## DATASHEET - T0-2-8260/IVS



Step switches, T0, 20 A, service distribution board mounting, 2 contact unit(s), Contacts: 4, 45  $^{\circ}$ , maintained, With 0 (Off) position, 0-2, design no. 8260





Similar to illustration

Part no. T0-2-8260/IVS Catalog No. 011764

Delivery program			
Product range			Control switches
Part group reference			ТО
Basic function			Step switches
			with black thumb grip and front plate
Contacts			4
Degree of Protection			Front IP30
Design			service distribution board mounting
Contact sequence			
Switching angle		o	45
Switching performance			maintained With 0 (Off) position
Design number			8260
Front plate no.			$0 \frac{1}{2}$ FS 418
front plate			0-2
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	5.5
Rated uninterrupted current	I <sub>u</sub>	Α	20
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)	

## **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			III/3
	11.	V AC	6000
Rated impulse withstand voltage	U <sub>imp</sub>		
Mechanical shock resistance		g	15
Mounting position			As required
Contacts Electrical characteristics			
	U <sub>e</sub>	V AC	690
Rated operational voltage			
Rated uninterrupted current	Iu	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ 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)	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	Iq	kA	6
Switching capacity	Ч		
cos φ rated making capacity as per IEC 60947-3		Α	130
Rated breaking capacity cos $\phi$ to IEC 60947-3		Α	
230 V		Α	100
400/415 V		Α	110
500 V		Α	80
690 V		Α	60
Safe isolation to EN 61140		,,	
between the contacts		V AC	440
Current heat loss per contact at I <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	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	P	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	I <sub>e</sub>	Α	11.5
230 V star-delta	l <sub>e</sub>	Α	20
400V 415 V	l <sub>e</sub>	Α	11.5
400 V star-delta	l <sub>e</sub>	Α	20
500 V	I <sub>e</sub>	A	9
500 V star-delta	l <sub>e</sub>	A	15.6
690 V	l <sub>e</sub>	Α	4.9
690 V star-delta	l <sub>e</sub>	Α	8.5
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	Р	kW	7.5
690 V	Р	kW	5.5
Rated operational current motor load switch			
230 V	l <sub>e</sub>	Α	13.3
400 V 415 V	l <sub>e</sub>	Α	13.3
500 V	l <sub>e</sub>	Α	13.3
690 V	I <sub>e</sub>	Α	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I <sub>e</sub>	Α	10
Voltage per contact pair in series		V	60
DC-21A	l <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	10
Contacts		Quantity	1
48 V			
Rated operational current	I <sub>e</sub>	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	Α	10
Contacts		Quantity	3
120 V		,	
Rated operational current	l <sub>e</sub>	A	5
Contacts		Quantity	3
240 V		,	
Rated operational current	I <sub>e</sub>	Α	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms		,	
Rated operational current	I <sub>e</sub>	Α	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault	H <sub>F</sub>	< 10 <sup>-5</sup> ,< 1 failure in 100,000 switching operations
	probability	'	< 10 ,< 1 failure in 100,000 Switching Operations
Terminal capacities			4 (4 05)
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		Α	16
Auxiliary contacts			
General Use	lu	Α	10
Pilot Duty			A 600
			P 300
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	SCC	3
Basic Rating	kA	5
max. Fuse	Α	50
High fault rating	kA	10
max. Fuse	Α	20, Class J
Terminal capacity		
Solid or flexible conductor with ferrule	AWO	18 - 14
Terminal screw		M3.5
Tightening torque	lb-in	8.8

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	20
Heat dissipation per pole, current-dependent	$P_{\text{vid}}$	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			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 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. $\label{eq:constraint}$

#### **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 [ACN998011])

[ACN330011])		
Type of switch		Level switch
Number of poles		2
Max. rated operation voltage Ue AC	V	690
Rated permanent current lu	А	20
Number of switch positions		3
With 0 (off) position		Yes
With retraction in 0-position		No
Device construction		Built-in device
Width in number of modular spacings		4
Suitable for ground mounting		Yes
Suitable for front mounting 4-hole		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		Other
Degree of protection (IP), front side		IP30
Degree of protection (NEMA), front side		Other

### **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: IP30; UL/CSA Type: –

#### **Dimensions**

