#### **DATASHEET - T0-3-8007/EZ**



Voltmeter selector switches, Contacts: 6, 20 A, 3 x phase-phase, 3 x phase-N, front plate: Phase/Phase-0-Phase/N, 45 °, maintained, centre mounting





 Part no.
 T0-3-8007/EZ

 Catalog No.
 098186

0001456148

**EL-Nummer** 

(Norway)

Similar to illustration

# **Delivery program**

Derivery program			
Product range			Control switches
Part group reference			ТО
Basic function			Voltmeter selector switches
			with black thumb grip and front plate
Contacts			6
Degree of Protection			Front IP65
Design			centre mounting
Contact sequence			I3N     IAN       I2N     IAN       IAN     IAN       IAN     IAN       IAN     IAN       IAN     IAN       IAN     IAN
switching function			3 x phase-phase 3 x phase-N
Switching angle		0	45
Switching performance			maintained With 0 (Off) position
Design number			8007
Front plate no.			L1-L2 L2-L3 L3-L1 L3-L1 L3-N FS 1410759
front plate			Phase/Phase-0-Phase/N
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	5.5
Rated uninterrupted current	lu	A	20
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ 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, 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	

Open		°C	-25 - +50
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree		U U	111/3
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Mechanical shock resistance	Cimp		15
Mounting position		g	As required
Contacts			As required
Electrical characteristics			
Rated operational voltage	Ue	V AC	690
Rated uninterrupted current	l <sub>u</sub>	A	20
Note on rated uninterrupted current ! <sub>u</sub>	·u		Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
Load rating with intermittent operation, class 12 AB 25 % DF		v 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	20
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	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	lq	kA	6
Switching capacity			
$\cos \phi$ rated making capacity as per IEC 60947-3		A	130
Rated breaking capacity $\cos \phi$ to IEC 60947-3		A	
230 V		A	100
400/415 V		А	110
500 V		А	80
690 V		A	60
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at ${\rm I}_{\rm e}$		W	0.6
Current heat loss per auxiliary circuit at $\rm I_{e}$ (AC-15/230 V)		CO	0.6
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.4
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	Р	kW	
220 V 230 V	Р	kW	3
230 V Star-delta	Р	kW	5.5
400 V 415 V	Р	kW	5.5
400 V Star-delta	Р	kW	7.5
500 V	Р	kW	5.5
500 V Star-delta	Р	kW	7.5
690 V	P	kW	4
690 V Star-delta	P	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	le	A	9
500 V star-delta	l <sub>e</sub>	A	15.6
690 V	le	А	4.9
690 V star-delta	I <sub>e</sub>	А	8.5
AC-21A			

Rated operational current switch			
440 V	le	A	20
AC-23A	'e		
AC-23A Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	3
400 V 415 V	P	kW	5.5
500 V	P	kW	7.5
690 V	P	kW	5.5
Rated operational current motor load switch	F	KVV	3.3
230 V		٨	13.3
	l <sub>e</sub>	A	
400 V 415 V	le	Α	13.3
500 V	l <sub>e</sub>	A	13.3
690 V	le	A	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	le	А	10
Voltage per contact pair in series		V	60
DC-21A	۱ <sub>e</sub>	Α	
Rated operational current	I <sub>e</sub>	A	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	Ι <sub>e</sub>	A	10
Contacts		Quantity	1
48 V		,	
Rated operational current	۱ <sub>e</sub>	A	10
Contacts	e	Quantity	
60 V		Quantity	
Rated operational current	Ι <sub>e</sub>	A	10
Contacts	'e	Quantity	
120 V		Quantity	
Rated operational current		A	5
	Ie		
Contacts 240 V		Quantity	3
		•	-
Rated operational current	۱ <sub>e</sub>	A	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	l <sub>e</sub>		10
Voltage per contact pair in series			32
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 fault in 100000 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			
Contacts			
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		А	16

Auxiliary contacts			
General Use	lu	А	10
Pilot Duty			A 600 P 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	0.5
200 V AC		HP	1
240 V AC		HP	1.5
Three-phase			
200 V AC		HP	3
240 V AC		HP	3
480 V AC		HP	7.5
600 V AC		HP	7.5
Short Circuit Current Rating		SCCR	
Basic Rating		kA	5
max. Fuse		А	50
High fault rating		kA	10
max. Fuse		А	20, Class J
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	18 - 14
Terminal screw			M3.5
Tightening torque		lb-in	8.8

# Design verification as per IEC/EN 61439

<b>.</b>			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	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
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 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) / Voltmeter selector switch (EC000911)

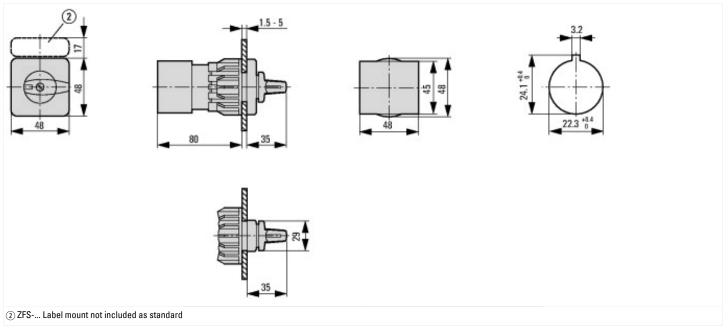
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Volt meter switch (ecl@ss10.0.1-27-37-14-11 [AKF068013])

Measurement between phases possible	Yes
Measuring between phase and N-neutral possible	Yes
With 0 (off) position	Yes
Device construction	Front installation
Modular version	No
With control unit	Yes
Degree of protection (IP)	IP65
Degree of protection (NEMA)	12

#### **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
Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

# **Dimensions**



## Assets (links)

Declaration of CE Conformity 00003075 Instruction Leaflets IL03801020Z2018\_05