### DATASHEET - P3-100/I5-RT



On-Off switch, P3, 100 A, surface mounting, 3 pole, Emergency switching off function, with red thumb grip and yellow front plate



Part no. P3-100/I5-RT Catalog No. 207382

#### **Delivery program**

Delivery program			
Product range			On-Off switch
Part group reference			P3
Stop Function			Emergency switching off function
			with red thumb grip and yellow front plate
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
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact assuman			
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Front plate no.			FS 908 GE
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	55
Rated uninterrupted current	I <sub>u</sub>	A	100
Note on rated uninterrupted current !u	d		Rated uninterrupted current $I_u$ is specified for max. cross-section.
note on rated animiterrupted current :[[			nated animerrupted carrent ill is specified for filax. 61055-5664011.

# 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		
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
Auxiliary contacts			
		N/0	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	I <sub>u</sub>	Α	100
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\rm u}$ 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 l <sub>e</sub>	1.3
		v 16	1.0
Short-circuit rating		A = C/=1	100
Fuse		A gG/gL	
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	2000
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	4
Switching capacity cos φ rated making capacity as per IEC 60947-3		Α	950
Rated breaking capacity os $\varphi$ to IEC 60947-3		A	330
230 V			760
		A	740
400/415 V		A	
500 V		A	880
690 V		Α	520
Safe isolation to EN 61140		V AC	440
between the contacts		V AC	440
Current heat loss per contact at l <sub>e</sub>		W	7.5
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	P	kW	22
400 V 415 V	Р	kW	37
500 V	P	kW	45
690 V	P	kW	37
Rated operational current motor load switch			
230 V	I <sub>e</sub>	Α	71
400V 415 V	l <sub>e</sub>	Α	71
500 V	l <sub>e</sub>	Α	65
690 V	l <sub>e</sub>	Α	23.8
AC-21A			
Rated operational current switch			
440 V	I <sub>e</sub>	Α	100
AC-23A	Ü		
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	l <sub>e</sub>	Α	100
400 V 415 V	l <sub>e</sub>	Α	100
500 V	l <sub>e</sub>	Α	96
690 V	le	Α	68
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	Α	100
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	50
Contacts		Quantity	1
48 V			
Rated operational current	l <sub>e</sub>	Α	50
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	Α	50
Contacts		Quantity	2
120 V			
Rated operational current	I <sub>e</sub>	Α	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		$\text{mm}^2$	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	2 x (1.5 - 6)
Terminal screw			M5
Tightening torque for terminal screw		Nm	3
Technical safety parameters: Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rating data for approved types			Diud values as per civ 150 15045-1, table Ci
Contacts			
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		Α	100
Notes			If used with neutral conductor: $I_U = max. 90 A$
Auxiliary contacts			
General Use	I <sub>U</sub>	Α	10
Pilot Duty			A 600 P 600
Switching capacity			***
Maximum motor rating			
Single-phase			
120 V AC		НР	5
200 V AC		НР	10
240 V AC		НР	15
Three-phase			
200 V AC		НР	20
240 V AC		HP	25
480 V AC		HP	60
600 V AC		НР	75
Short Circuit Current Rating		SCCR	
480 V AC 600 V AC		HP HP	60

Basic Rating	kA	10
max. Fuse	Α	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	Α	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 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])

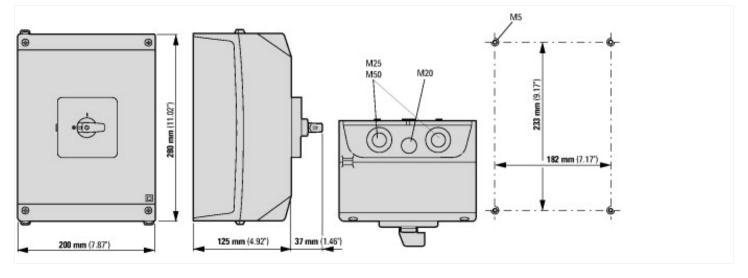
[AKI 0000 13])			
Version as main switch		No	
Version as maintenance-/service switch		No	
Version as safety switch		No	
Version as emergency stop installation		No	
Version as reversing switch		No	
Number of switches		1	
Max. rated operation voltage Ue AC	V	690	

