

Main switch, 3 pole + 2 N/O + 2 N/C, 25 A, Emergency-Stop function, flush mounting



Part no. P1-25/EA/SVB/2HI11 Article no. 012464

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
Number of poles			3 pole
Auxiliary contacts			
\ [']		N/0	2
7		N/C	2
Degree of Protection			Front IP65
Design			flush mounting
Function			O OFF
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	11

Technical data

Rated uninterrupted current

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_{imp}	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Contacts			
Mechanical variables			

Α

25

Number of poles			3 pole
Auxiliary contacts			3 pole
Auxiliary contacts		N/0	2
		N/C	2
Electrical characteristics		14/0	
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	I _u	Α	25
Note on rated uninterrupted current !u			Rated uninterrupted current lu 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	25
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	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			
cos φ rated making capacity as per IEC 60947-3		A	240
Rated breaking capacity cos φ to IEC 60947-3		A	
230 V		A	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 l _e		W	1.1
Current heat loss per auxiliary circuit at I _e (AC-15/230 V)		CO	0.2
Lifespan, mechanical	Operations	x 10 ⁶	> 0.3
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	5.5
400 V 415 V	Р	kW	7.5
500 V	Р	kW	7.5
690 V	P	kW	7.5
Rated operational current motor load switch			
230 V	l _e	Α	19.6
400V 415 V	I _e	Α	15.2
500 V	I _e	Α	12.1
690 V	I _e	Α	8.8
AC-21A			
Rated operational current switch			
440 V	I _e	Α	25
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	5.5
400 V 415 V	Р	kW	11
500 V	Р	kW	11
690 V	Р	kW	11
Rated operational current motor load switch			
230 V	I _e	Α	25

Sept				
DC U, Look brasts whicher LR = n ms Law 2 2 Risted operational current V. A. 2 2 Cot CotA, mater had sower to discuss the life in missis V. B. 2 Cot CotA, mater had operational current I. A. 2 2 Cottant Cot Dualty 1 1 East operational current I. A. 3 2 Based operational current I. A. 3 2 Based operational current I. A. 3 2 Based operational current I. A. 3 2 Cottacts Dualty 2 2 Based operational current I. A. 3 2 Cottacts Dualty 2 2 Cottacts I. A. 3 2 Cottacts I. A. 3 3 Cottacts I. A. 4 2 Cottacts I. A. 4 1 Cottacts I. A. 5 1 Cottacts I. A. 1 1 Cottacts II A. 1 1 Cottacts II A. 1 1 Cottacts II A. 1	500 V	l _e	Α	17.4
DO-1, Land brook sorbicles UR - 1 ms Interference Interferen	690 V	l _e	Α	12.6
Rused operational current Image Value	DC			
Votage per context pair in series Votage per context Votage per	DC-1, Load-break switches L/R = 1 ms			
Caracter Part Par	Rated operational current	l _e	Α	25
### Ratio personnel current	Voltage per contact pair in series		٧	60
Rated operational current	DC-23A, motor load switch L/R = 15 ms			
Contacts	24 V			
Contacts	Rated operational current	I _e	Α	25
A	Contacts		Quantity	1
Rested operational current			,	
Cartacts		l _o	Α	25
Ratid operational current		C		
Rated operational current			Quantity	
Contracts			٨	25
120 V Radad operational current L		'e		
Rated operational current			Quantity	2
Control Cicker foliability at 24 V DC, 10 mA Fault probability or 24 V DC, 10 mA SV 15 - 6)				
Control circuit ratiobility at 24 VDC, 10 MA Feath probability Place probability 1 Act (1,5 c) (1,5		l _e		
Terminal capacities				3
Solid or stranded	Control circuit reliability at 24 V DC, 10 mA		H _F	$< 10^{-5}$, < 1 fault in 100000 operations
	Terminal capacities	probability		
Panishi with ferrules to DIN 48228			mm ²	1 x (1,5 - 6)
Terminal screw				2 x (1,5 - 6)
Terminal screw Max Max Max Tothical safety parameters: Tothical safety parameters: Notes Indigitation approved types Tothical safety parameters: Tothical safety parameters: Tothical safety parameters: Tothical safety safety safety parameters: Read uninterrupted current max. Value NA Solid	Flexible with ferrules to DIN 46228		mm^2	
Most sightening torque Nome 8 Bella values as per EN ISO 13849-1, table C1 Restated parameters: Section of parameters	Terminal corow			
Technical safety parameters: Notes 8 lblg values as per EN ISO 13849-1, table C1 Rating data for approved types: Contacts Rated operational voltage VAC 600 Rated uninterrupted current max. Main conducting paths Page 20 General use May A 20 Auxiliary contacts Ig A 10 Switching capacity A 10 Switching capacity B 10			Nm	
Notes Bottomation data for approved types Cortacts Manage of the provisional voltage Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uninterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted current max. Manage of the provisional voltage and uniterrupted cur			IVIII	1.0
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Rated uninterrupted current max. Main conducting paths Iu A 20 General use Iu A 20 Auxiliary contacts But Duty A 600 P 600 Pilot Duty A 600 P 600 Switching capacity Maximum motor rating Single-phase 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 10 480 V AC HP 15 Short Circuit Current Rating SCR Basic Rating kA 5 max. Fuse A 110 High fault rating KA 50. Class J				
Rated uninterrupted current max. Main conducting paths IU A 20 General use IU A 20 Auxiliary contacts IU A 10 General Use IU A 600 Pilot Duty A 600 Switching capacity P600 P600 Switching capacity IV IV Maximum motor rating IV IV Single-phase IV IV 120 V AC IV IV 200 V AC IV IV 200 V AC IV IV 240 V AC IV IV 480 V AC IV IV 480 V AC IV IV 600 V AC IV IV Short Circuit Current Rating SCCR Basic Rating IV IV max. Fuse A 110 High fault rating IV IV Max. Fuse IV IV	Rated operational voltage	U _e	V AC	600
Main conducting paths Iu	Rated uninterrupted current max.			
General use Iu				
Auxiliary contacts General Use Pilot Duty Pilot Duty Maximum motor rating Single-phase 120 V AC 240 V AC Three-phase 200 V AC 480 V AC 4		lu	Α	20
Filed Duty A 10 A 600 P	Auxiliary contacts	O		
Pilot Duty A 600 P 6000 Switching capacity P 6000 Maximum motor rating P 6000 Single-phase P 7 120 V AC P 9 200 V AC P 9 240 V AC P 9 Three-phase P 3 200 V AC P 9 480 V AC P 9 480 V AC P 9 600 V AC P 9 Short Circuit Current Rating SCCR Basic Rating KA 5 max. Fuse A 110 High fault rating KA 10 max. Fuse A 50, Class J		l	٨	10
Switching capacity P 600 Maximum motor rating P 600 Single-phase P 600 120 V AC HP 200 V AC HP 1 240 V AC HP 3 Three-phase P 7 3 200 V AC HP 3 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J		10	^	
Maximum motor rating Image: Control of the control	Pilot Duty			
Maximum motor rating Image: Control of the control	Switching capacity			
Single-phase 120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 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 A 110 High fault rating KA 10 max. Fuse A 50, Class J				
120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 200 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 A 110 High fault rating kA 10 max. Fuse A 50, Class J				
200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 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 A 110 High fault rating kA 10 max. Fuse A 50, Class J			НР	1
240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
Three-phase 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 A 110 High fault rating kA 10 max. Fuse A 50, Class J				
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 A 110 High fault rating kA 10 max. Fuse A 50, Class J				
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 A 110 High fault rating kA 10 max. Fuse A 50, Class J			НР	3
480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
Short Circuit Current Rating Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				5
High fault rating kA 10 max. Fuse A 50, Class J				
max. Fuse A 50, Class J				
Terminal Capacity			А	JU, MIBSS U
	тепппа сараску			

