# DATASHEET - P1-25/EA/SVB



Main switch, P1, 25 A, flush mounting, 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position



Part no. P1-25/EA/SVB Catalog No. 041097

EL-Nummer 0001456105 (Norway)

Nelivery program

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			P1
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Information about equipment supplied			Auxiliary contact or neutral conductor fitted by user.
Number of poles			3 pole
Auxiliary contacts			
1		N/0	0
<b>7</b>		N/C	0
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP65
Design			flush mounting
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Function			OFF O
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	11
Rated uninterrupted current	l <sub>u</sub>	Α	25
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{U}}$ is specified for max. cross-section.

# Technical data General

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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	r	g	15
Mounting position			As required
Contacts			
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/0	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	l <sub>u</sub>	Α	25
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	25
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	640
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	50
Switching capacity	1		
cos φ rated making capacity as per IEC 60947-3		Α	240
Rated breaking capacity $\cos \phi$ to IEC 60947-3		Α	
230 V		Α	190
400/415 V		Α	150
500 V		Α	170
690 V		Α	150
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	1.1
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.3
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	Р	kW	5.5
400 V 415 V	Р	kW	7.5
500 V	P	kW	7.5
690 V	P	kW	7.5
Rated operational current motor load switch			
230 V	I <sub>e</sub>	Α	19.6
400V 415 V	I <sub>e</sub>	Α	15.2
500 V	I <sub>e</sub>	Α	12.1
690 V	I <sub>e</sub>	Α	8.8
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	5.5
400 V 415 V	P	kW	11
500 V	P	kW	11

690 V	P	kW	11
Rated operational current motor load switch			
230 V	l <sub>e</sub>	Α	25
400 V 415 V	I <sub>e</sub>	Α	25
500 V	I <sub>e</sub>	Α	17.4
690 V	l <sub>e</sub>	Α	12.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I <sub>e</sub>	A	25
	'e	V	60
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	1
48 V			
Rated operational current	l <sub>e</sub>	Α	25
Contacts		Quantity	2
60 V			
Rated operational current	Ie	Α	25
Contacts		Quantity	2
120 V			
Rated operational current	l <sub>e</sub>	Α	12
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		< 10 ,< 1 failure in 100,000 Switching Operations
Terminal capacities			
Solid or stranded		mm <sup>2</sup>	1 x (1,5 - 6) 2 x (1,5 - 6)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1 - 4)
		111111	2 x (1 - 4)
Terminal screw			M4
Tightening torque for terminal screw		Nm	1.6
Technical safety parameters:			
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Rating data for approved types			
Contacts		V 40	200
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		Α	20
Auxiliary contacts			
General Use	lu	Α	10
Pilot Duty			A 600 P 600
Suitabing canacity			1 000
Switching capacity  Maximum motor rating			
Maximum motor rating			
Single-phase		ш	
120 V AC		HP	1
200 V AC		HP	2
240 V AC		HP	3
Three-phase			
200 V AC		HP	3
240 V AC		HP	5
480 V AC		HP	10
600 V AC		HP	15
Short Circuit Current Rating		SCCR	
Basic Rating		kA	5

max. Fuse	Α	110
High fault rating	kA	10
max. Fuse	Α	50, Class J
Terminal capacity		
Solid or flexible conductor with ferrule	AWG	14 - 8
Terminal screw		M4
Tightening torque	lb-in	14.1

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	25
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.1
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 switch gear must be observed. $\label{eq:specifications}$
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])

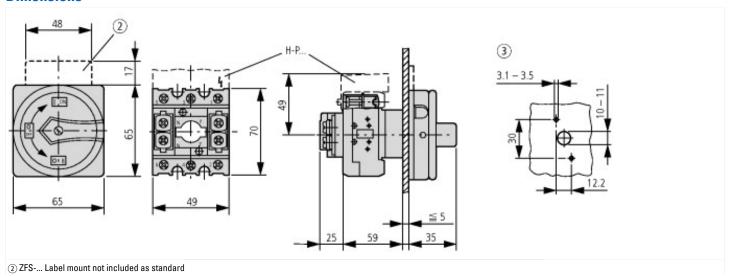
[AKF060013])	
Version as main switch	Yes
Version as maintenance-/service switch	Yes
Version as safety switch	No
Version as emergency stop installation	Yes
Version as reversing switch	No
Number of switches	1

May noted an arction valte as LLs AC	,	V	000
Max. rated operation voltage Ue AC			690
Rated operating voltage		V	690 - 690
Rated permanent current lu	,	A	25
Rated permanent current at AC-23, 400 V	,	A	25
Rated permanent current at AC-21, 400 V	1	Α	25
Rated operation power at AC-3, 400 V	ŀ	kW	7.5
Rated short-time withstand current lcw	ŀ	kA	0.64
Rated operation power at AC-23, 400 V	ŀ	kW	13
Switching power at 400 V	ŀ	kW	13
Conditioned rated short-circuit current Iq	ŀ	kA	80
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			No
Suitable for front mounting 4-hole			Yes
Suitable for front mounting centre			No
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Red
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

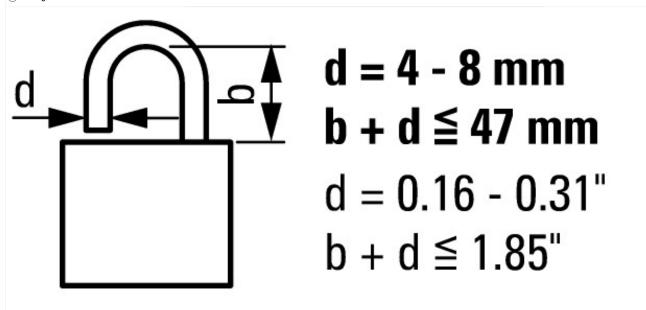
# Approvals

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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**



3 Drilling dimensions door



≦3 padlocks