Rated permanent current Iu         A         100           Rated permanent current at AC-23, 400 V         A         100           Rated permanent current at AC-21, 400 V         A         100           Rated permanent current at AC-23, 400 V         IAV         37           Rated operation power at AC-23, 400 V         IAV         55           Rated operation power at AC-23, 400 V         IAV         55           Switching power at AC-23, 400 V         IAV         5           Switching power at AC-23, 400 V         IAV         4           Number of auxiliary contacts as normally closed contact         IAV         A           Motor drive opti			
Rated permanent current at AC-23, 400 V         A         100           Rated permanent current at AC-21, 400 V         WW         37           Rated operation power at AC-3, 400 V         KW         55           Rated operation power at AC-23, 400 V         KW         55           Rated operation power at AC-23, 400 V         KW         55           Switching power at 40 V         KW         55           Conditioned rated short-circuit current Iq         KA         4           Number of poles         3         3           Number of poles         3         3           Number of auxiliary contacts as normally closed contact         0         0           Number of auxiliary contacts as change-over contact         0         No           Motor drive optional         No         No           Motor drive integrated         No         No           Voltage release optional         No         No           Device construction         Yes         Complete device in housing           Suitable for front mounting 4-hole         No         No           Suitable for front mounting centre         No         No           Suitable for intermediate mounting         No         No           Colour control element         No </td <td>Rated operating voltage</td> <td>V</td> <td>690 - 690</td>	Rated operating voltage	V	690 - 690
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 Icw         kA         2           Rated operation power at AC-23, 400 V         kW         55           Switching power at 400 V         kW         55           Conditioned rated short-circuit current Iq         kW         55           Number of poles         3         3           Number of auxiliary contacts as normally closed contact         0         0           Number of auxiliary contacts as normally open contact         0         0           Number of auxiliary contacts as change-over contact         0         No           Motor drive optional         No         No           Motor drive integrated         No         No           Voltage release optional         No         No           Suitable for ground mounting         Yes         Complete device in housing           Suitable for front mounting 4-hole         No         No           Suitable for front mounting centre         No         No           Suitable for intermediate mounting         No         No           Colour control element         No         No           Toggle	Rated permanent current lu	Α	100
Rated operation power at AC-3, 400 V         kM         37           Rated short-time withstand current Icw         kA         2           Rated operation power at AC-23, 400 V         kW         55           Switching power at 400 V         kM         55           Conditioned rated short-circuit current Iq         kA         4           Number of poles         Conditioned rated short-circuit current Iq         kA         4           Number of poles         Conditioned rated short-circuit current Iq         Conditioned rated short-circuit current Iq         A         4           Number of poles         Conditioned rated short-circuit current Iq         A         4         4           Number of auxiliary contacts as normally closed contact         Conditioned rated short-circuit current Iq         No         No         No           Motor drive integrated         No         N	Rated permanent current at AC-23, 400 V	Α	100
Rated short-time withstand current low kW 55 Switching power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 4 Number of poles 3 Number of poles 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally open contact 0 0 Number of auxiliary contacts as change-over contact 0 0 Number of auxiliary contacts as change-over contact 0 0 Notor drive optional 0 0 No Motor drive integrated 0 No Notor drive integrated 0 No Device construction 0 No Suitable for ground mounting 0 Yes Suitable for front mounting 4-hole 0 No Suitable for front mounting centre 0 No Suitable for front mounting centre 0 No Suitable for intermediate mounting 0 No Colour control element 0 No Suitable for intermediate mounting 0 No Suitab	Rated permanent current at AC-21, 400 V	Α	100
Rated operation power at AC-23, 400 V  Switching power at 400 V  Conditioned rated short-circuit current Iq  Number of poles  Number of poles  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Notor drive optional  Motor drive integrated  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting 4-hole  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side	Rated operation power at AC-3, 400 V	kW	37
Switching power at 400 V         kW         55           Conditioned rated short-circuit current Iq         kA         4           Number of poles         3         3           Number of auxiliary contacts as normally closed contact         0         0           Number of auxiliary contacts as normally open contact         0         0           Motor drive optional         No         0           Motor drive integrated         No         0           Voltage release optional         No         Complete device in housing           Suitable for ground mounting         Yes         No           Suitable for front mounting 4-hole         No         No           Suitable for front mounting centre         No         No           Suitable for intermediate mounting         No         No           Suitable for intermediate mounting         No         No           Suitable for intermediate mounting         No         No           Colour control element         Red         Toggle           Interlockable         No         Soriew connection           Type of electrical connection of main circuit         Soriew connection           Degree of protection (IP), front side         Fe5	Rated short-time withstand current lcw	kA	2
