F.T.-N

On-Off switch, 3 pole, 63 A, flush mounting

Part no. P3-63/E Article no. 026861





Similar to illustration

Similar to illustration			
Delivery program			
Product range			On-Off switch
Part group reference			P3
			with black thumb grip and front plate
Information about equipment supplied			Auxiliary contact or neutral conductor fitted by user.
Number of poles			3 pole
Auxiliary contacts			
\\		N/0	0
7		N/C	0
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
Front plate no.			FS 908
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	30
Rated uninterrupted current	I _u	Α	63

Technical data General

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		
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	шр	g	15
Mounting position		9	As required
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Contacts			3
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/0	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	Iu	Α	63
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 l _e	2
AB 40 % DF			
		x l _e	1.6
AB 60 % DF		x I _e	1.3
Short-circuit rating			
Fuse		A gG/gL	
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	1260
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		Λ	000
cos φ rated making capacity as per IEC 60947-3		A	800
Rated breaking capacity cos φ to IEC 60947-3		A	212
230 V		A	640
400/415 V		A	600 E00
500 V		A	590
690 V		A	340
Safe isolation to EN 61140		V AC	440
between the contacts		W	440
Current heat loss per contact at I _e			4.5
Lifespan, mechanical	Operations	x 10 ⁶	> 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	P	kW	30
690 V	P	kW	30
Rated operational current motor load switch			
230 V	l _e	Α	51
400V 415 V	l _e	Α	55
500 V	I _e	Α	44
690 V	l _e	Α	22.1
AC-21A			
Rated operational current switch			
440 V	I _e	A	63
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	18.5

400 V 415 V	Р	kW	30
500 V	P	kW	45
	P		
690 V	۲	kW	55
Rated operational current motor load switch			
230 V	l _e	Α	63
400 V 415 V	le	Α	63
500 V	l _e	Α	63
690 V	l _e	Α	63
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l _e	Α	63
Voltage per contact pair in series		٧	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I _e	Α	50
Contacts		Quantity	1
48 V		22.16.7	
Rated operational current	I _e	A	50
	'e	Quantity	
Contacts		uuantity	2
60 V			
Rated operational current	I _e	Α	50
Contacts		Quantity	2
120 V			
Rated operational current	l _e	Α	25
Contacts		Quantity	3
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	$< 10^{-5}$, < 1 fault in 100000 operations
Torminal conscision	probability		
Terminal capacities Solid or stranded		2	1 x (2 5 - 35)
Solid or stranded		mm ²	1 x (2,5 - 35) 2 x (2,5 - 10)
-		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25)
Solid or stranded Flexible with ferrules to DIN 46228			2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6)
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque			2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6)
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters:		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts		mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage	U _e	mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max.	U _e	mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max. Main conducting paths		mm ² Nm	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max. Main conducting paths General use	U _e	mm ²	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max. Main conducting paths General use Auxiliary contacts	lu	mm ² Nm V AC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 60
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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		mm ² Nm	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque Technical safety parameters: Notes Rating data for approved types Contacts Rated operational voltage Rated uninterrupted current max. Main conducting paths General use Auxiliary contacts	lu	mm ² Nm V AC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm ² Nm V AC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm ² Nm V AC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm ² Nm V AC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm ² Nm VAC	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm VAC A	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm VAC A HP	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600 3 7.5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm VAC A	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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 240 V AC Three-phase	lu	mm² Nm VAC A HP HP	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600 3 7.5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm VAC A A HP HP HP	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600 3 7.5
Solid or stranded Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm V AC A A HP HP HP	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600 3 7.5 10
Flexible with ferrules to DIN 46228 Terminal screw Max. tightening torque 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	lu	mm² Nm VAC A A HP HP HP	2 x (2,5 - 10) 1 x (1.5 - 25) 2 x (1.5 - 6) M5 3 B10 _d values as per EN ISO 13849-1, table C1 600 10 A 600 P 600 3 7.5

Short Circuit Current Rating	SCCR	
Basic Rating	kA	10
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	Α	63
Heat dissipation per pole, current-dependent	P _{vid}	W	4.5
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. $\label{eq:specifications}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. $\label{eq:continuous}$

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])

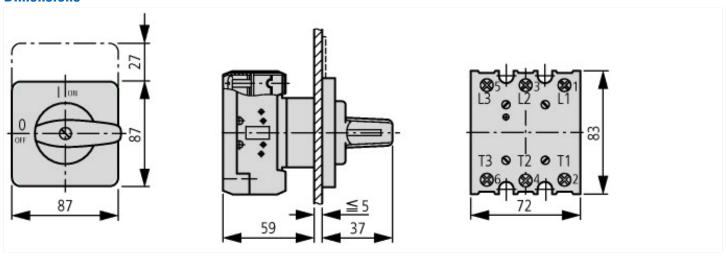
[AKFU60UTU])			
Version as main switch		No	
Version as maintenance-/service switch		No	
Version as safety switch		No	
Version as emergency stop installation		No	
Version as reversing switch		No	
Max. rated operation voltage Ue AC	V	690	

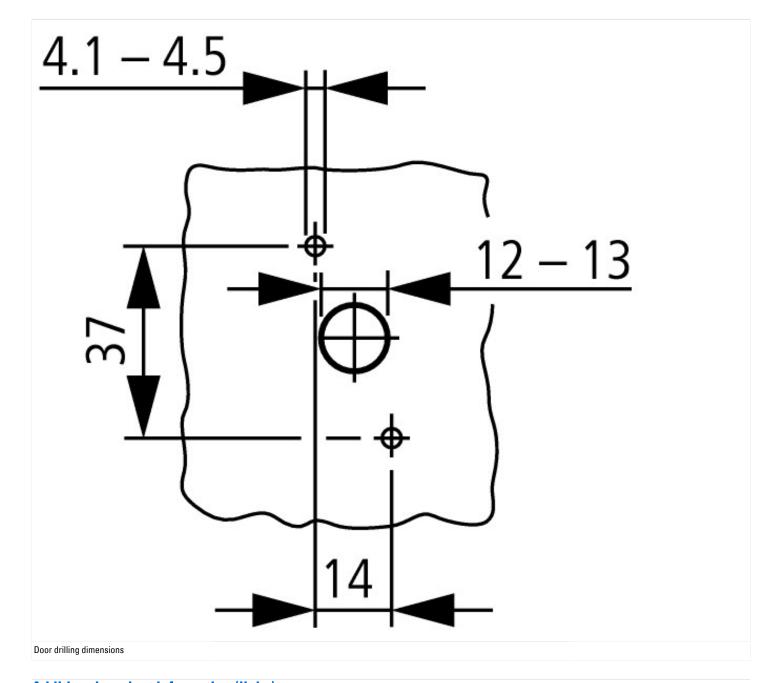
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	63
Rated permanent current at AC-21, 400 V	А	63
Rated operation power at AC-3, 400 V	kW	30
Rated short-time withstand current lcw	kA	1.26
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	30
Conditioned rated short-circuit 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		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		Black
Type of control element		Toggle
Interlockable		No
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





Additional product information (links)

(
IL03802002Z (AWA1150-1690) Switch-Disconnectors for flush mounting		
IL03802002Z (AWA1150-1690) Switch- Disconnectors for flush mounting	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03802002Z2016_07.pdf	
Form for ordering non-standard front plates	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=4.87	
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	