actuator yellow the product standard successful yellow the product y	Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)	130 A
Control circult reliability Number of contacts Actuator Actuator function Actuator trype Doesign verification Equipment head dissipation, current-dependent Pvid Heat dissipation capacity Pdiss OW Heat dissipation appairty Pdiss OW Heat dissipation per pole, current-dependent Pvid Bated operational current for specified heat dissipation (Inc.) Static heat dissipation, non-current-dependent Pvid Du Zo A Static heat dis	Voltage per contact pair in series	60 V
Number of contacts 2 Actuator function Actuator rype Toggle Number of switch positions Design verification Equipment heat discipation, current-dependent Pvid OW Heat dissipation per pole, current-dependent Pvid OBW Heat dissipation, per pole, current-dependent Pvid OBW Heat dissipation, non-current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvis OW OW Heat dissipation non-current-dependent Pvis OW OW Static heat dissipation, non-current-dependent Pvis OW Heat dissipation non-current-dependent Pvis OW OW Static heat dissipation non-current-dependent Pvis OW OW Static heat dissipation non-current-dependent Pvis OW OW OW Static heat dissipation of resistance of insulating materials to normal heat OW	Contacts	
Actuator function Actuator function Actuator type Toggle Number of switch positions 2 Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation per pole, current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Based dissipation, non-current-dependent Pvid Based operations of severation of resistance of insulating materials to In) 10.2.3 Unification of fresistance of insulating materials to normal hoat 10.2.3 Unification of fresistance of insulating materials to normal hoat 10.2.3 Resistance to ultra-violet (IV) radiation 10.2.4 Resistance to ultra-violet (IV) radiation 10.2.5 History and the active specified specified in protect standard's requirements. 10.2.7 Inscriptions 10.8 Desence and protection of assemblies Does not apply, since the entire switchgear needs to be evaluated. 10.9 Protection against electric shock Does not apply, since the entire switchgear needs to be evaluated. 10.9 Recorporation of switching devices and components 10.9 Recorporation of switching devices and	Control circuit reliability	
Actuator function Actuator function Actuator type Number of switch positions 2 Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation, current-dependent Pvid Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) State heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) State heat dissipation on current-dependent Pvid Rated operational current for specified heat dissipation (In) State heat dissipation on current-dependent Pvis 10.2.2 I Verification of resistance Meets the product standard's requirements. 10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting Does not apply, since the entire switchpear needs to be evaluated. 10.2.5 Lifting Does not apply, since the entire switchpear needs to be evaluated. 10.2.5 Degree of protection of assemblies Does not apply, since the entire switchpear needs to be evaluated. 10.4 Clearances and creepage distances Meets the product standard's requirements. Meets the product standard's requirements. 10.5 Protection against electric shock Does not apply, since the entire switchpear needs to be evaluated. 10.6 Incorporation of switching devices and components 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 Protection training 10.1 Short-circuit rating	Number of contacts	2
Actuator type Number of switch positions Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation apacity Pvids Heat dissipation per pole, current-dependent Pvid Retard operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvis Retard operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs OW 10.2.2 Corresion resistance Meets the product standard's requirements. 10.2.3.1 Verification of resistance of insulating materials to normal heat 10.2.3.2 Verification or resistance of insulating materials to normal heat 10.2.3.3 Resist of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (IVI) radiation 10.2.5 Lifting Does not apply, since the entrie switchgear needs to be evaluated. 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions Meets the product standard's requirements. 10.2.8 Despend of protection of assemblies Does not apply, since the entrie switchgear needs to be evaluated. 10.2.1 Despends of creapage distances Meets the product standard's requirements. 10.3 Degree of protection of assemblies Does not apply, since the entrie switchgear needs to be evaluated. 10.4 Clearances and creapage distances Meets the product standard's requirements. 10.5 Protection against electric shock Does not apply, since the entrie switchgear needs to be evaluated. 10.6 Incorporation of switching devices and components Does not apply, since the entrie switchgear needs to be evaluated. 10.8 Connections for external conductors Is the panel builder's responsibility. 10.9 Protection against electric shock Does not apply, since the entire switchgear needs to be evaluated. 10.1 Termal electrical circuits and connections Is the panel builder's responsibility. 10.9 Protection against electric shock Does not apply, since the entire switchgear needs to be evaluated. 10.1 Termal electrical circuits and connections Is the panel bu	Actuator	
Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation, capacity Pdiss Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid 0.8 W Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvis 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 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 0.0es not apply, since the entire switchgear needs to be evaluated. 10.2.5 Lifting 0.0es not apply, since the entire switchgear needs to be evaluated. 10.2.6 Meets the product standard's requirements. 10.2.7 Inscriptions 10.8 Operation of assemblies 0.0es not apply, since the entire switchgear needs to be evaluated. 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Protection of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9 Connections for external conductors 10.9 Power-frequency electric strength 10.9 Components and connections 10.9 Internal electric shock 10.9 Repeat builder's responsibility. 10.9 Power-frequency electric strength 10.9 The panel builder's responsibility. 10.9 The panel builder's responsibility. 10.9 The panel builder's responsibility. 10.1 The panel builder's responsibility. 10.2 Lelectromagnetic compatibility 10.1 The panel builder's responsibility. 10.2 Dever-frequence compatibility 10.3 Mechanical function 10.1 Medical for the devices. 10.1 Short-circuit rating 10.2 Heat dissipation data for the devices.	Actuator function	
Equipment heat dissipation, current-dependent Pvid	Actuator type	Toggle
Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss OW Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvid Rated operational current for specified heat dissipation (In) 20 A Static heat dissipation, non-current-dependent Pvs OW 10.22 Corrosion resistance Meets the product standard's requirements. UV resistance to ultra-violet (UV) radiation Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. In Internal electrical circuits and connections In the panel builder's responsibility. Meets the panel builder's responsibility. In the panel builder's responsibility. In Short-circuit reting In the panel builder's responsibility. In the panel builder's responsibility	Number of switch positions	2
Heat dissipation capacity Pdiss Heat dissipation prole, current-dependent Pvid Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs OW 10.22 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 Sesist of insul. mat. to abnormal heat/fire by internal elect. effects Meets the product standard's requirements. 10.2.3 Resistance to ultra-violet (IUV) 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. 10.3 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. 10.9.3 Impulse withstand voltage Is the panel builder's responsibility. 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise The panel builder's responsibility. 10.11 Short-circuit rating Lis the panel builder's responsibility. 10.12 Electromagnetic compatibility Lis the panel builder's responsibility. 10.15 Electromagnetic compatibility Lis the panel builder's responsibility. 10.16 Electromagnetic compatibility Lis 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	Design verification	
Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs 0W 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 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 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. 10.2.7 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. 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage Is the panel builder's responsibility. 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise The panel builder's responsibility. 10.11 Short-circuit rating 10.12 Electromagnetic compatibility Lis 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	Equipment heat dissipation, current-dependent Pvid	0 W
Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs 0 W 10.22 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 Nerification of resistance of insulating materials to normal heat 10.2.3.3 Resists, of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (IV) radiation 10.2.5 Lifting 10.2.5 Lifting 10.2.5 Lifting 10.2.7 Inscriptions 10.3.0 Begree of protection of assemblies 10.3.1 Resistances and creepage distances 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9 Power-frequency electric strength 10.9 Inpulse withstand voltage 10.9.1 Resisting of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating Let he panel builder's responsibility. 10.10 Temperature rise 10.11 Short-circuit rating Let he panel builder's responsibility. The specifications for the switchgear must be observed. 10.11 Short-circuit rating Let he panel builder's responsibility. The specifications for the switchgear must be observed. 10.11 Short-circuit rating Let he 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	Heat dissipation capacity Pdiss	0 W
Static heat dissipation, non-current-dependent Pvs 10.2.2 Corrosion resistance 10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resists of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.5 Lifting 10.2.5 Lifting 10.2.7 Inscriptions 10.3 Degree of protection of assemblies 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.13 Mechanical function 10.13 Mechanical function 10.14 Electromagnetic compatibility 10.15 Incorporation of symbol and a connections and connections are passed to be evaluated. 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Mechanical function 10.15 Mechanical function 10.16 Incorporation of switching devices and components 10.17 Incorporation of switching devices and components 10.18 Life panel builder's responsibility. 10.19 The panel builder's responsibility. 10.19 The panel builder's responsibility. 10.19 The panel builder's responsibility. 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Mechanical function 10.15 Mechanical function 10.16 Mechanical function 10.17 Mechanical function 10.18 Mechanical function 10.19 Mechanical function 10.19 Mechanical function 10.10 Temperature rise 10.11	Heat dissipation per pole, current-dependent Pvid	0.6 W
10.2.2 Corrosion resistance 10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of thermal stability of enclosures 10.2.3.2 Nerification of resistance of insulating materials to normal heat 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.3.0 pose not apply, since the entire switchgear needs to be evaluated. 10.2.7 Inscriptions 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Meets the product standard's requirements. 10.6 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Is the panel builder's responsibility. 10.9.1 Power-frequency electric strength 10.9.2 Power-frequency electric strength 10.10 Temperature rise 10.11 Short-circuit rating 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. 10.8 Connection of switching devices and components 10.9 Power-frequency electric strength 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requir	Rated operational current for specified heat dissipation (In)	20 A
10.2.3.1 Verification of thermal stability of enclosures 10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of assemblies 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requirements. Meets the product standard's requirements. Weets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. In provide had dissipation data for the devices. In the panel builder's responsibility. The specifications for the switchgear must be observed. In the panel builder's responsibility. The specifications for the switchgear must be observed.	Static heat dissipation, non-current-dependent Pvs	0 W
10.2.3.2 Verification of resistance of insulating materials to normal heat 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Meets the product standard's requirements. Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. 10.7 Internal electrical circuits and connections 1 s the panel builder's responsibility. 10.9.2 Power-frequency electric strength 1 s the panel builder's responsibility. 10.9.4 Testing of enclosures made of insulating material 1 s the panel builder's responsibility. 10.10 Temperature rise 10.11 Short-circuit rating 1 s the panel builder's responsibility. 1 s the panel builder's responsibility. 1 s the panel builder's responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility 1 s 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	10.2.2 Corrosion resistance	Meets the product standard's requirements.
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. 10.7 Internal electrical circuits and connections 1 sthe panel builder's responsibility. 1 sthe panel builder's responsibility. The specifications for the switchgear must be observed. 1 sthe panel builder's responsibility. The specifications for the switchgear must be observed. 1 sthe panel builder's responsibility. The specifications for the switchgear must be observed. 1 sthe panel builder's responsibility. The specifications for the switchgear must be observed. 1 sthe panel builder's responsibility. The specifications for the switchgear must be observed.	10.2.3.1 Verification of thermal stability of enclosures	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. 10.2.7 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. 10.9.2 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's responsibility. The specifications for the switchgear must be observed. 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	10.2.3.2 Verification of resistance of insulating materials to normal heat	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. 10.9.2 Power-frequency electric strength Is the panel builder's responsibility. 10.9.3 Impulse withstand voltage Is the panel builder's responsibility. 10.10 Temperature rise The panel builder's responsibility. 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	10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects	Meets the product standard's requirements.
10.2.6 Mechanical impact 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. 10.9.2 Power-frequency electric strength Is the panel builder's responsibility. 10.9.3 Impulse withstand voltage Is the panel builder's responsibility. 10.10 Temperature rise The panel builder's responsibility. 10.11 Short-circuit rating Is the panel builder's responsibility. 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	10.2.4 Resistance to ultra-violet (UV) radiation	UV resistance only in connection with protective shield.
10.27 Inscriptions 10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. In panel builder's responsibility. In panel builder's responsibility. In panel builder's responsibility. In panel builder's responsibility. The panel builder's responsibility. The specifications for the switchgear must be observed. In the panel builder's responsibility. The specifications for the switchgear must be observed. In the panel builder's responsibility. The specifications for the switchgear must be observed.	10.2.5 Lifting	Does not apply, since the entire switchgear needs to be evaluated.
10.3 Degree of protection of assemblies 10.4 Clearances and creepage distances Meets the product standard's requirements. 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. In panel builder's responsibility. Is the panel builder's responsibility. In the panel	10.2.6 Mechanical impact	Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.1 Testing of enclosures made of insulating material 10.10 Temperature rise 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. 10 Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. The panel builder is responsibility. Is the panel builder is responsibility. Is the panel builder is responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.2.7 Inscriptions	Meets the product standard's requirements.
10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Does not apply, since the entire switchgear needs to be evaluated. Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. The panel builder's responsibility. The panel builder is responsibility. Is the panel builder is responsibility. Is the panel builder's responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. The device meets the requirements, provided the information in the instruction	10.3 Degree of protection of assemblies	Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 1s the panel builder's responsibility. 10.8 Connections for external conductors 1s the panel builder's responsibility. 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 1s the panel builder's responsibility. 1s the panel builder's responsibility. The specifications for the switchgear must be observed. 1s the panel builder's responsibility. The specifications for the switchgear must be observed. 1s the panel builder's responsibility. The specifications for the switchgear must be observed. 1s the panel builder's responsibility. The specifications for the switchgear must be observed. 1s the panel builder's responsibility. The specifications for the switchgear must be observed.	10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.7 Internal electrical circuits and connections 1s the panel builder's responsibility. 10.8 Connections for external conductors 1s the panel builder's responsibility. 10.9.2 Power-frequency electric strength 1s the panel builder's responsibility. 10.9.3 Impulse withstand voltage 1s the panel builder's responsibility. 1s the panel builder's responsibility. 1s the panel builder's responsibility. 1c the panel builder's responsibility. 1c the panel builder is responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed. 1c the panel builder's responsibility. The specifications for the switchgear must be observed.	10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Steppens builder's responsibility. The specifications for the switchgear must be observed. 10.15 Mechanical function 10.16 The panel builder's responsibility. The specifications for the switchgear must be observed. 10.17 The panel builder's responsibility. The specifications for the switchgear must be observed. 10.19 Mechanical function 10.10 The device meets the requirements, provided the information in the instruction	10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder's responsibility. The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. 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	10.7 Internal electrical circuits and connections	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. 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	10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise The panel builder's 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	10.9.2 Power-frequency electric strength	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	10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
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	10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
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	10.10 Temperature rise	
observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	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	

Technical data ETIM 9.0

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@ss13-27-37-14-14 [ACN998016])

[ACN330010])		
Type of switch		Reverser
Number of poles		1
Max. rated operation voltage Ue AC	V	690
Rated permanent current lu	А	20
Number of switch positions		2

With zero (off) position	No
With retraction in 0-position	No
Device construction	Surface mounted device
Width in number of modular spacings	0
Suitable for floor mounting	Yes
Suitable for front mounting	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	12