Changeoverswitches, T0, 20 A, flush mounting, 2 contact unit(s), Contacts: 4, 45 $^{\circ}$, maintained, With 0 (Off) position, HAND-0-AUTO, Design number 15432



Part no. T0-2-15432/E

034110

EL Number 1456296

(Norway)

Product name	(Norway)	
Periodical tempth (Output) Producal Tempth (Ou	General specifications	
EAN Product Length/Depth Product Length/Depth Product Length/Depth Product visibility Product Traditionanc Product Traditionance Product Tradi	Product name	Eaton Moeller® series TO Changeover switch
Product Langth/Depth Product beight Product velogit Certifications CSA-C52 2No. 94 U. 05974-1 CLSA CSA-C52 2No. 9604 U. Category Carron No.: NLRV U. CSA-C52 2No. 9604 U. Category Carron No.: NLRV U. Category NLRV Political Category Politi	Part no.	T0-2-15432/E
Product height Product visight Certifications	EAN	4015080341109
Product voilpit Product Produc	Product Length/Depth	86 millimetre
Product veight Certifications CESA-222 2 No. 94 Ut (9897-4-1 CE (0897-4-1 CE (0897	Product height	48 millimetre
Cardifications CSA-CIZ2 2N to 61 LI 8947-4-1 CE	Product width	48 millimetre
UL 05974-1 CE CE CSAG BUSAGE RECARD SHEET RE	Product weight	0.108 kilogram
Product Type Product Sub Type Catalog Notes Rated Short-time Withstand Current (Icw) for a time of 1 second Features & Functions Fitted with: Inscription Inscription Number of poles General information Degree of protection (front side) Degree of protection (front side) Itlespan, mechanical Mounting method Mounting position Number of contact units Qerating frequency Operating frequency Itlespan, Pollution degree Itlespany Pollution degree Safe isolation Safe isolation Safe ty parameter (En ISO 13849-1) Shock resistance Suitable for Suitable as motor disconnect, (UU/CSA) Front mounting Saret mounting Saret mounting Nounting angle Saret correction (Itlespan) Saret size of the second	Certifications	UL 60947-4-1 CE CSA IEC/EN 60204 IEC/EN 60947 IEC/EN 60947-3 UL File No.: E36332 CSA File No.: 012528 VDE 0660 UL Category Control No.: NLRV UL CSA Class No.: 3211-05
Product Sub Type Catalog Notes Rated Short-time Withstand Current (Icw) for a time of 1 second Features & Functions Fitted with: Inscription Number of poles General information Degree of protection (front side) Degree of protection (front side	Product Tradename	ТО
Catalog Notes Features & Functions Fitted with: Discription Pitted with with part of poles Page	Product Type	Changeover switch
Fitted with: Fitted with: 0 0 0 0 0 0 0 0 0	Product Sub Type	None
Fitted with: Inscription Number of poles General information Degree of protection Degree of protection (front side) Lifespan, mechanical Mounting method Mounting method Mounting position Number of contact units Operating frequency Overvoltage category Pollution degree Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Suitable for Franch incircuits, suitable as motor disconnect, (UL/CSA) Front mounting Branch incircuits, suitable as motor disconnect, (UL/CSA) Front mounting Branch incircuits, suitable as motor disconnect, (UL/CSA) Front mounting Branch incircuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle	Catalog Notes	Rated Short-time Withstand Current (Icw) for a time of 1 second
Inscription Number of poles General information Degree of protection (front side) Lifespan, mechanical Mounting method Mounting position Number of contact units Operating frequency Overvoltage category Pollution degree Product category Rated impulse withstand voltage (Uimp) Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle *HAND-0-AUTO * Two-pole * **Country * Two-pole **Country *	Features & Functions	
Number of poles General information Degree of protection Degree of protection Degree of protection (front side) Lifespan, mechanical Mounting method Mounting method Mounting position Number of contact units Operating frequency Overvoltage category Pollution degree Product category Rated impulse withstand voltage (Uimp) Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle Two-pole NEMA 12 NEMA 1 IP65 NEMA 12 400,000 Operations Ple5 NEMA 12 400,000 Operations As required 400,000 Operations Plush mounting As required 1200 Operations/h III Control switches 6000 V AC Safe isolation Safety parameter (EN ISO 13849-1) B 100 values as per EN ISO 13849-1, table C.1 Shock resistance Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle	Fitted with:	
General information NEMA 12 NEMA 1 1P65 Degree of protection (front side) IP65 NEMA 1 1P65 Lifespan, mechanical 400,000 Operations Mounting method Flush mounting Mounting position As required Number of contact units 2 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 60088-2-27, Half-sinusoidal shock 20 ms Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting 45 °	Inscription	" HAND-0-AUTO "
Degree of protection NEMA 12 NEMA 1 1P65 NEMA 12 Lifespan, mechanical 400,000 Operations Mounting method Flush mounting Mounting position As required Number of contact units 2 Operating frequency 1200 Operations/h Overvoltage category III 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 Switching angle 45 °	Number of poles	Two-pole
Degree of protection (front side) Degree of protection (front side) Lifespan, mechanical Mounting method Mounting position Number of contact units Operating frequency Overvoltage category Pollution degree Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle NEMA 1 1P65 NEMA 12 400,000 Operations Flush mounting 440,000 Operations Flush mounting As required 2 2 Control switche 1200 Operations/h III 6000 V AC 40 V AC, Between the contacts, According to EN 61140 B 10d values as per EN ISO 13849-1, table C.1 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle	General information	
Lifespan, mechanical Mounting method Mounting position Mounting position Number of contact units Operating frequency Overvoltage category Pollution degree Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for NEMA 12 400,000 Operations Flush mounting As required As required 1200 Operations/h 1001 Control switches 3 Control switches 6000 V AC 440 V AC, Between the contacts, According to EN 61140 B 10d values as per EN ISO 13849-1, table C.1 Shock resistance Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle	Degree of protection	NEMA 1
Mounting method Mounting position Number of contact units Operating frequency 1200 Operations/h Overvoltage category III Pollution degree 3 Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle Flush mounting As required As requ	Degree of protection (front side)	
Mounting position Number of contact units 2 Operating frequency 1200 Operations/h Overvoltage category III Pollution degree 3 Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle As required 1500 Operations/h Control switches Bage Control switches Bull description Bloov VAC Bloov VAC Bloov VAC Safe isolation Safety parameter (EN ISO 13849-1, table C.1 Shock resistance Bloov values as per EN ISO 13849-1, table C.1 Shock resistance Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle	Lifespan, mechanical	400,000 Operations
Number of contact units Operating frequency 1200 Operations/h Overvoltage category III Pollution degree 3 Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle 2 1200 Operations/h III 1200 Operations/h 1011 1020 1030 1030 1040 1050 1	Mounting method	Flush mounting
Operating frequency Overvoltage category III Pollution degree 3 Product category Control switches Rated impulse withstand voltage (Uimp) 6000 V AC Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle 1200 Operations/h III A 200 Operations/h III Shock resistance Suitable for 1200 Operations/h 111 Shock resistance Suitable for 1200 Operations/h 111 Shock resistance Suitable as motor disconnect, (UL/CSA) Front mounting 45°	Mounting position	As required
Overvoltage category Pollution degree 3 Product category Rated impulse withstand voltage (Uimp) Safe isolation Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Switching angle III Control switches Control switches 6000 V AC 440 V AC, Between the contacts, According to EN 61140 B10d values as per EN ISO 13849-1, table C.1 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting 45°	Number of contact units	2
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 Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Operating frequency	1200 Operations/h
Product category 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 Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Overvoltage category	III
Rated impulse withstand voltage (Uimp) Safe isolation 440 V AC, Between the contacts, According to EN 61140 Safety parameter (EN ISO 13849-1) Shock resistance 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Pollution degree	3
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 Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Product category	Control switches
Safety parameter (EN ISO 13849-1) Shock resistance Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45°	Rated impulse withstand voltage (Uimp)	6000 V AC
Shock resistance 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Safe isolation	440 V AC, Between the contacts, According to EN 61140
Suitable for Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting Switching angle 45 °	Safety parameter (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
		Branch circuits, suitable as motor disconnect, (UL/CSA)
TYDE GRANGER SWITCH	Switching angle Type	45 ° Changeover switch

