

On-Off switch, P3, 63 A, service distribution board mounting, 3 pole + N, with black thumb grip and front plate, Lockable in the 0 (Off) position

Part no. P3-63/IVS/N
Catalog No. 022267

Similar to illustration

Delivery program

Product range			On-Off switch
Part group reference			P3
			with black thumb grip and front plate
Information about equipment supplied			auxiliary contact fitted by user.
Number of poles			3 pole + N
Auxiliary contacts			
		N/O	0
		N/C	0
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP30
Design			service distribution board mounting
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	30
Rated uninterrupted current	I_U	A	63
Note on rated uninterrupted current I_U			Rated uninterrupted current I_U is specified for max. cross-section.

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
Rated impulse withstand voltage	U_{imp}	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required

Contacts

Mechanical variables			
Number of poles			3 pole + N
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U_e	V AC	690
Rated uninterrupted current	I_U	A	63
Note on rated uninterrupted current I_U			Rated uninterrupted current I_U is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x I_e	2
AB 40 % DF		x I_e	1.6

AB 60 % DF		x I _e	1.3
Short-circuit rating			
Fuse		A gG/gL	80
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	1260
Note on rated short-time withstand current I _{cw}			Current for a time of 1 second
Rated conditional short-circuit current	I _q	kA	4 (Load side) 100 (Supply side)

Switching capacity

cos φ rated making capacity as per IEC 60947-3		A	800
Rated breaking capacity cos φ to IEC 60947-3		A	
230 V		A	640
400/415 V		A	600
500 V		A	590
690 V		A	340
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I _e		W	4.5
Lifespan, mechanical	Operations	x 10 ⁶	> 0.1
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	15
400 V 415 V	P	kW	30
500 V	P	kW	30
690 V	P	kW	30
Rated operational current motor load switch			
230 V	I _e	A	51
400V 415 V	I _e	A	55
500 V	I _e	A	44
690 V	I _e	A	22.1
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	18.5
400 V 415 V	P	kW	30
500 V	P	kW	45
690 V	P	kW	55
Rated operational current motor load switch			
230 V	I _e	A	63
400 V 415 V	I _e	A	63
500 V	I _e	A	63
690 V	I _e	A	63
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I _e	A	63
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I _e	A	50
Contacts		Quantity	1
48 V			
Rated operational current	I _e	A	50
Contacts		Quantity	2
60 V			

Rated operational current	I_e	A	50
Contacts		Quantity	2
120 V			
Rated operational current	I_e	A	25
Contacts		Quantity	3
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H_F	$< 10^{-5}$, < 1 failure in 100,000 switching operations

Terminal capacities

Solid or stranded		mm^2	1 x (2,5 - 35) 2 x (2,5 - 10)
Flexible with ferrules to DIN 46228		mm^2	1 x (1.5 - 25) 2 x (1.5 - 6)
Terminal screw			M5
Tightening torque for terminal screw		Nm	3

Technical safety parameters:

Notes			B10 _d values as per EN ISO 13849-1, table C1
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Rating data for approved types

Contacts			
Rated operational voltage	U_e	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		A	60
Auxiliary contacts			
General Use	I_U	A	10
Pilot Duty			A 600 P 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	3
200 V AC		HP	7.5
240 V AC		HP	10
Three-phase			
200 V AC		HP	15
240 V AC		HP	15
480 V AC		HP	40
600 V AC		HP	50
Short Circuit Current Rating			
Basic Rating			
		kA	10
max. Fuse			
		A	150
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	14 - 2
Terminal screw			M5
Tightening torque		lb-in	26.5

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	63
Heat dissipation per pole, current-dependent	P_{vid}	W	4.5
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		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 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 8.0

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss10.0.1-27-37-14-03 [AKF060013])

Version as main switch		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage U _e AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current I _u	A	63
Rated permanent current at AC-23, 400 V	A	63
Rated permanent current at AC-21, 400 V	A	63
Rated operation power at AC-3, 400 V	kW	30
Rated short-time withstand current I _{cw}	kA	1.26
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	30
Conditioned rated short-circuit current I _q	kA	100
Number of poles		4
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as change-over contact		0
Motor drive optional		No
Motor drive integrated		No
Voltage release optional		No
Device construction		Built-in device fixed built-in technique
Suitable for floor mounting		Yes
Suitable for front mounting 4-hole		No
Suitable for front mounting centre		No

Suitable for distribution board installation			Yes
Suitable for intermediate mounting			No
Colour control element			Black
Type of control element			Short thumb-grip
Interlockable			No
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP), front side			IP30
Degree of protection (NEMA)			Other