## DATASHEET - T0-3-SOND\*/XZ



Non-standard switch, T0, 20 A, rear mounting, Basic switch, 3 contact unit(s)



Part no. Catalog No. T0-3-SOND\*/XZ 907830

Similar to illustration

Delivery program			
Product range			Non-standard switch
Part group reference			ТО
Notes			customized version according to form
Design			rear mounting
2.00.9.1			Basic switch
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	5.5
Rated uninterrupted current	Iu	А	20
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{u}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	3
Technical data			
General			
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204 Switch-disconnector according to IEC/EN 60947-3
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree			111/3
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Contacts			
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	Iu	А	20
Note on rated uninterrupted current $!_{\rm u}$			Rated uninterrupted current $\mathbf{I}_{u}$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x I <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			
Fuse		A gG/gL	20
Rated short-time withstand current (1 s current)	Icw	A <sub>rms</sub>	320
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	6
Switching capacity			
$\cos \phi$ rated making capacity as per IEC 60947-3		А	130
Rated breaking capacity $\cos \phi$ to IEC 60947-3		А	
230 V		А	100
400/415 V		А	110
500 V		А	80

690 V

А

60

Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at l <sub>e</sub>		W	0.6
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations		>0.4
		x 10 <sup>6</sup>	
Maximum operating frequency	Operations/h		1200
AC			
AC-3	Р	1347	
Rating, motor load switch 220 V 230 V	P	kW kW	3
230 V Star-delta	P	kW	5.5
400 V 415 V	P	kW	5.5
400 V Star-delta	P	kW	7.5
500 V	P	kW	5.5
500 V Star-delta	P	kW	7.5
690 V	P	kW	4
690 V Star-delta	Р	kW	5.5
Rated operational current motor load switch			
230 V	l <sub>e</sub>	A	11.5
230 V star-delta	l <sub>e</sub>	A	20
400V 415 V	l <sub>e</sub>	A	11.5
400 V star-delta	l <sub>e</sub>	A	20
500 V			9
	l <sub>e</sub>	A	
500 V star-delta	l <sub>e</sub>	A	15.6
690 V	l <sub>e</sub>	A	4.9
690 V star-delta	le	A	8.5
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	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 230 V		A	13.3
400 V 415 V	l <sub>e</sub>		13.3
	l <sub>e</sub>	A	
500 V	l <sub>e</sub>	A	13.3
690 V	l <sub>e</sub>	A	7.6
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	A	10
Voltage per contact pair in series		v	60
DC-21A	le	A	
Rated operational current	l <sub>e</sub>	A	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l <sub>e</sub>	A	10
Contacts		Quantity	1
48 V			
Rated operational current	l <sub>e</sub>	A	10
Contacts		Quantity	2
60 V			10
Rated operational current	le	A	10

Contacts		Quantity	3
120 V			
Rated operational current	Ι <sub>e</sub>	А	5
Contacts		Quantity	3
240 V			
Rated operational current	۱ <sub>e</sub>	А	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	Ι <sub>e</sub>	А	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
Terminal capacities			
Solid or stranded		mm <sup>2</sup>	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Terminal screw			M3.5
Tightening torque for terminal screw		Nm	1
Technical safety parameters:			
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Rating data for approved types			
Terminal capacity			
Terminal screw			M3.5

## Design verification as per IEC/EN 61439

Design vernication as per 120/211 01455			
Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	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 <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	50
EC/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) / Switch disconnector (EC000216)

