DATASHEET - TM-6-8253/EZ



Step switches, TM, 10 A, centre mounting, 6 contact unit(s), Contacts: 12, 60 $^{\circ}$, maintained, Without 0 (Off) position, 1-6, design no. 8253



Part no. TM-6-8253/EZ Catalog No. 046127

Product range Part group reference Basic function Contacts Contact sequence Switching angle Control selection Contact sequence Switching angle Contact sequence Switching				
Product range Part group reference Basic function Contacts Number of contact sequence Degree of Protection Contact sequence Contact s	Delivery program			
Basic function Step switches with black thumb grip and front plate 12 6 step 50°, no full rotation Front IPBS centre mounting centre mounting centre mounting Contact sequence Switching angle Switching angle Switching performance Design number Front plate no. Pront plate no. Pront plate no. Switching AC-23A, 50 - 60 Hz 400 V P WW 3 Rated uninterrupted current I _u is specified for max. cross-section. Number of contact unints Whose or rated uninterrupted current I _u is specified for max. cross-section.	Product range			Control switches
with black thumb grip and front plata Contacts Number of staps Degree of Protection Design Contact sequence Contac	Part group reference			TM
Contacts Number of steps Degree of Protection Design Contact sequence Contact sequ	Basic function			Step switches
Number of steps Degree of Protection Design Contact sequence Contact sequence Switching angle Switching performance Switching angle Foot position The suitable state of the sta				with black thumb grip and front plate
Design Contact sequence Contact sequence Switching angle Switching performance Design number Front plate no. Front plate no. Total plate Motor rating AC-23A, 50 - 60 Hz 400 V P KW AD Note on rated uninterrupted current I _u Note on rated uninterrupted current I _u Note on rated uninterrupted current I _u Number of contact units Foot plate ocntact of services section. Front plate ocntact of services section.	Contacts			12
Contact sequence Contact sequence Switching angle Switching performance Design number Front plate no. Motor rating AC-23A, 50 - 60 Hz 400 V Rated uninterrupted current I _u Note on rated uninterrupted current I _u Number of contact units Left the mounting centre mounti	Number of steps			6 steps 60°, no full rotation
Contact sequence Switching angle Switching performance Switching performance Design number Front plate no. ***Office of the plate of	Degree of Protection			Front IP65
Switching angle Switching performance Design number Front plate no. ### April 1	Design			centre mounting
Switching angle Switching performance Design number Front plate no. ### April 1				
Switching performance Design number Front plate no. Motor rating AC-23A, 50 - 60 Hz 400 V Rated uninterrupted current I _u Number of contact units Number of contact units Maintained Without 0 (0ff) position 8253 F 079 1-6 Note on rated uninterrupted current I _u is specified for max. cross-section.	Contact sequence			
Without 0 (Off) position Besign number Front plate no. Without 0 (Off) position B253 F 079 Front plate Motor rating AC-23A, 50 - 60 Hz 400 V Rated uninterrupted current 1 u Number of contact units Without 0 (Off) position B253 F 079 1-6 8-7 1-6 Rated uninterrupted current 1 u is specified for max. cross-section.	Switching angle		0	60
Front plate no. Front plate no. Front plate Front plate Front plate Motor rating AC-23A, 50 - 60 Hz 400 V P kW 3 Rated uninterrupted current Iu Note on rated uninterrupted current Iu Number of contact units Front plate Front plate 1-6 Rated uninterrupted current Iu is specified for max. cross-section.	Switching performance			
front plate Motor rating AC-23A, 50 - 60 Hz 400 V Rated uninterrupted current Note on rated uninterrupted current I_u Number of contact units $ \begin{array}{cccccccccccccccccccccccccccccccccc$	Design number			8253
Motor rating AC-23A, 50 - 60 Hz 400 V Rated uninterrupted current Note on rated uninterrupted current! Number of contact units	Front plate no.			$ \begin{bmatrix} 2 & 3 \\ 1 & 4 \\ 6 & 5 \end{bmatrix} $ F 079
400 V P kW 3 Rated uninterrupted current I _u A 10 Note on rated uninterrupted current I _u is specified for max. cross-section. Number of contact units contact Contact 6	front plate			1-6
Rated uninterrupted current Note on rated uninterrupted current ! A 10 Rated uninterrupted current Iu is specified for max. cross-section. Number of contact units contact 6	Motor rating AC-23A, 50 - 60 Hz			
Note on rated uninterrupted current I _u Rated uninterrupted current I _u is specified for max. cross-section. Number of contact units contact 6	400 V	Р	kW	3
Number of contact units contact 6	Rated uninterrupted current	I _u	Α	10
	Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\rm u}$ is specified for max. cross-section.
	Number of contact units			6

