



**Safety switch, P3, 100 A, 3 pole + N, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in position 0 with cover interlock, with warning label „safety switch“**



**Part no. P3-100/I5-SI/N**  
**Catalog No. 207390**

**Delivery program**

Product range				safety switch																				
Part group reference				P3																				
Stop Function				Emergency switching off function																				
Information about equipment supplied				With red rotary handle and yellow locking ring																				
Notes				auxiliary contact fitted by user.																				
Number of poles				with warning label „safety switch“																				
				3 pole + N																				
<b>Auxiliary contacts</b>																								
			N/O	0																				
			N/C	0																				
Locking facility				Lockable in position 0 with cover interlock																				
Degree of Protection				IP65																				
				<b>totally insulated</b>																				
Design				surface mounting																				
Contact sequence				<table border="1"> <tr> <td>1</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>0</td> <td></td> <td></td> <td></td> <td>↑</td> </tr> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td></td> <td>5</td> <td>6</td> <td>N</td> <td>N</td> </tr> </table>	1	X	X	X	X	0				↑		1	2	3	4		5	6	N	N
1	X	X	X	X																				
0				↑																				
	1	2	3	4																				
	5	6	N	N																				
Function																								
<b>Motor rating AC-23A, 50 - 60 Hz</b>																								
400 V	P		kW	55																				
Rated uninterrupted current	I <sub>u</sub>		A	100																				
Note on rated uninterrupted current I <sub>u</sub>				Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.																				

**Technical data**

<b>General</b>				
Standards				IEC/EN 60947, VDE 0660, IEC/EN 60204 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				

Enclosed		°C	-25 - +40
Overtoltage 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	100
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	100
Rated short-time withstand current (1 s current)	$I_{cw}$	$A_{rms}$	2000
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

## Switching capacity

cos $\varphi$ rated making capacity as per IEC 60947-3		A	950
Rated breaking capacity cos $\varphi$ to IEC 60947-3		A	
230 V		A	760
400/415 V		A	740
500 V		A	880
690 V		A	520
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at $I_e$		W	7.5
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	22
400 V 415 V	P	kW	37
500 V	P	kW	45
690 V	P	kW	37
Rated operational current motor load switch			
230 V	$I_e$	A	71
400V 415 V	$I_e$	A	71
500 V	$I_e$	A	65
690 V	$I_e$	A	23.8
AC-21A			
Rated operational current switch			
440 V	$I_e$	A	100
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	30

400 V 415 V	P	kW	55
500 V	P	kW	55
690 V	P	kW	55
Rated operational current motor load switch			
230 V	I <sub>e</sub>	A	100
400 V 415 V	I <sub>e</sub>	A	100
500 V	I <sub>e</sub>	A	96
690 V	I <sub>e</sub>	A	68
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I <sub>e</sub>	A	100
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	1
48 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	A	50
Contacts		Quantity	2
120 V			
Rated operational current	I <sub>e</sub>	A	25
Contacts		Quantity	3
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 failure in 100,000 switching operations

### 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) 2 x (1.5 - 6)
Terminal screw			M5
Tightening torque for terminal screw		Nm	3

### Technical safety parameters:

Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
-------	--	--	---

### Rating data for approved types

Terminal capacity			
Terminal screw			M5
Tightening torque		lb-in	26.49

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	100
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	7.5
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	40
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

