### **DATASHEET - T5-4-8234/E**



Step switches, T5, 100 A, flush mounting, 4 contact unit(s), Contacts: 7, 45 °, maintained, With 0 (Off) position, 1-7, design no. 8234



Part no. T5-4-8234/E Catalog No. 096006

Similar to illustration

Delivery program			
Product range			Control switches
Part group reference			T5
Basic function			Step switches
Substitution.			with black thumb grip and front plate
Contacts			7
Degree of Protection			Front IP65
Design			flush mounting
Contact sequence			1 2 3 4 5 6 7 3 9
Switching angle		0	45
Switching performance			maintained With 0 (Off) position
Design number			8234
Front plate no.			FS 412
front plate			1-7
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	55
Rated uninterrupted current	Iu	Α	100
Note on rated uninterrupted current !u			Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
Number of contact units		contact unit(s)	4

# **Technical data**

General

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

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	I <sub>u</sub>	Α	100
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			
AB 25 % DF		x I <sub>e</sub>	2
AB 40 % DF		x l <sub>e</sub>	1.6
AB 60 % DF		x I <sub>e</sub>	1.3
Short-circuit rating		6	
Fuse		A gG/gL	100
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	1700
Note on rated short-time withstand current lcw	·Cvv	, villis	Current for a time of 1 second
Rated conditional short-circuit current	ı	kA	2
Switching capacity	Iq	NA.	
cos φ rated making capacity as per IEC 60947-3		Α	950
Rated breaking capacity cos $\phi$ to IEC 60947-3		Α	
230 V		Α	760
400/415 V		Α	740
500 V		Α	590
690 V		Α	420
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	7.5
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)		CO	7.5
Lifespan, mechanical	Operations		> 0.5
		x 10 <sup>6</sup>	
Maximum operating frequency	Operations/h		1200
AC AC A			
AC-3	Р	LAA	
Rating, motor load switch 220 V 230 V	P	kW	22
		kW	
230 V Star-delta	P P	kW	30
400 V 415 V 400 V Star-delta	P	kW	30 45
500 V	P	kW	30
500 V Star-delta 690 V	P P	kW	45
690 V Star-delta	P	kW	15 22
Rated operational current motor load switch	•	VAA	LL .
230 V		Α	71
	l <sub>e</sub>		
230 V star-delta	l <sub>e</sub>	A	100
400V 415 V	l <sub>e</sub>	Α	55
400 V star-delta	l <sub>e</sub>	Α	95.3
500 V	l <sub>e</sub>	Α	44
500 V star-delta	l <sub>e</sub>	Α	76.2
690 V	l <sub>e</sub>	Α	17
690 V star-delta	l <sub>e</sub>	Α	29.4
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
	Р	kW	30
230 V			

500 V	P	kW	37	
690 V	P	kW	30	
Rated operational current motor load switch				
230 V	I <sub>e</sub>	Α	100	
400 V 415 V	l <sub>e</sub>	Α	100	
500 V	l <sub>e</sub>	Α	55	
690 V	l <sub>e</sub>	Α	32	
DC				
DC-1, Load-break switches L/R = 1 ms				
Rated operational current	I <sub>e</sub>	Α	80	
Voltage per contact pair in series		V	60	
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 (2,5 - 35) 2 x (2,5 - 16)	
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1 - 25) 2 x (1.5 - 10)	
Terminal screw			M6	
Tightening torque for terminal screw		Nm	4	
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		Α	65	
Terminal capacity				
Terminal screw			M6	

## Design verification as per IEC/EN 61439

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	100
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	7.5
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) / 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

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Type of switch		Level switch
Number of poles		1
Max. rated operation voltage Ue AC	V	690
Rated permanent current lu	Α	100
Number of switch positions		7
With 0 (off) position		No
With retraction in 0-position		No
Device construction		Built-in device
Width in number of modular spacings		0
Suitable for ground mounting		No
Suitable for front mounting 4-hole		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		88x88 mm
Degree of protection (IP), front side		IP65
Degree of protection (NEMA), front side		Other

#### **Dimensions**