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 _{vid}	W	1.1
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			Please enquire
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. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 6.0

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@ss8.1-27-37-14-03 [AKF060010])

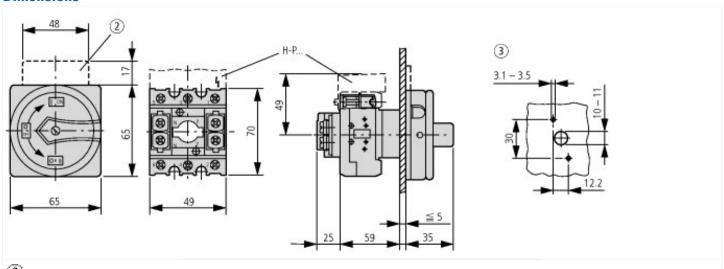
[AKFU60U1U])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
Version as emergency stop installation		Yes
Version as reversing switch		No
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	25
Rated permanent current at AC-21, 400 V	Α	25
Rated operation power at AC-3, 400 V	kW	7.5

Rated short-time withstand current lcw	kA	0.64
Rated operation power at AC-23, 400 V	kW	13
Switching power at 400 V	kW	13
Conditioned rated short-circuit current Iq	kA	80
Number of poles		3
Number of auxiliary contacts as normally closed contact		2
Number of auxiliary contacts as normally open contact		2
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 center		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

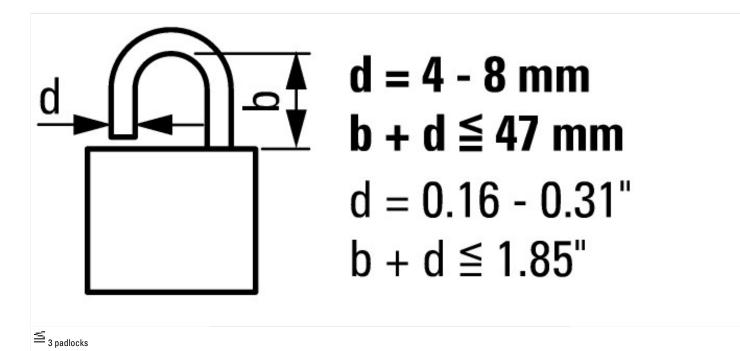
Approvals

••	
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.	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



2 ZFS-... Label mount not included as standard
3 Drilling dimensions door



Additional product information (links)

IL03802003Z (AWA1150-1890) Switch-disconnectors for flush mounting		
IL03802003Z (AWA1150-1890) Switch- disconnectors for flush mounting	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03802003Z2016_07.pdf	
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	