Au a a ua	
Climatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	50 °C
Ambient operating temperature (enclosed) - min	-25 °C
Ambient operating temperature (enclosed) - max	40 °C
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
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/flexible with ferrule AWG)	18 - 14
Terminal capacity (solid/stranded)	1 x (1 - 2.5) mm ² 2 x (1 - 2.5) mm ²
Screw size	M3.5, Terminal screw
Tightening torque	1 Nm, Screw terminals 8.8 lb-in, 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 (le) at AC-3, 220 V, 230 V, 240 V	11.5 A
Rated operational current (le) at AC-3, 380 V, 400 V, 415 V	11.5 A
Rated operational current (le) at AC-3, 500 V	9 A
Rated operational current (le) at AC-3, 660 V, 690 V	4.9 A
Rated operational current (le) at AC-21, 440 V	20 A
Rated operational current (le) at AC-23A, 230 V	13.3 A
Rated operational current (le) at AC-23A, 400 V, 415 V	13.3 A
Rated operational current (le) at AC-23A, 500 V	13.3 A
Rated operational current (le) at AC-23A, 690 V	7.6 A
Rated operational current (le) at DC-1, load-break switches I/r = 1 ms	10 A
Rated operational current (le) at DC-13, control switches L/R = 50 ms	10 A
Rated operational current (le) at DC-21, 240 V	1A
Rated operational current (le) at DC-23A, 24 V	10 A
Rated operational current (le) at DC-23A, 48 V	10 A
Rated operational current (le) at DC-23A, 60 V	10 A
Rated operational current (le) at DC-23A, 120 V	5 A
Rated operational current (le) at DC-23A, 240 V	5 A
Rated operational current (le) star-delta at AC-3, 230 V	20 A
Rated operational current (le) star-delta at AC-3, 400 V	20 A
Rated operational current (le) star-delta at AC-3, 500 V	15.6 A 8.5 A
Rated operational current (le) star-delta at AC-3, 690 V	
Rated operational power at AC-3, 415 V, 50 Hz Rated operational power at AC-3, 500 V, 50 Hz	5.5 kW 5.5 kW
Rated operational power at AC-33, 690 V, 50 Hz Rated operational power at AC-33A, 220/230 V, 50 Hz	4 kW 3 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz	
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	7.5 kW
Rated operational power star-delta at 690 V, 50 Hz	5.5 kW
Rated uninterrupted current (Iu)	20 A
Uninterrupted current	Rated uninterrupted current lu is specified for max. cross-section.

Short-circuit rating	
Rated conditional short-circuit current (Iq)	6 kA
Rated short-time withstand current (Icw)	320 A, Contacts, 1 second
Short-circuit current rating (basic rating)	5 kA, SCCR (UL/CSA) 50A, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault)	10 kA, SCCR (UL/CSA) 20 A, Class J, max. Fuse, SCCR (UL/CSA)
Short-circuit protection rating	20 A gG/gL, Fuse, Contacts
Switching capacity	
Load rating	2 x l# (with intermittent operation class 12, 25 % duty factor) 1.3 x l# (with intermittent operation class 12, 60 % duty factor) 1.6 x l# (with intermittent operation class 12, 40 % duty factor)
Number of contacts in series at DC-21A, 240 V	1
Number of contacts in series at DC-23A, 24 V	1
Number of contacts in series at DC-23A, 48 V	2
Number of contacts in series at DC-23A, 60 V	3
Number of contacts in series at DC-23A, 120 V	3
Number of contacts in series at DC-23A, 240 V	5
Switching capacity (main contacts, general use)	16 A, Rated uninterrupted current max. (UL/CSA)
Switching capacity (auxiliary contacts, general use)	10A, IU, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)	P300 (UL/CSA) A600 (UL/CSA)
Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)	130 A
Voltage per contact pair in series	60 V
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	0.5 HP
Assigned motor power at 200/208 V, 60 Hz, 1-phase	1 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase	3 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	1.5 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	3 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	7.5 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	7.5 HP
Contacts	
Control circuit reliability	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
Number of contacts	4
Actuator	
Actuator function	With 0 (Off) position Maintained
Actuator type	Toggle
Number of switch positions	3
Design verification	
Equipment heat dissipation, current-dependent Pvid	0 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	0.6 W
Rated operational current for specified heat dissipation (In)	20 A
Static heat dissipation, non-current-dependent Pvs	0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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 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])

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Type of switch		Reverser
Number of poles		2
Max. rated operation voltage Ue AC	V	690
Rated permanent current lu	Α	20
Number of switch positions		3
With zero (off) position		Yes
With retraction in 0-position		No
Device construction		Built-in device
Width in number of modular spacings		0
Suitable for floor mounting		No
Suitable for front mounting		Yes
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Complete device in housing		No
Type of control element		Toggle
Front shield size		48x48 mm
Degree of protection (IP), front side		IP65
Degree of protection (NEMA), front side		12