Technical data

General			
Standards			IEC/EN 60947, VDE 0660, CSA, UL Control switch as per IEC/EN 60947-5-1 Auxiliary switch as per IEC/EN 60947-5-1
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +50
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	U_{imp}	V AC	4000
Mounting position			As required
Contacts			
Electrical characteristics			

Poted approximal voltage	ш	V AC	500
Rated operational voltage	U _e		
Rated uninterrupted current	lu	Α	10
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Short-circuit rating			
Fuse		A gG/gL	10
Switching capacity			
Safe isolation to EN 61140			
Current heat loss per contact at l _e		W	0.15
Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		CO	0.15
Lifespan, mechanical	Operations	x 10 ⁶	>1
Maximum operating frequency	Operations/h		1200
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	l _e	Α	10
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
400 V 415 V	Р	kW	3
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	< 10 ⁻⁵ ,< 1 failure in 100,000 switching operations
Torminal assocition	probability		
Terminal capacities Solid or stranded		mm ²	1 x 1,5
Cond of Stranded		mm	2 x 1,5
Flexible with ferrules to DIN 46228		mm ²	1 x 1.0 2 x 1.0
Flexible		mm ²	1 x 1.5 2 x 1.5
Terminal screw			M2.5
Tightening torque for terminal screw		Nm	0.4
Rating data for approved types			
Contacts			
Rated operational voltage	U _e	V AC	300
Rated uninterrupted current max.			
Main conducting paths			
General use		Α	10
Auxiliary contacts			
General Use	IU	Α	10
Pilot Duty			A 300
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		НР	0.33
240 V AC		НР	0.75
277 V AC		HP	0.75
Three-phase			
120 V AC		HP	0.75
240 V AC		НР	1
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	14
Terminal screw			M2.5
Tightening torque		lb-in	3.5

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	10
Heat dissipation per pole, current-dependent	P _{vid}	W	0.15

Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P _{diss}	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 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.

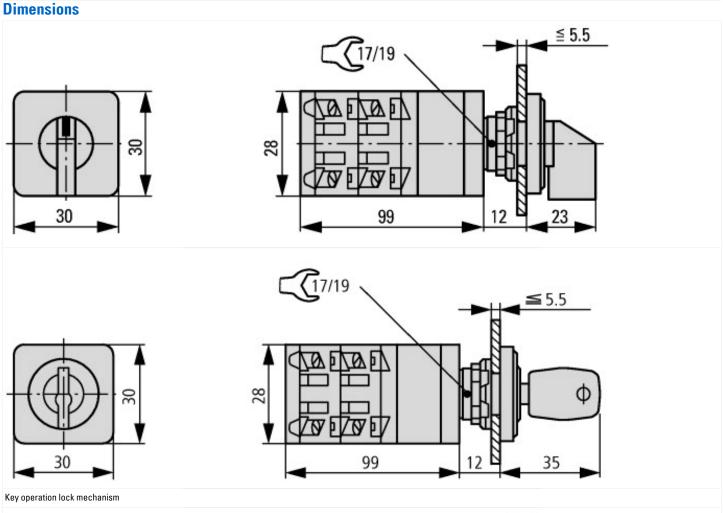
Technical data ETIM 7.0

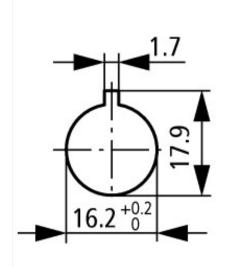
Low-voltage industrial components (EG000017) / Control switch (EC002611)

