#### DATASHEET - P3-63/V/SVB-SW



Main switch, P3, 63 A, rear mounting, 3 pole, STOP function, With black rotary handle and locking ring, Lockable in the 0 (Off) position



Part no. Catalog No. P3-63/V/SVB-SW 060230

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			P3
Stop Function			STOP function
			With black rotary handle and locking ring
Information about equipment supplied			Auxiliary contact or neutral conductor fitted by user.
Number of poles			3 pole
Auxiliary contacts			
4		N/0	0
7		N/C	0
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP65
Design			rear mounting
Contact sequence			0 1 2 0 1 6 0 1 6 0 1 6 0 1
Function			
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	30
Rated uninterrupted current	l <sub>u</sub>	А	63
Note on rated uninterrupted current !u			Rated uninterrupted current I <sub>u</sub> 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 NEMA12
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 <sub>imp</sub>	V AC	6000
Mechanical shock resistance	mp	g	15
Mounting position		5	As required
Contacts			
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/0	0
		N/C	0
Electrical characteristics			
Rated operational voltage	Ue	V AC	690
Rated uninterrupted current	I <sub>u</sub>	A	63
Note on rated uninterrupted current !u			Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x l <sub>e</sub>	2
AB 40 % DF		x l <sub>e</sub>	1.6
AB 60 % DF		x l <sub>e</sub>	1.3
Short-circuit rating		A . O	
Fuse		A gG/gL	
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	1260
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Ι <sub>q</sub>	kA	4
Switching capacity		٨	000
cos φ rated making capacity as per IEC 60947-3		A	800
Rated breaking capacity cos φ to IEC 60947-3		A	C40
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 <sub>e</sub>		W	4.5
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.1
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	Р	kW	
220 V 230 V	Р	kW	15
400 V 415 V	Р	kW	30
500 V	Р	kW	30
690 V	Ρ	kW	30
Rated operational current motor load switch			
230 V	l <sub>e</sub>	А	51
400V 415 V	le	А	55
500 V	le	А	44
690 V	l <sub>e</sub>	A	22.1
AC-21A			
Rated operational current switch			
440 V	l <sub>e</sub>	A	63
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	18.5
400 V 415 V	P	kW	30
500 V	P	kW	45
			·

