

Position Switches Series 8070

- Explosion protection to
 - CENELEC
 - IEC
- For use in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
- Enclosures have protection class "increased safety"
- Dimensions and functional measurements to EN 50041
- Replaceable contact elements in flameproof enclosure
- Positive opening contacts
- Category 1 safety position switch with:
 - extended plunger
 - roller plunger
 - roller lever plunger
 - roller lever
 - adjustable roller lever plunger
 - angled roller lever plunger
 - actuating rod
- All attachments can be displaced through $4 \times 90^\circ$
- Contact elements with snap-action contact, with slow-action contact or overlapping slow-action contact
- Design also possible with cable already attached



01618E00

STAHL

Position switches are used to monitor the position of moving parts of machines and plant.








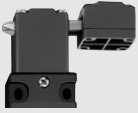
Can be used in safety circuits, as the device satisfies EN 60 947-5-1/DIN VDE 0660 part 200, and the opening contacts are positive opening. The series 8070 position switch with positive opening contacts has been tested to the professional association test standard GS-ET 15 of the German Employer Liability Insurance Association, and is thus licensed for personnel protection functions.

Category 1 safety position switches have contact and actuating element in a single constructional and functional unit.

As a result of the galvanic isolation of the moving contacts, the position switch is suitable for switching various potentials.

Zones 1 & 2, 21 & 22

Selection table

Version	Actuator	Ordering code	Weight kg
 03788E00	Extended plunger Plunger of stainless steel	8070/1-.-S	0,155
 03789E00	Roller plunger Roller of moulded plastic	8070/1-.-RS	0,154
 04550E00	Roller lever, Form E Roller of moulded plastic	8070/1-.-AR	0,155
 03790E00	Roller lever, Form A Roller of moulded plastic; for minimum force 0,3 Nm	8070/1-.-HR311	0,221
	Roller lever, Form A Roller of moulded plastic; for minimum force 0,1 Nm	8070/1-.-HR311NR	0,221
 04551E00	Adjustable roller lever Roller of moulded plastic; Roller of stainless steel	8070/1-.-HV	0,269
 09380E00	Actuating rod Rod of moulded plastic No positively opening operation, not suitable for safety circuits!	8070/1-.-HH-K	0,237
 04552E00	Spring-rod actuator Spring of stainless steel Only for use with snap-action contact! No positively opening operation, not suitable for safety circuits!	8070/1-2-F2	0,175
 04553E00	Safety switch Separate actuator of moulded plastic	8070/1-1-ZB	0,208
	Safety switch Separate actuator of moulded plastic	8070/1-3-ZB	0,208

Add. to ordering code




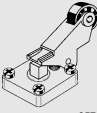

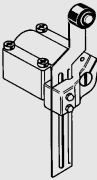
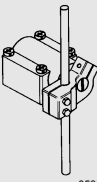
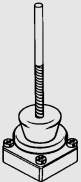

Switching function	1 NC + 1 NO	Slow-action contact	8070/1-1-...
	1 NC + 1 NO	Snap-action contact	8070/1-2-...
	2 NC	Slow-action contact	8070/1-3-...
	2 NO	Slow-action contact	8070/1-4-...
	1 NC + 1 NO	Slow-action contact, overlapping	8070/1-5-...
		Design with cable	8070/1-.-.-.-K

Note: Actuating heads enclosed are not mounted.