Conditioned rated short-circuit current Iq  Number of poles  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Motor drive optional  Motor drive integrated  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for distribution board installation  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side	Rated operation power at AC-23, 400 V	kW	55
Number of poles  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  No  Motor drive optional  Motor drive integrated  No  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting 4-hole  Suitable for distribution board installation  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side  No  Screw connection  Degree of protection (IP), front side	Switching power at 400 V	kW	55
Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  No  Motor drive optional  No  No  Voltage release optional  No  Complete device in housing  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for distribution board installation  No  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side  O  O  O  O  O  O  O  O  O  O  O  O  O	Conditioned rated short-circuit current Iq	kA	4
Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Motor drive optional  Motor drive integrated  No  No  No  No  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for distribution board installation  Suitable for distribution board installation  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side  Degree of protection (IP), front side	Number of poles		3
Number of auxiliary contacts as change-over contact  Motor drive optional  Motor drive integrated  No  No  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for firont mounting centre  Suitable for intermediate mounting  Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated M	Number of auxiliary contacts as normally open contact		0
Motor drive integrated  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for firont mounting centre  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side	Number of auxiliary contacts as change-over contact		0
Voltage release optional Device construction Complete device in housing Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Interlockable Degree of protection (IP), front side  No Complete device in housing Complete device in housing Complete device in housing Yes No No No No No Suitable for intermediate mounting No Suitable for intermediate mounting No Screw connection Screw connection IP65	Motor drive optional		No
Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for front mounting centre  No  Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of control element  No  Type of electrical connection of main circuit  Degree of protection (IP), front side  Complete device in housing  Yes  No  No  Red  Type  Type of electrical connection of main circuit  Degree of protection (IP), front side  Complete device in housing  Yes  No  No  Suitable for intermediate mounting  No  Screw connection  IP65	Motor drive integrated		No
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for distribution board installation No Suitable for intermediate mounting Colour control element Type of control element Type of control element Interlockable Interlockable Degree of protection (IP), front side  Yes  No  No  No  Suitable for ground mounting 4-hole No  Suitable for front mounting centre No  Suitable for distribution board installation No  Suitable for intermediate mounting No  Suitable for intermediate mounting No  Type of control element No  Screw connection IP65	Voltage release optional		No
Suitable for front mounting 4-hole  Suitable for front mounting centre  No  Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Interlockable  Interlockable  Degree of protection (IP), front side  No  No  No  No  No  No  No  No  Type of electrical connection of main circuit  Degree of protection (IP), front side	Device construction		Complete device in housing
Suitable for front mounting centre  Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Interlockable  Type of electrical connection of main circuit  Degree of protection (IP), front side  No  No  No  No  Red  Toggle  No  Screw connection  IP65	Suitable for ground mounting		Yes
Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Interlockable  Interlockable  Type of electrical connection of main circuit  Degree of protection (IP), front side  No  No  No  No  IP65	Suitable for front mounting 4-hole		No
Suitable for intermediate mounting  Colour control element  Red  Type of control element  Interlockable  Type of electrical connection of main circuit  Degree of protection (IP), front side  No  No  IP65	Suitable for front mounting centre		No
Colour control element Type of control element Toggle Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side Red Toggle No IP65	Suitable for distribution board installation		No
Type of control element Interlockable Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side  Toggle No Screw connection IP65	Suitable for intermediate mounting		No
Interlockable No Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP65	Colour control element		Red
Type of electrical connection of main circuit  Degree of protection (IP), front side  Screw connection  IP65	Type of control element		Toggle
Degree of protection (IP), front side	Interlockable		No
	Type of electrical connection of main circuit		Screw connection
	Degree of protection (IP), front side		IP65
Degree of protection (NEMA) Other	Degree of protection (NEMA)		Other

# Approvals

North America Certification	For UL/CSA certification order article number 255905

### **Dimensions**



## 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:	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801010Z2018_05.pdf
switch-disconnector	
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
Ordering form for SOND switches and SOND front plates(DE_EN)	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