

4BR

4BR

- Characteristics
- choice of IP54 or IP67 sealed versions
 - precise movements and exceptional repeat accuracy
 - robust metal housing
 - flying lead version available
 - long overtravel

Rating 125 VAC, 10 A max.

Dimensions (mm) 53,1 × 20,6 × 29,2

Actuator ■ plunger

Approvals UL, CSA



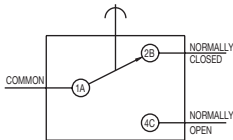
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Sealing	Operating pos. (mm)	Operating pos. (in)	Terminal	Circuit	Actuator	Contacts	Electrical rating
4BR	7,2	26,00	IP54	39,3	1,550	Screw	CO	Plunger	Ag	Up to 125 VAC, 10 A
4BR510	7,2	26,00	IP67	39,3	1,550	Screw	CO	Plunger	Ag	Up to 125 VAC, 10 A
4BRSH	7.2	26,00	IP67	39,3	1,550	Pre-wired	CO	Plunger	Ag	Up to 125 VAC, 10 A

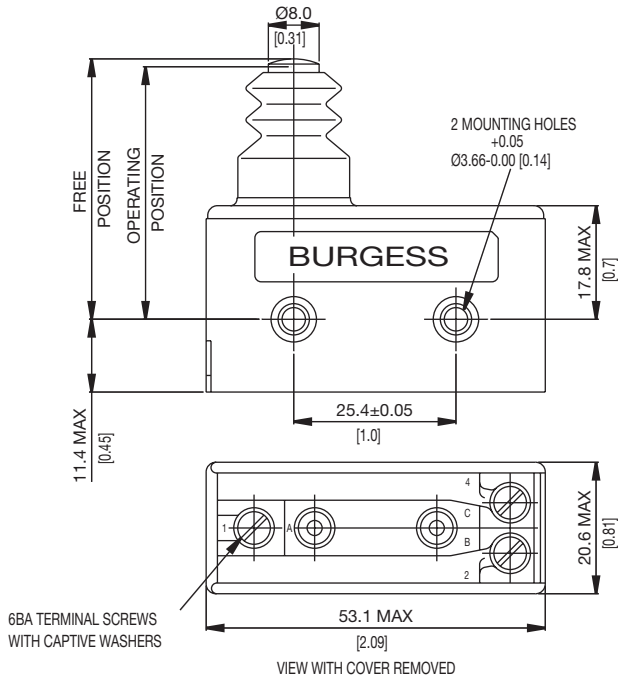
Specifications

Housing	Zinc based alloy
Base Plate	Phenolic
Plunger	Stainless steel
Cowl	Silicon rubber
Mechanism	Single pole change-over
Contacts	Silver
Terminals	Removable screw terminals, insulated cover plate
Temperature	-10°C to +85°C
Mechanical life	10 ⁶ cycles minimum (impact free actuation)
Protection	4BR/510 IP67 / 4BR IP54 (enclosure)
Mounting	Side mounting

Circuit diagram



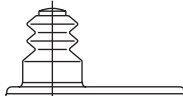
Dimensions



Recommended maximum electrical ratings

Voltage (max)	Resistive load (A)	Inductive load	Horsepower	Approval
250 VAC	5 (0.75 pf)	5	-	CSA 22.2 No. 55 - 6,000 operations
125 VAC	10 (0.75 pf)	-	-	CSA 22.2 No. 55 - 6,000 operations
250 VAC	-	-	1/4 HP (0.45 pf)	CSA 22.2 No. 55 - 6,000 operations
125 VAC	-	-	1/8 HP (0.45 pf)	CSA 22.2 No. 55 - 6,000 operations
0 - 15 VDC	10	-	-	General rating - 50,000 operations
15 - 30 VDC	5	-	-	General rating - 50,000 operations

Operating Characteristics

Actuator	Reference	Actuating Force		Release Force		Free Position		Operating Position		Movement Differential		Over travel	
		Maximum (N)	(ozf)	Minimum (N)	(ozf)	Maximum (mm)	(in)	(mm)	(in)	Maximum (mm)	(in)	(mm)	(in)
Plunger 	4BR	7,2	26,00	1,7	6	40,8	1,6	39,3 ± 0,4	1,55 ± 0,016	0,08	0,003	4,6	0,18
	4BR510	7,2	26,00	1,7	6	40,8	1,6	39,3 ± 0,4	1,55 ± 0,016	0,08	0,003	4,6	0,18
	4BRSH	7,2	26,00	1,7	6	40,8	1,6	39,3 ± 0,4	1,55 ± 0,016	0,08	0,003	4,6	0,18

Ordering Reference

Basic type 4BR Example: 4BR | SH

Environmental sealing SH Sealed terminals with horizontal exiting 500 mm cables IP67
 103 Sealed to IP54
 510 Sealed to IP67

Special Features /□□□□ Burgess specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact us.

3BR

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- Characteristics
- choice of IP54 or IP67 sealed versions
 - precise movements
 - screw terminals
 - pre-wired option
 - long overtravel

Rating 250 VAC, 10 A max.

Dimensions (mm) 53.1 × 20.6 × 30.8

Actuator ■ plunger

Approvals UL, CSA



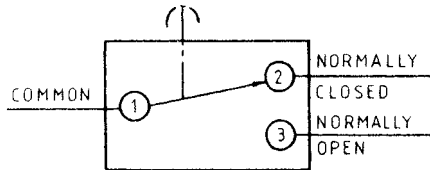
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Sealing	Operating pos. (mm)	Operating pos. (in)	Terminal	Circuit	Actuator	Contacts	Electrical rating
3BR103	7,2	26,00	IP54	39,3	1,55	Screw	CO	Plunger	Ag	Up to 125 VAC, 10 A
3BR510	7,2	26,00	IP67	39,3	1,55	Screw	CO	Plunger	Ag	Up to 125 VAC, 10 A

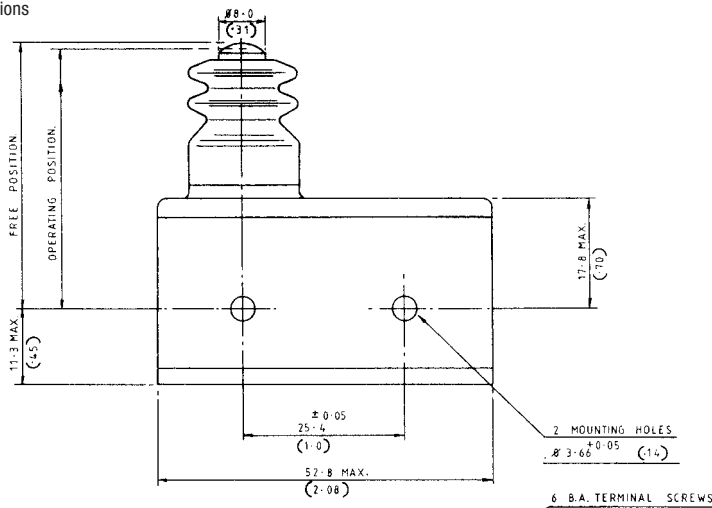
Specifications

Housing	Phenolic
Plunger	Stainless steel
Cowl	Silicone rubber
Mechanism	Single pole change-over
Contacts	Silver
Terminals	Screw terminals with captive washers
Temperature	-10°C to +85°C
Mechanical life	10 ⁶ cycles minimum (impact free actuation)
Protection	3BR / 510 IP67 / 3BR103 IP54 (enclosure)
Mounting	Side mounting

Circuit diagram



Dimensions



Recommended maximum electrical ratings

Voltage (max)	Load (A)	Horsepower	Approval
250 VAC	5 (0.75 pf)	-	CSA 22.2 No. 55 - 6,000 operations
125 VAC	10 (0.75 pf)	-	CSA 22.2 No. 55 - 6,000 operations
250 VAC	-	1/4 HP (0.45 pf)	CSA 22.2 No. 55 - 6,000 operations
125 VAC	-	1/4 HP (0.45 pf)	CSA 22.2 No. 55 - 6,000 operations
0 - 15 VDC	10	-	General rating - 50,000 operations
15 - 30 VDC	5	-	General rating - 50,000 operations

Operating Characteristics

Actuator	Reference	Actuating Force Maximum		Release Force Minimum		Free Position Maximum		Operating Position		Movement Differential Maximum		Overtravel	
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
Plunger	3BR103	7,2	26,00	1,7	6	40,8	1,6	39,3 ± 0.4	1,55 ± 0.016	0,08	0,003	4,6	0,18

Ordering Reference

Basic type	3BR	Example: 3BR SH
Environmental sealing	SH 103 510	Sealed terminals with horizontal exiting 500 mm cables IP67 Sealed to IP54 Sealed to IP67
Special Features	/□□□□	Burgess specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact www.saia-burgess.com or your local SB outlet.