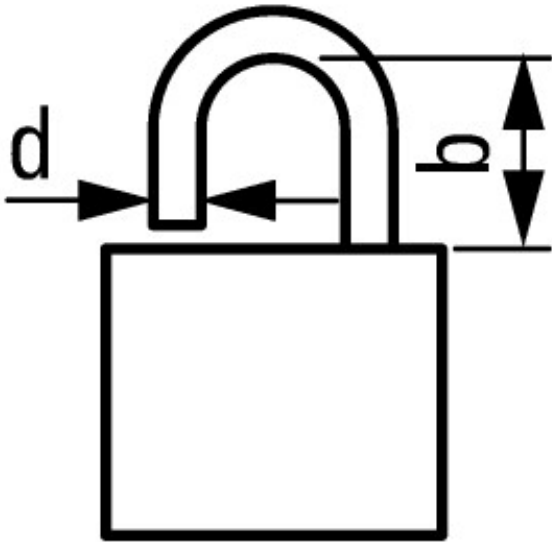
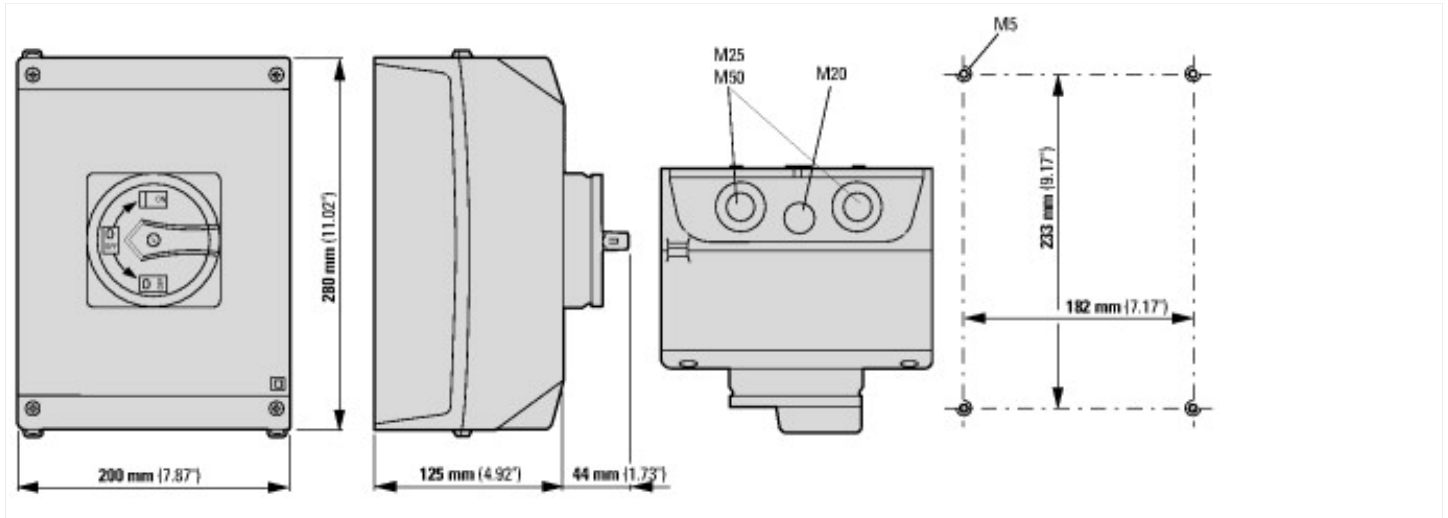
Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)

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		Yes
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage U <sub>e</sub> AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current I <sub>u</sub>	A	100
Rated permanent current at AC-23, 400 V	A	100
Rated permanent current at AC-21, 400 V	A	100
Rated operation power at AC-3, 400 V	kW	37
Rated short-time withstand current I <sub>cw</sub>	kA	2
Rated operation power at AC-23, 400 V	kW	55
Switching power at 400 V	kW	55
Conditioned rated short-circuit current I <sub>q</sub>	kA	4
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		Complete device in housing
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		Red
Type of control element		Door coupling rotary drive
Interlockable		No
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		Other

## Dimensions



$$d = 4 - 8 \text{ mm}$$

$$b + d \leq 47 \text{ mm}$$

$$d = 0.16 - 0.31''$$

$$b + d \leq 1.85''$$

≤ 3 padlocks

## Assets (links)

### Declaration of CE Conformity

00003104

### Instruction Leaflets

IL03801010Z2018\_05

## Additional product information (links)

### IL03801010Z (AWA1150-1982) Cam switch: switch-disconnector

IL03801010Z (AWA1150-1982) Cam switch: switch-disconnector	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801010Z2018_05.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801010Z2018_05.pdf</a>
Technical overview cam switch, switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2</a>
System overview cam switch T	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4</a>
System overview switch-disconnector P	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6</a>
Key to part numbers Cam switch	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Key to part numbers Switch-disconnector	<a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>
Switches for ATEX	<a href="http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html">http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html</a>

Ordering form for SOND switches and SOND front plates(DE\_EN)

[ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU\\_Orderform\\_Customized\\_Switch.pdf](ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf)

Ordering form for SOND switches and SOND front plates(DE\_EN)

[ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU\\_Orderform\\_Customized\\_Switch.pdf](ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf)