

**Changeoverswitches, T0, 20 A, service distribution board mounting,
1 contact unit(s), Contacts: 2, 45 °, maintained, With 0 (Off) position,
HAND-0-AUTO, Design number 15431**

Part no. T0-1-15431/IVS
026991
EL Number 1456755
(Norway)

Product name	Eaton Moeller® series T0 Changeover switch
Part no.	T0-1-15431/IVS
EAN	4015080269915
Product Length/Depth	82 millimetre
Product height	55 millimetre
Product width	54 millimetre
Product weight	0.106 kilogram
Certifications	CSA-C22.2 No. 60947-4-1-14 CSA File No.: 012528 UL Category Control No.: NLRV UL VDE 0660 CSA-C22.2 No. 94 CE UL 60947-4-1 IEC/EN 60947-3 UL File No.: E36332 CSA Class No.: 3211-05 CSA IEC/EN 60947 IEC/EN 60204
Product Tradename	T0
Product Type	Changeover switch
Product Sub Type	None
Catalog Notes	Rated Short-time Withstand Current (Icw) for a time of 1 second
Fitted with:	0 (off) position Black thumb grip and front plate
Inscription	" HAND-0-AUTO "
Number of poles	Single-pole
Degree of protection	IP30
Degree of protection (front side)	IP30 NEMA 2
Lifespan, mechanical	400,000 Operations
Mounting method	Service distribution board 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	Branch circuits, suitable as motor disconnect, (UL/CSA) Ground mounting Distribution board installation
Switching angle	45 °
Type	Changeover switch

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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Terminal capacity (flexible with ferrule)		2 x (0.75 - 2.5) mm ² , ferrules to DIN 46228 1 x (0.75 - 2.5) mm ² , 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
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 ms		10 A
Rated operational current (Ie) at DC-13, control switches L/R = 50 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		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 Iu is specified for max. cross-section.
Rated conditional short-circuit current (Iq)		6 kA

Rated short-time withstand current (I _{cs})		320 A, Contacts, 1 second
Short-circuit current rating (basic rating)		50A, max. Fuse, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
Short-circuit current rating (high fault)		20 A, Class J, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit protection rating		20 A gG/gL, Fuse, Contacts
Load rating		1.6 x I _# (with intermittent operation class 12, 40 % duty factor) 1.3 x I _# (with intermittent operation class 12, 60 % duty factor) 2 x I _# (with intermittent operation class 12, 25 % 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
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
Control circuit reliability		1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
Number of contacts		2
Actuator function		Maintained With 0 (Off) position
Actuator type		Toggle
Number of switch positions		3
Equipment heat dissipation, current-dependent P _{vid}		0 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		0.6 W
Rated operational current for specified heat dissipation (I _n)		20 A
Static heat dissipation, non-current-dependent P _{vs}		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		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.
10.9.2 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 8.0

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			Reverser
Number of poles			1
Max. rated operation voltage Ue AC		V	690
Rated permanent current Iu		A	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			4
Suitable for floor mounting			Yes
Suitable for front mounting			No
Suitable for distribution board installation			Yes
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			IP30
Degree of protection (NEMA), front side			2