KB5

KB5

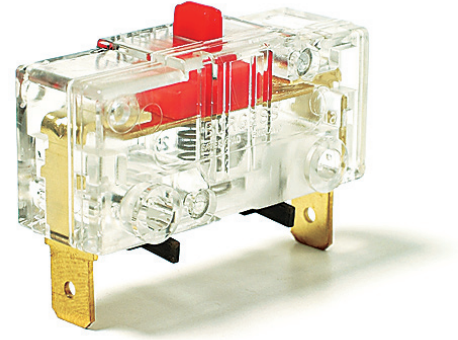
- Characteristics
- positive-action forced double break switching
 - > 3 mm contact gap at full travel
 - high electrical rating
 - faston terminals

Rating Up to 250 VAC, 20 A

Dimensions (mm) 41 × 19,5 × 15,5

- Actuator
- plunger
 - plain lever
 - roller levers

Approvals ULS, CSA



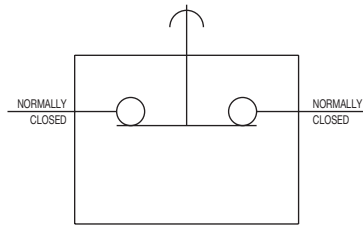
Preferred Range

Ordering Reference	Actuating Force (N) (ozf)		Sealing	Operating pos (mm) (in)		Terminal	Circuit	Actuator	Contacts	Electrical rating
KB5FULS	3.00	10.0	IP40	16.8	0.66	Faston	NC	Plunger	Ag	Up to 250 VAC, 20 A
KB5FKULS	2.25	8.0	IP40	19.2	0.76	Faston	NC	Plain lever	Ag	Up to 250 VAC, 20 A
KB5FKRULS	2.25	8.0	IP40	31.0	1.22	Faston	NC	Roller lever	Ag	Up to 250 VAC, 20 A

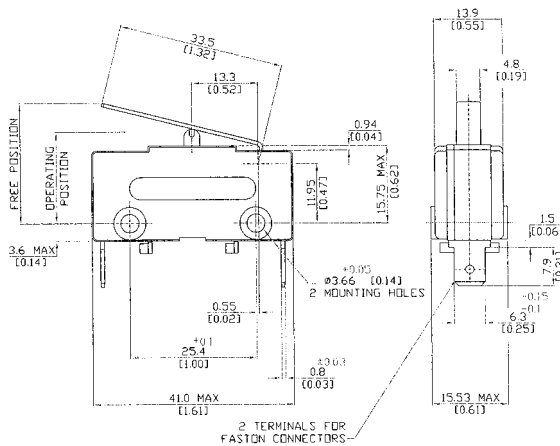
Specifications

Housing	Polycarbonate
Plunger	Nylon
Mechanism	Single pole, double break, positive action
Functions	Normally closed
Contacts	Fixed – silver, Moving – silver cadmium oxide
Terminals	6.3 mm (0.25 in) faston, brass
Temperature range	-40°C to +85°C
Mechanical life	10 ⁷ cycles minimum, impact-free actuation
Protection	IP40 (enclosure)
Mounting	Side mounting
Actuators	Plain lever - stainless steel, roller lever - stainless steel, nylon roller
Approvals	UL and CSA

Circuit diagram



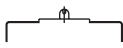
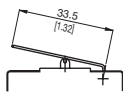
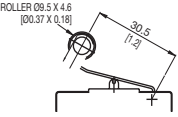
Dimensions