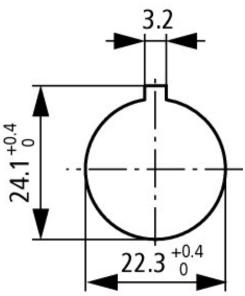
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Control switch (ecl@ss10.0.1-27-37-14-14 [ACN998011])

Number of poles Max. rated operation voltage Ue AC Rated permanent current lu Number of switch positions With 0 (off) position With retraction in 0-position With retraction in 0-position Device construction With in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Complete device in housing Type of control element Front shield size Degree of protection (IP), front side	[ACN998011])		
Max. rated operation voltage Ue AC Rated permanent current lu Number of switch positions With 0 (off) position With retraction in 0-position Device construction With in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Suitable for other device in housing Type of control element Front shield size Degree of protection (IP), front side	Type of switch		Level switch
Rated permanent current lu Number of switch positions With 0 (off) position With retraction in 0-position With retraction in 0-position Device construction Width in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for intermediate mounting Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side A 10 6 A 10 6 A 10 A	Number of poles		2
Number of switch positions With 0 (off) position With petraction in 0-position No Device construction With in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side	Max. rated operation voltage Ue AC	V	500
With 0 (off) position With retraction in 0-position Device construction Width in number of modular spacings Width in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side	Rated permanent current lu	Α	10
With retraction in 0-position Device construction Width in number of modular spacings O Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side No Built-in device Built-in device No No No Tyes No No Tygele 30x30 mm P65	Number of switch positions		6
Device construction Built-in device O Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side Built-in device Built-in device No No No No Fyes No No Type of control mounting 4-hole Suitable for intermediate mounting No Type of control element Front shield size Degree of protection (IP), front side	With 0 (off) position		No
Width in number of modular spacings Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Front shield size Degree of protection (IP), front side O No O O O O O O O O O O O O O	With retraction in 0-position		No
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Type of control element Toggle Front shield size Degree of protection (IP), front side No	Device construction		Built-in device
Suitable for front mounting 4-hole Suitable for distribution board installation No Suitable for intermediate mounting No Complete device in housing No Type of control element Toggle Front shield size Degree of protection (IP), front side Yes No No Type of control element Toggle 100, 100, 100, 100, 100, 100, 100, 100,	Width in number of modular spacings		0
Suitable for distribution board installation Suitable for intermediate mounting No Complete device in housing Type of control element Front shield size Degree of protection (IP), front side No No Type of control element Toggle 1065	Suitable for ground mounting		No
Suitable for intermediate mounting Complete device in housing No Type of control element Front shield size Degree of protection (IP), front side No Toggle 30x30 mm IP65	Suitable for front mounting 4-hole		Yes
Complete device in housing No Type of control element Front shield size Degree of protection (IP), front side No Toggle 30x30 mm IP65	Suitable for distribution board installation		No
Type of control element Toggle Front shield size 30x30 mm Degree of protection (IP), front side IP65	Suitable for intermediate mounting		No
Front shield size 30x30 mm Degree of protection (IP), front side IP65	Complete device in housing		No
Degree of protection (IP), front side	Type of control element		Toggle
	Front shield size		30x30 mm
Degree of protection (NEMA), front side Other	Degree of protection (IP), front side		IP65
	Degree of protection (NEMA), front side		Other

Approvals	
Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	UL report applies to both US and Canada
North America Certification	UL listed, certified by UL for use in Canada
Degree of Protection	IEC: IP65; UL/CSA Type: —







Door drilling dimensions

Drilling dimensions: either 16.2 mm = without reduction ≙ RMQ16 or 22.3 mm = with reduction ≙ RMQ Titan

Additional product information (links)

Display flip catalog page. http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=174

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