Bichicogneoming automation process control engineering / Low-voltage south low-	Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)			
Variai as aninteniner-/sarvice switch     Image: Safely switch     No       Variais as serving switch     Mo     No       Variais as serving switch     No     No       Variais as serving switch     No     No       Variais as serving switch     No     No       Number of switches     No     No       Rated operation voltage Ue AC     V     60       Rated operation voltage Ue AC     V     60       Rated parmamet current LAC-22,400 V     A     13       Rated parmamet current LAC-21,400 V     KN     50       Rated operation power at AC-23,400 V     KN     50       Rated operation power at AC-24,400 V     KN     50       Rated operation power at AC-24,400 V     KN     50       Rated operation power at AC-24,400 V     KN     50       Number of power at AC-24,400 V     KN     50       Softeblang current low     KN     50       Number of power at AC-24,400 V     KN     50       Number of pow		n technology / C	)ff-load sv	vitch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03
Version as starty which         Image: starty starts and	Version as main switch			No
Varian as mergency step installationNoVersion as reversing switchNoNumber of switchesVName of switchesVNack rated operation voltage Us ACVRated operation voltage Us ACVRated operation voltage Us ACVRated operation voltage Us ACARated operation power at AC3, 400 VARated operation power at AC3, 400 VARated operation power at AC3, 400 VARated operation power at AC3, 400 VKRated operation power at AC3, 400 VKRated operation power at AC3, 400 VKSwitching power at AC3, 400 VKRated operation power at AC3, 400 VKRated operation power at AC3, 400 VKRated operation power at AC3, 400 VKNumber of power at AC3, 400 VK<	Version as maintenance-/service switch			No
Number of switches         Image: Second	Version as safety switch			No
Number of switches         Image: space of	Version as emergency stop installation			No
Nax. rate operation voltage U A AC         P         P         P           Rated operation voltage         V         80-899           Rated operation voltage         A         0           Rated operation voltage         A         0           Rated operation voltage         A         0           Rated operation power at AC3. 400 V         A         0           Rated operation power at AC3. 400 V         KW         0           Rated operation power at AC3. 400 V         KW         0           Number of power at AC3. 400 V         KW         0           Number of power at AC3. 400 V         KW         0           Number of power at AC3. 400 V         KW         0           Number of southary contacts an ormally closed contact         KW         0           Number of southary contacts as normally closed contact         KM         0           Number of southary contacts as normally closed contact         KM         0           Number of southary contacts as normally closed contact         KM         0           Number of southary contacts as normally closed contact         KM         0           Number of southary contacts as normally closed contact         KM         0           Number of southary contacts as normally closed contact	Version as reversing switch			No
Rate operament current lu         So - 690           Rated permanent current lu         So - 600           Rated permanent current lu AC-23, 400 V         G         A           Rated permanent current AC-23, 400 V         G         A           Rated operation power at AC-33, 400 V         G         A           Rated operation power at AC-34, 400 V         G         A           Rated operation power at AC-34, 400 V         G         A           Rated operation power at AC-34, 400 V         G         B           Rated operation power at AC-34, 400 V         G         B           Soliching wore at AC-34, 400 V         G         B           Soliching wore at AC-34, 400 V         G         B           Soliching power at AC-34, 400 V         B         B           So	Number of switches			1
Reted permanent current lu         Reted permanent current tu AC-23, 400 V         Image: Add permanent current ta AC-21, 400 V         Image: Add permanent current ta AC-23, 400 V	Max. rated operation voltage Ue AC		V	690
Are degrament current at AC-23, 400 V         A         3           Rated permanent current at AC-21, 400 V         A         0           Rated operation power at AC-3, 400 V         KW         5           Rated short-time withstand current low         KW         5           Rated short-time withstand current low         KW         5           Switching power at AC-23, 400 V         KW         5           Number of outsiliary contacts as normally closed contact         KW         6           Number of outsiliary contacts as normally closed contact         KW         6           Notact contact c	Rated operating voltage		V	690 - 690
Reted permenent current at AC-21, 400 V       Image: A       20         Reted operation power at AC-3, 400 V       KW       55         Reted operation power at AC-23, 400 V       KW       55         Switch img ower at 400 V       KW       55         Conditioned rated short-circuit current lq       KW       55         Number of poles       G       G         Number of poles       G       G         Number of auxiliary contacts as normally closed contact       G       G         Number of auxiliary contacts as normally closed contact       G       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as normally closed contact       M       G         Number of auxiliary contacts as change-over contact       M       G         Sutable for forton mouting       M       G	Rated permanent current lu		А	20
Rete operation power at AC-3, 400 V       KW       5.3         Rete dooration power at AC-23, 400 V       KW       5.3         Switching power at 400 V       KW       5.3         Conditioned rated short-circuit current Iq       KM       6.4         Number of poles       6       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       6.4         Number of auxiliary contacts as normally cosed contact       F       8.4         Number of auxiliary contacts as normally cosed contact       F       8.4         Number of auxiliary contacts as normally cosed contact       No       No         Nutc	Rated permanent current at AC-23, 400 V		А	13.3
Kade short-time withstand current low         Kade short-time withstand curre	Rated permanent current at AC-21, 400 V		Α	20
Rete operation power at AC-23, 400 V       FM       5         Synching power at 400 V       5       5         Conditioned rated short-circuit current lq       FM       6         Number of poles       0       0         Number of auxiliary contacts as normally closed contact       FM       0         Number of auxiliary contacts as normally closed contact       FM       0         Number of auxiliary contacts as change-over contact       FM       0         Number of auxiliary contacts as change-over contact       FM       0         Number of auxiliary contacts as change-over contact       FM       0         Number of auxiliary contacts as change-over contact       FM       0         Number of auxiliary contacts as change-over contact       FM       0         Number of auxiliary contacts as change-over contact       FM       No         Number of auxiliary contacts as change-over contact       FM       No         Number of auxiliary contacts as change-over contact       FM       No         Number of auxiliary contacts as change-over contact       FM       No         Number of auxiliary contacts as change-over contact       FM       No         Stable for fort monting entre       FM       No       No         Suitable for fort mounting centre	Rated operation power at AC-3, 400 V		kW	5.5