Recommended maximum electrical ratings

Voltage (max)	Resistive load (A)	Inductive load	Horsepower	Approval
250 VAC	20 (0.75 pf)	-	-	ULS 1054/CSA 22.2 No. 55 - 100,000 operations
250 VAC	-	-	2 HP	ULS 1054 - Horsepower - 6,000 operations
125 VAC	-	-	1 HP	ULS 1054 - Horsepower - 6,000 operations
0 - 15 VDC	15	-	-	General rating - 50,000 operations
15 - 30 VDC	10	-	-	General rating - 50,000 operations

Operating Characteristics

Actuator	Reference	Actuating Force	Operation Position	Free Position Maximum	Contact gap at total travel					
		(N)	(ozf)	(mm)	Minimum (in)	(mm)	(in)	(mm)	(in)	(mm)
Plunger 	KB5FULS	3,00	10,8	16,8	0,66	19,3	0,76		2 T 3.0	2 T 0.12
1 At contact separation of 2 × 1,5 mm										
K Lever 	KB5FKULS	2,25	8,0	19,2	0,76	26,0	1,02		2 T 3.0	2 T 0.12
KR Lever 	KB5FKRULS	2,25	8,0	31,0	1,22	36,5	1,40		2 T 3.0	2 T 0.12

Recommended minimum contact separation 2 × 1,5 mm (2 × 0,6) indicated when groove in plunger lines up with case. Operating characteristics are specified from mounting holes.

Total travel: Plunger can be depressed flush with housing. The housing should not be used as an end stop.

Ordering Reference

Basic type	KB5	Example: KB5	F	K	ULS
Terminals	F	Faston 6.3 × 0.8 mm			
Actuators	No symbol, without lever K Plain lever 33.5 mm KR Roller lever 30.5 mm				
Approvals	ULS	UL 100 k operations and CSA approved			
Special Features	/□□□□	Burgess specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact us.			

V9N

- Characteristics
- sealed (IP67)
 - metal housed
 - screw terminals or flying leads
 - pre-wired option

Rating 250 VAC, 10 A max.

Dimensions (mm) 42 × 24.5 × 16

- Actuator
- plunger
 - plain levers
 - reverse action lever
 - roller lever

Approvals UL and CSA



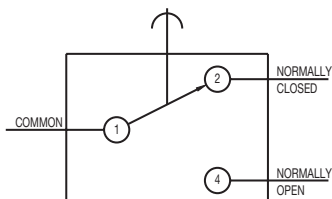
Preferred Range

Ordering Reference	Actuating Force (N) (ozf)		Sealing	Operating pos. (mm) (in)		Terminal	Circuit	Actuator	Contacts	Electrical rating
V9N	5,5	19,80	IP67	21,3	0,840	M3 screw	CO	Plunger	Ag	Up to 250 VAC, 10 A
V9NLR	6,0	21,60	IP67	27,5	1,080	M3 screw	CO	Roller lever - short	Ag	Up to 250 VAC, 10 A
V9NLR1	4,5	16,20	IP67	34,5	1,360	M3 screw	CO	Roller lever - long	Ag	Up to 250 VAC, 10 A
V9NL	3,0	10,80	IP67	24,7	0,970	M3 screw	CO	Plain lever	Ag	Up to 250 VAC, 10 A

