#### **DATASHEET - T3-4-8902/12**



Changeoverswitches, T3, 32 A, surface mounting, 4 contact unit(s), Contacts: 8, 60  $^{\circ}$ , maintained, With 0 (Off) position, Netz-0-Notstrom, design no. 8902



Part no. T3-4-8902/12 Catalog No. 215224

Delivery program			
Product range			Control switches
Part group reference			Т3
Basic function			Changeoverswitches
			with black thumb grip and front plate
Contacts			8
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact sequence			Standby Standb
Switching angle		0	60
Switching performance			maintained With 0 (Off) position
Design number			8902
Front plate no.			NETZ STROM FS 161629
front plate			Netz-0-Notstrom
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	15
Rated uninterrupted current	I <sub>u</sub>	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\text{u}}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	4

# Technical data General

Contrai			
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL
			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			
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	$U_{imp}$	V AC	6000

Mechanical shock resistance		g	12
Mounting position			As required
Contacts			
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	I <sub>u</sub>	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\rm u}$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			Traced difficult representation of the second of the secon
AB 25 % DF		u I	2
		x l <sub>e</sub>	2
AB 40 % DF		x I <sub>e</sub>	1.6
AB 60 % DF		x I <sub>e</sub>	1.3
Short-circuit rating			
Fuse		A gG/gL	35
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	$A_{rms}$	650
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	1
Switching capacity			
$\cos \phi$ rated making capacity as per IEC 60947-3		Α	320
Rated breaking capacity $\cos\phi$ to IEC 60947-3		Α	
230 V		Α	260
400/415 V		Α	260
500 V		Α	240
690 V		Α	170
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	1.1
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)		CO	1.1
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.5
		X IU	
Maximum operating frequency	Operations/h		1200
AC			
AC-3	<b>D</b>	114/	
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	5.5
230 V Star-delta	P	kW	7.5
400 V 415 V	P	kW	11
400 V Star-delta	Р	kW	15
500 V	P	kW	15
500 V Star-delta	Р	kW	18.5
690 V	Р	kW	11
690 V Star-delta	P	kW	22
Rated operational current motor load switch			
230 V	I <sub>e</sub>	Α	23.7
230 V star-delta	I <sub>e</sub>	Α	32
400V 415 V	I <sub>e</sub>	Α	23.7
400 V star-delta	I <sub>e</sub>	Α	32
500 V	I <sub>e</sub>	Α	23.7
500 V star-delta	I <sub>e</sub>	A	32
690 V	I <sub>e</sub>	A	14.7
690 V star-delta	l <sub>e</sub>	Α	25.5
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	7.5
400 V 415 V	P	kW	15
500 V	Р	kW	15

690 V	Р	kW	15
Rated operational current motor load switch			
230 V	l <sub>e</sub>	A	32
400 V 415 V		A	32
	l <sub>e</sub>		
500 V	l <sub>e</sub>	Α	26.4
690 V	l <sub>e</sub>	Α	17
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	Α	25
Voltage per contact pair in series		V	60
DC-21A	I <sub>e</sub>	Α	
Rated operational current	I <sub>e</sub>	Α	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	1
48 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	3
120 V		,	
Rated operational current	l <sub>e</sub>	A	12
Contacts	· ·	Quantity	
240 V		Zuumary	
Rated operational current	I <sub>e</sub>	A	5
Contacts	·e	Quantity	
DC-13, Control switches L/R = 50 ms		Quantity	
Rated operational current	I <sub>e</sub>	A	20
Voltage per contact pair in series	'e	V	24
Control circuit reliability at 24 V DC, 10 mA	Fault	V H <sub>F</sub>	
Control Circuit remainity at 24 V DG, 10 min	probability	''F	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
Terminal capacities			
Solid or stranded		$mm^2$	1 x (1 - 6) 2 x (1 - 6)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 4)
		mm	2 x (0.75 - 4)
Terminal screw			M4
Tightening torque for terminal screw		Nm	1.6
Technical safety parameters:			
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Rating data for approved types			
Contacts		V/ A C	000
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		Α	25
Auxiliary contacts			
General Use	lu	Α	10
Pilot Duty			A 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	1.5

200 V AC	HP	3
240 V AC	HP	3
Three-phase		
200 V AC	HP	3
240 V AC	HP	3
480 V AC	HP	7.5
600 V AC	HP	10
Short Circuit Current Rating	SCCR	
Basic Rating	kA	5
max. Fuse	А	40
High fault rating	kA	10
max. Fuse	Α	40, Class J
Terminal capacity		
Solid or flexible conductor with ferrule	AWG	14 - 10
Terminal screw		M4
Tightening torque	lb-in	17.7

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	32
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.1
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	40
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			UV resistance only in connection with protective shield.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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) / Off-load switch (EC001105)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Changeover switch (ecl@ss10.0.1-27-37-14-05 [AKF062013])

Model         Reverser           Number of poles         4           With 0 (off) position         Yes           With retraction in 0-position         No           Rated permanent current lu         A         32           Rated operation current le at AC-3, 400 V         A         23.7           Rated operation (IP), front side         IP65           Degree of protection (NEMA), front side         IP65           Number of auxiliary contacts as normally closed contact         0           Number of auxiliary contacts as a change-over contact         0           Suitable for ground mounting         Yes           Suitable for front mounting 4-hole         No           Suitable for distribution board installation         Yes           Suitable for intermediate mounting         Yes           Suitable for intermediate mounting         Yes           Material housing         Yes           Material housing         Yes           Type of control element         Yes			
With 0 (off) position  With retraction in 0-position  Rated permanent current lu  Rated permanent current le at AC-3, 400 V  Rated operation power at AC-3, 400 V  Rated operation (IP), front side  Degree of protection (NEMA), front side  Pegree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally closed contact  Number of permet of auxiliary contacts as normally closed contact  Number of permet of auxiliary contacts as normally closed contact  Number of protection (IP), front side  Number of permet of auxiliary contacts as normally closed contact  Number of permet of auxiliary contacts as normally closed contact  Number of permet of auxi	Model		Reverser
With retraction in 0-position Rated permanent current lu Rated operation current le at AC-3, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Retrouch of protection (IP), front side Degree of protection (NEMA), front side Degree of protection (NEMA), front side Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Suitable for ground mounting Suitable for front mounting 4-hole Suitable for intermediate mounting Suitable for intermediate mounting Complete device in housing Material housing Type of control element  No Degree of protection (NEMA), front side No Retrouch of protection (NEMA), front side No	Number of poles		4
Rated permanent current lu  Rated operation current le at AC-3, 400 V  Rated operation power at AC-3, 400 V  Degree of protection (IP), front side  Degree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for intermediate mounting  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  A 23.7  AWW 12  Degree of 23.7  AWW 12  Degree of protection (NEMA), front side  Ple5  Degree of protection (NEMA), front side  Ple5  Degree of protection (NEMA), front side  Po 0  O 0  Ves  No  No  Suitable for intermediate mounting  No  Po 9  Ves  Plestic  Toggle	With 0 (off) position		Yes
Rated operation current le at AC-3, 400 V  Rated operation power at AC-3, 400 V  Degree of protection (IP), front side  Degree of protection (NEMA), front side  Degree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for ground mounting  Suitable for intermediate mounting  Suitable for intermediate mounting  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  A 23.7  RtP  12  Degree of protection (NEMA), front side  12  0  0  0  0  Ves  No  No  Plastic  Plastic  Toggle	With retraction in 0-position		No
Rated operation power at AC-3, 400 V  Degree of protection (IP), front side  Degree of protection (NEMA), front side  Degree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  No  10  12  12  10  10  10  10  10  10  10	Rated permanent current lu	Α	32
Degree of protection (IP), front side  Degree of protection (NEMA), front side  Degree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for front mounting 4-hole  No  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  Toggle	Rated operation current le at AC-3, 400 V	Α	23.7
Degree of protection (NEMA), front side  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Yes  Suitable for front mounting 4-hole  No  Suitable for distribution board installation  No  Complete device in housing  Material housing  Type of control element  Toggle	Rated operation power at AC-3, 400 V	kW	12
Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as normally open contact  No  Suitable for ground mounting  No  Complete device in housing  No  Complete device in housing  No  Plastic  Toggle	Degree of protection (IP), front side		IP65
Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  O  O  O  O  O  O  O  O  O  O  O  O  O	Degree of protection (NEMA), front side		12
Number of auxiliary contacts as change-over contact  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  O  Suitable for intermediate mounting  Toggle  O  Suitable for intermediate mounting  Toggle	Number of auxiliary contacts as normally closed contact		0
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Material housing Type of control element  Yes  Yes  Yes  Plastic Toggle	Number of auxiliary contacts as normally open contact		0
Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Material housing Type of control element  No  No  Plastic Toggle	Number of auxiliary contacts as change-over contact		0
Suitable for distribution board installation  Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  No  Yes  Plastic  Toggle	Suitable for ground mounting		Yes
Suitable for intermediate mounting  Complete device in housing  Material housing  Type of control element  No  Yes  Plastic  Toggle	Suitable for front mounting 4-hole		No
Complete device in housing Yes Material housing Plastic Type of control element Toggle	Suitable for distribution board installation		No
Material housing Plastic Type of control element Toggle	Suitable for intermediate mounting		No
Type of control element Toggle	Complete device in housing		Yes
	Material housing		Plastic
Type of electrical connection of main circuit  Screw connection	Type of control element		Toggle
	Type of electrical connection of main circuit		Screw connection

### Approvals

• •	
Product Standards	UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	12528
CSA Class No.	3211-05
North America Certification	UL listed, CSA certified
Specially designed for North America	Yes, additional labeling according to UL on the enclosure in combination with "+NA-I2" (105866)
Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

#### **Dimensions**