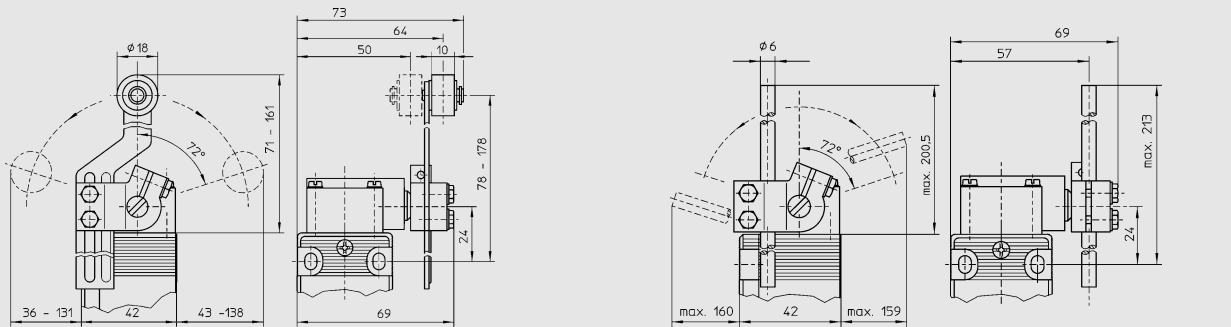


Technical Data																
Explosion protection																
Gas explosion protection	II 2 G EEx ed IIC T6															
Dust explosion protection	II 2 D IP65 T80 °C															
Certificates																
Gas explosion protection	PTB 01 ATEX 1053															
Dust explosion protection	LCIE 03 ATEX 6308															
Other certificates	IECEX															
Rated operational voltage U_e	<table border="1"> <tr> <td>8070/1-1</td> <td>8070/1-3</td> </tr> <tr> <td>8070/1-2</td> <td>8070/1-4</td> </tr> <tr> <td>8070/1-5</td> <td></td> </tr> </table>	8070/1-1	8070/1-3	8070/1-2	8070/1-4	8070/1-5										
8070/1-1	8070/1-3															
8070/1-2	8070/1-4															
8070/1-5																
	<table border="1"> <tr> <td>max. 500 V</td> <td>max. 400 V</td> </tr> <tr> <td>max. 250 V</td> <td>max. 250 V</td> </tr> <tr> <td>250 V</td> <td>250 V</td> </tr> </table>	max. 500 V	max. 400 V	max. 250 V	max. 250 V	250 V	250 V									
max. 500 V	max. 400 V															
max. 250 V	max. 250 V															
250 V	250 V															
Rated working current I_e	max. 10 A															
Switching capacity	<table border="1"> <tr> <td>AC 12</td> <td>AC 15</td> <td>DC 12</td> </tr> <tr> <td>8070/1-1 8070/1-2 8070/1-5</td> <td>8070/1-3 8070/1-4</td> <td>8070/1-3 8070/1-4 8070/1-</td> </tr> <tr> <td>max. 250 V max. 500 V **) max. 10 A max. 5000 VA</td> <td>max. 250 V max. 400 V **) max. 10 A max. 4000 VA</td> <td>max. 250 V max. 500 V **) max. 10 A max. 1000 VA</td> </tr> <tr> <td></td> <td></td> <td>max. 250 V max. 400 V **) max. 10 A max. 1000 VA</td> </tr> <tr> <td></td> <td></td> <td>max. 125 V max. 10 A max. 400 W</td> </tr> </table>	AC 12	AC 15	DC 12	8070/1-1 8070/1-2 8070/1-5	8070/1-3 8070/1-4	8070/1-3 8070/1-4 8070/1-	max. 250 V max. 500 V **) max. 10 A max. 5000 VA	max. 250 V max. 400 V **) max. 10 A max. 4000 VA	max. 250 V max. 500 V **) max. 10 A max. 1000 VA			max. 250 V max. 400 V **) max. 10 A max. 1000 VA			max. 125 V max. 10 A max. 400 W
AC 12	AC 15	DC 12														
8070/1-1 8070/1-2 8070/1-5	8070/1-3 8070/1-4	8070/1-3 8070/1-4 8070/1-														
max. 250 V max. 500 V **) max. 10 A max. 5000 VA	max. 250 V max. 400 V **) max. 10 A max. 4000 VA	max. 250 V max. 500 V **) max. 10 A max. 1000 VA														
		max. 250 V max. 400 V **) max. 10 A max. 1000 VA														
		max. 125 V max. 10 A max. 400 W														
Rated isolation voltage	550 V															
Rated impulse withstand voltage	6 kV															
Back-up fuse	10 A gL / gG															
Contact block																
Version	<p>Slow-action contact Snap-action contact Slow-action contact, overlapping</p> <p>8070/1-1 8070/1-2 8070/1-5</p> <p>8070/1-3</p> <p>8070/1-4</p> <p>Attention: Functions positive opening ⊖ and operator safety ⊕ depend on actuating head used</p>															
Contact arrangement	2-pole, galvanically isolated, with double break action															
Clearance between open contacts	≥ 1,5 mm (Clearance distance ≥ 3 mm)															
Contacts	Silver-Nickel															
Life																
mechanical	max. 10 ⁶ Operations															
electrical	max. 10 ⁶ Operations															
Enclosure contact block	Polyamide, glass fibre-reinforced															
Ambient temperature	- 25 °C ... + 70 °C															
Degree of protection	IP 65															
Enclosure	Polyamide, glass fibre-reinforced, black															
Cable glands	Cable entry 8161, M 20 x 1,5															
Connection	<p>With cable entry 8161: For sheathed cable 4 x 2,5 mm², Ø 6 - 13 mm; recommended 4 x 1,5 mm²</p> <p>With mounted cable: Sheathed cable HK-SO-X05VV-F-OZ 4 x 1,5 mm², cable length 6 m</p>															
Terminals	1 x 2,5 mm ² (solid) or 2 x 1 mm ² (flexible)															
Mechanical shock resistance	<p>Snap-action contact: 2 g</p> <p>Slow-action contact: 20 g</p>															