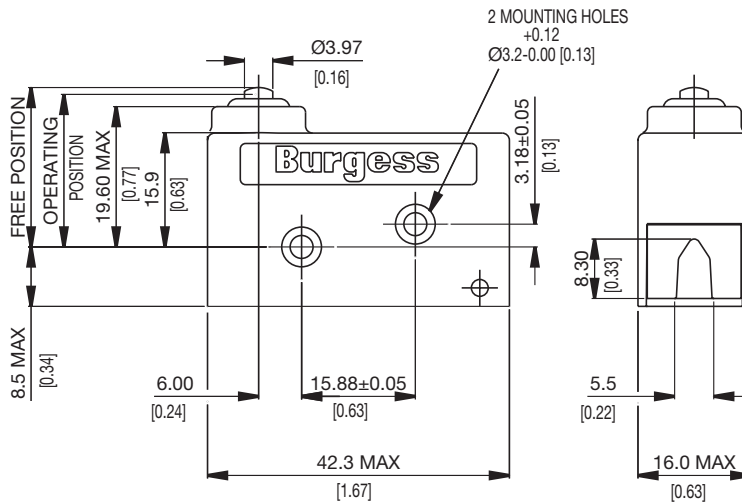
Specifications

Housing	Zinc diecasting
Plunger	Acetal
Mechanism	Snap-action, single pole
Functions	Change-over
Cowl	Silicon rubber
Contacts	Silver
Terminals	M3 screws with captive washers or pre-wired
Temperature range	-40°C to +125°C, switch only -10°C to +85°C pre-wired and roller levers
Mechanical life	10 ⁶ cycles minimum, impact-free actuation
Protection	IP67 (enclosure)
Mounting	Side mounting
Actuators	Plain levers - stainless steel, roller levers - stainless steel, nylon roller

Circuit diagram




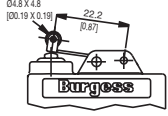
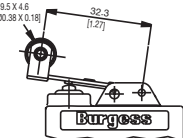
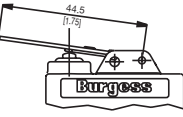
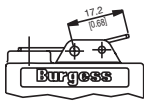
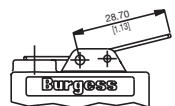
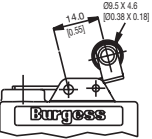
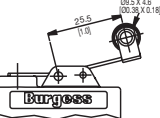
Dimensions



Recommended maximum electrical ratings

Voltage (max)	Load (A)	Approval
250 VAC	10 (0.75 pf)	UL 1054/CSA 22.2 No. 55 - 6,000 operations (85°C)
0 - 15 VDC	10	General rating - 50,000 operations (85°C)
15 - 30 VDC	10	General rating - 50,000 operations (85°C)

Operating Characteristics

Actuator	Reference	Actuating Force		Release Force		Free Position		Operating Position		Movement Differential		Over travel Maximum	
		Maximum (N)	(ozf)	Minimum (N)	(ozf)	Maximum (mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
Plunger 	V9N	5,5	19,8	1,0	3,6	22,6	0,89	21,3 ± 0,3	0,84 ± 0,012	0,35	0,014	*	
Roller lever - short 	V9NLR	6,0	21,6	1,3	4,7	31,0	1,22	27,5 ± 0,5	1,08 ± 0,02	0,35	0,014	*	
Roller lever - long 	V9NLR1	4,5	16,2	0,8	2,9	39,0	1,54	34,5 ± 0,7	1,36 ± 0,028	0,60	0,024	*	
Plain lever 	V9NLR	3,0	10,8	0,6	2,1	31,0	1,22	24,7 ± 01.0	0,97 ± 0,039	0,70	0,028	*	
Reverse action lever - short 	V9NM	7,5	27,0	1,5	5,4	26,0	1,02	22,4 ± 0,5	0,88 ± 0,02	0,50	0,020	3,50	0,137
Reverse action lever - long 	V9NML	4,5	16,2	1,0	3,6	29,0	1,14	23,6 ± 01.0	0,93 ± 0,039	1,20	0,047	6,00	0,236
Reverse action roller lever - short 	V9NMR	9,5	34,2	1,5	5,4	36,0	1,42	32,9 ± 0,5	1,295 ± 0,02	0,45	0,018	2,00	0,079
Reverse action roller lever - long 	V9NMLR	5,0	18,0	1,0	3,6	39,5	1,56	34,0 ± 01.0	1,34 ± 0,039	1,00	0,039	5,50	0,216

Operating characteristics are specified from lower mounting hole

* Plunger can be depressed flush with housing. The housing should not be used as an end stop.

Ordering Reference

Basic type	V9N	Example: V9N	L	H
Actuators	No symbol, without lever			
L	Plain lever 44.5 mm			
LR	Roller lever 22.2 mm			
LR1	Roller lever 32.3 mm			
M	Reverse action lever 187.2 mm			
ML	Reverse action lever 28.7 mm			
MR	Reverse action roller lever 14.0 mm			
MLR	Reverse action roller lever 25.5 mm			
Terminals	No symbol, unwired			
H	Horizontal pre-wired cable			
V	Vertical pre-wired cable			
Pre-wired with Terminals H + V	No symbol, 1 m cable			
Special Features	/□□□□	Burgess specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact us.		