690 V	Ρ	kW	55
Rated operational current motor load switch			
230 V	I <sub>e</sub>	А	63
400 V 415 V	I <sub>e</sub>	A	63
500 V	le	A	63
690 V	le	A	63
DC	0		
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	1	A	63
	le		
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	le	A	50
Contacts		Quantity	1
48 V			
Rated operational current	l <sub>e</sub>	A	50
Contacts		Quantity	2
60 V			
Rated operational current	l <sub>e</sub>	А	50
Contacts		Quantity	2
120 V			
Rated operational current	le	A	25
Contacts		Quantity	3
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		
Terminal capacities			
Solid or stranded		mm <sup>2</sup>	1 x (2,5 - 35) 2 x (2,5 - 10)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1.5 - 25)
		mm <sup>2</sup>	1 x (1.5 - 25) 2 x (1.5 - 6)
Terminal screw			1 x (1.5 - 25)
Terminal screw Tightening torque for terminal screw		mm <sup>2</sup> Nm	1 x (1.5 - 25) 2 x (1.5 - 6)
Terminal screw Tightening torque for terminal screw <b>Technical safety parameters:</b>			1 x (1.5 - 25) 2 x (1.5 - 6) M5 3
Terminal screw Tightening torque for terminal screw <b>Technical safety parameters:</b> Notes			1 x (1.5 - 25) 2 x (1.5 - 6) M5
Terminal screw Tightening torque for terminal screw Technical safety parameters: Notes Rating data for approved types			1 x (1.5 - 25) 2 x (1.5 - 6) M5 3
Terminal screw Tightening torque for terminal screw Technical safety parameters: Notes Rating data for approved types Contacts		Nm	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Terminal screw Tightening torque for terminal screw Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage	Ue		1 x (1.5 - 25) 2 x (1.5 - 6) M5 3
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.	U <sub>e</sub>	Nm	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Terminal screw Tightening torque for terminal screw Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max. Main conducting paths	Ue	Nm V AC	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use	Ue	Nm	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts		Nm V AC A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use	Ue	Nm V AC	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60 60 60 10
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts		Nm V AC A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty		Nm V AC A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 10 10 A 600
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use		Nm V AC A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 10 10 A 600
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating		Nm V AC A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 10 10 A 600
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase		Nm V AC A A	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60 10 A 600 P 600
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC		Nm VAC A A HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 10 A 600 P 600 3
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC		Nm VAC A A HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 10 A 600 P 600 3 3 3 7.5
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC         240 V AC		Nm VAC A A HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 10 A 600 P 600 3
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         240 V AC         Three-phase		Nm VAC A A HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 10 A 600 P 600 9 600 10 3 7.5 10 10 10 10 10 10 10 10 10 10
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC         200 V AC         200 V AC         200 V AC		Nm VAC A A A HP HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60 60 10 A 600 P 600 9 600 10 3 3 7.5 10 10 10 10 10 10 10 10 10 10
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         240 V AC         Three-phase         200 V AC         240 V AC		Nm VAC A A A HP HP HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60 60 60 10 A 600 P 600 9 600 10 3 3 7.5 10 10 10 10 10 10 10 10 10 10
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC         200 V AC         200 V AC         480 V AC		Nm VAC A A A HP HP HP HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 60 10 A 600 P 600 9 600 10 3 3 3 3 5 5 10 15 15 15 15 15 10 40
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC         200 V AC         200 V AC         480 V AC         600 V AC		Nm VAC A A A HP HP HP HP HP HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 60 60 60 10 A 600 P 600 9 600 10 3 3 7.5 10 10 10 10 10 10 10 10 10 10
Terminal screw         Tightening torque for terminal screw         Technical safety parameters:         Notes         Rating data for approved types         Contacts         Rated operational voltage         Rated uninterrupted current max.         Main conducting paths         General use         Auxiliary contacts         General Use         Pilot Duty         Switching capacity         Maximum motor rating         Single-phase         120 V AC         200 V AC         200 V AC         480 V AC         480 V AC		Nm VAC A A A HP HP HP HP HP	1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 600 600 60 60 60 10 A 600 P 600 9 600 10 3 3 3 3 5 5 10 15 15 15 15 15 10 40

max. Fuse	А	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	In	А	63
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	4.5
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) / Switch disconnector (EC000216)

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

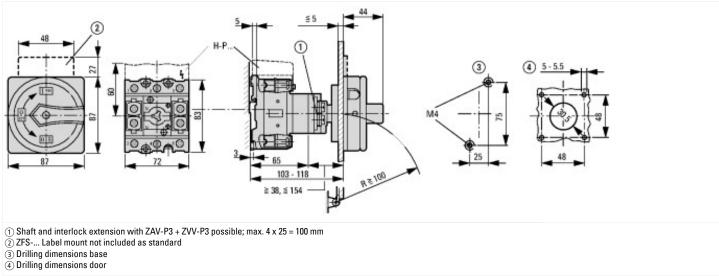
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690

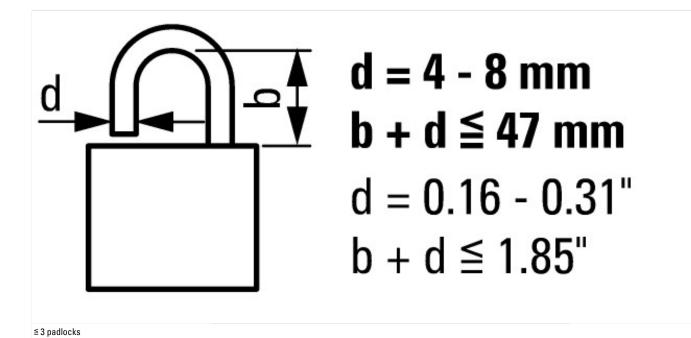
Rated permanent current lu	А	63
Rated permanent current at AC-23, 400 V	А	63
Rated permanent current at AC-21, 400 V	Α	63
Rated operation power at AC-3, 400 V	kW	30
Rated short-time withstand current Icw	kA	1.26
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	30
Conditioned rated short-circuit current Iq	kA	4
Number of poles		3
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 ground mounting		Yes
Suitable for front mounting 4-hole		No
Suitable for front mounting centre		No
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Colour control element		Black
Type of control element		Door coupling rotary drive
Interlockable		Yes
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		12

#### **Approvals**

Approvate	
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**





02/03/2021