Niching power at 400 VIIIConditioned rated short-circuit current IqIIINumber of polesIIIINumber of auxiliary contacts as normally closed contactIIIINumber of auxiliary contacts as change-over contactIIIINumber of auxiliary contacts as change-over contactIIIIINumber of auxiliary contacts as change-over contactII	Rated short-time withstand current lcw		kA	0.32
Conditioned rated short-circuit current Iq       IA       6         Number of publics       0       0         Number of auxiliary contacts as normally closed contact       0       0         Number of auxiliary contacts as normally closed contact       0       0         Number of auxiliary contacts as normally closed contact       0       0         Number of auxiliary contacts as change-over contact       No       No         Mot drive integrated       No       No         Notative construction       No       No         Natable for ground mounting       Sector Secto	Rated operation power at AC-23, 400 V		kW	5.5
Number of poles         Imper of auxiliary contacts as normally closed contact         Imper of auxiliary contacts as normally open contact         Imper of auxiliary contacts as normally contact         Imper of auxiliary contact	Switching power at 400 V		kW	5.5
Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Number of auxiliary contacts as normally closed contact       0         Notor drive closed contact       0         Notor drive closed contact       0         Notor drive closed contact       0         Notard crive closed contact       0         Notard contact       0         Suitable for ground mounting       0         Suitable for first mounting centre       0         Suitable for instribution board installation       0         Suitable for instribution board installation       0         Suitable for instribution beard instal	Conditioned rated short-circuit current Iq		kA	6
Number of auxiliary contacts as normally open contact         Image: Provide auxiliary contacts as change-over contact         Image: Provide auxiliary con	Number of poles			0
Number of auxiliary contacts as change-over contact       Image: Section 1       0         Motor drive optional       No       No         Motor drive integrated       No       No         Voltage release optional       No       No         Device construction       Image: Section 1       No         Suitable for ground mounting       Image: Section 1       Section 1         Suitable for front mounting 4-hole       Image: Section 1       No         Suitable for front mounting centre       Image: Section 1       No         Suitable for intermediate mounting       Image: Section 1 </td <td>Number of auxiliary contacts as normally closed contact</td> <td></td> <td></td> <td>0</td>	Number of auxiliary contacts as normally closed contact			0
Motor drive optional         Moder drive optional         Moder drive integrated	Number of auxiliary contacts as normally open contact			0
Motor drive integrated         Model	Number of auxiliary contacts as change-over contact			0
Voltage release optional         No           Device construction         Built-in device fixed built-in technique           Suitable for ground mounting         Ves           Suitable for front mounting 4-hole         No           Suitable for front mounting centre         No           Suitable for distribution board installation         Ves           Suitable for intermediate mounting         Ves           Colour control element         Ves           Type of control element         Ves           Type of electrical connection of main circuit         Ves           Pop of electrical connection (IP), front side         Ves	Motor drive optional			No
Device construction       Image: Construction       Built-in device fixed built-in technique         Suitable for ground mounting 4-hole       Mo       No         Suitable for front mounting centre       Mo       No         Suitable for distribution board installation       Mo       No         Suitable for intermediate mounting       Mo       Mo         Type of control element       Mo       Mo         Interlockable       Mo       Mo         Type of electrical connection of main circuit       Mo       Mo         Degree of protection (IP), front side       Mo       Mo	Motor drive integrated			No
Suitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationImage: Second S	Voltage release optional			No
Suitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationNoSuitable for distribution board installationYesColour control elementOtherType of control elementNoInterlockableNoType of electrical connection of main circuitSeree connectionDegree of protection (IP), front sideSuitable for intermediate mounting	Device construction			Built-in device fixed built-in technique
Suitable for front mounting centreNoSuitable for distribution board installationNoSuitable for intermediate mountingNoSuitable for intermediate mountingVesColour control elementOtherType of control elementOtherInterlockableNoType of electrical connection of main circuitSerew connectionDegree of protection (IP), front sideInterlockable	Suitable for ground mounting			Yes
Suitable for distribution board installationNoSuitable for intermediate mountingYesColour control elementOtherType of control elementOtherInterlockableNoType of electrical connection of main circuitSer on screw connectionDegree of protection (IP), front sideInterlockable	Suitable for front mounting 4-hole			No
Suitable for intermediate mountingYesColour control elementOtherType of control elementOtherInterlockableNoType of electrical connection of main circuitSerew connectionDegree of protection (IP), front sideInterlockable	Suitable for front mounting centre			No
Colour control elementOtherType of control elementOtherInterlockableNoType of electrical connection of main circuitScrew connectionDegree of protection (IP), front sideInterlockable	Suitable for distribution board installation			No
Type of control element     Other       Interlockable     No       Type of electrical connection of main circuit     Connection       Degree of protection (IP), front side     Image: Connection circuit	Suitable for intermediate mounting			Yes
Interlockable     No       Type of electrical connection of main circuit     Image: Screw connection       Degree of protection (IP), front side     Image: Screw connection	Colour control element			Other
Type of electrical connection of main circuit     Screw connection       Degree of protection (IP), front side     IP00	Type of control element			Other
Degree of protection (IP), front side	Interlockable			No
	Type of electrical connection of main circuit			Screw connection
Degree of protection (NEMA) Other	Degree of protection (IP), front side			IP00
	Degree of protection (NEMA)			Other

## Additional product information (links)

Technical overview cam switch, switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.2
System overview cam switch T	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.4
System overview switch-disconnector P	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6
Key to part numbers Cam switch	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8
Key to part numbers Switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8
Switches for ATEX	http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html