XPC

Characteristics	<ul style="list-style-type: none"> ■ double break switching ■ > 3 mm contact gap ■ long overtravel ■ faston terminals
Rating	120 VAC, 6 A 240 VAC, 3 A
Dimensions (mm)	30 × 30 × 13
Actuator	■ plunger
Approvals	CE



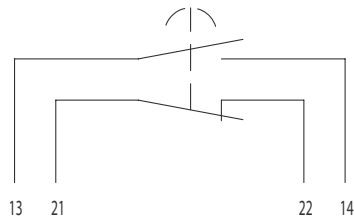
Preferred Range

Ordering Reference	Actuating Force (N)	Operating position (mm)	Terminal	Circuit	Actuator	Contacts	Electrical rating
XPC24	6,0	13,5	Faston	CO	Straight plunger	AgSnO ₂	Up to 120 VAC, 6 A

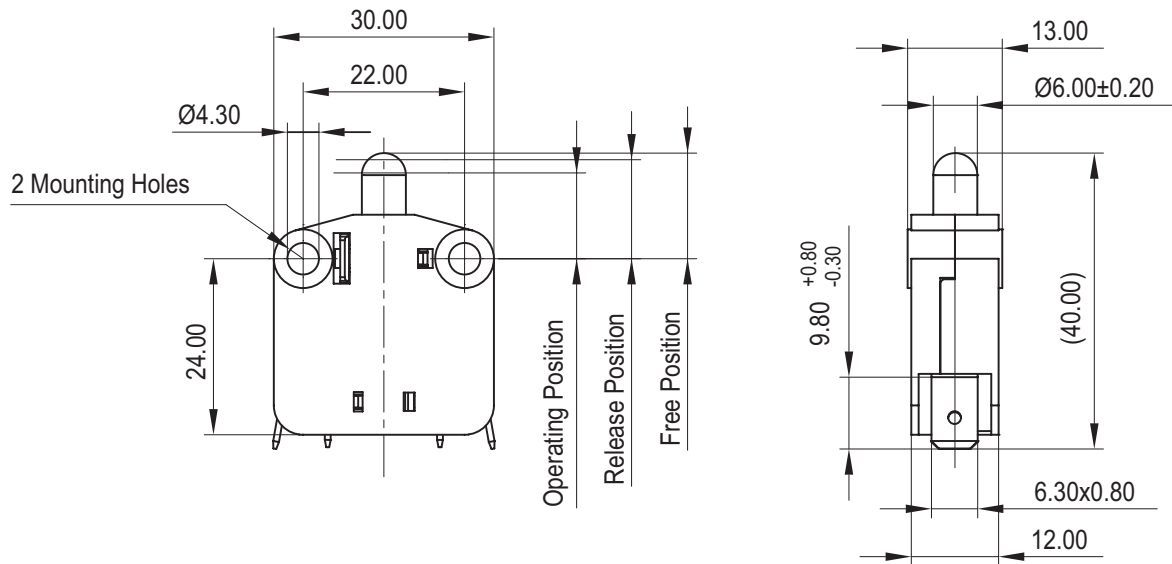
Specifications

Housing	Flame-retardant glass-fibre reinforced nylon
Plunger	Flame-retardant glass-fibre reinforced nylon
Mechanism	Snap-action, coil spring mechanism with stainless steel spring
Contacts	Silver
Terminals	6.3 mm (x0.8) faston brass
Temperature range °C	-20°C to +85°C
Protection	IP40 (enclosure)
Mounting	Screw mounting
Actuators	Plunger

Circuit diagram



Dimensions

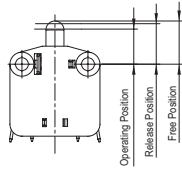


Recommended maximum electrical ratings

Voltage (max)	(A)
240 VAC	3
120 VAC	6
120 VDC	2,2
240 VDC	1,1

Operating Characteristics

Actuator	Reference	Actuating Force Maximum (N)	Release Force Minimum (N)	Free Position Maximum (mm)	Operating Position (mm)	Release Position (mm)	Operating travel Minimum (mm)
Plunger	XPC24	6,0	3,5 ± 0,5	14,5	11,7 ± 0,5	13,5 ± 0,5	6,0



Ordering Reference

Type XPC24