Accessories and spare parts

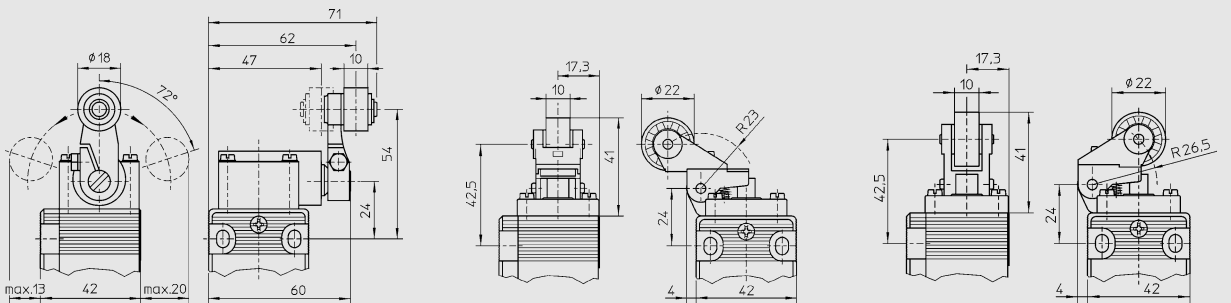
Designation	Illustration	Ordering code	Weight kg
Actuating head	 05652E00	Extended plunger 8070/1- -S	8070001170 0,044
	 05653E00	Roller plunger 8070/1- -RS	8070002170 0,042
	 05653E00	Roller lever, Form E 8070/1- -AR	8070003170 0,046
	 05706E00	Angled roller lever, Form A depends on lever mounting	---
	 05655E00	Roller lever, Form A Roller of moulded plastic	8070004170 0,099
		Roller lever, Form A Roller of moulded plastic	8070012170
	 05656E00	Adjustable roller lever 8070/1- -HV	8070005170 0,148
	 05657E00	Actuating rod 8070/1- -HH-K	8070006170 0,162
Contact block	 05658E00	Spring-rod actuator 8070/1- 2 -F2 Only for use with snap-action contact!	8070007170 0,059
	 10809E00	1 NC + 1 NO Slow-action contact 8070/1-1	8080010600 0,025
		1 NC + 1 NO Snap-action contact with spring 8070/1-2	8080011600 0,025
		2 NC Slow-action contact 8070/1-3	8080013600 0,025
		2 NO Slow-action contact 8070/1-4	8080014600 0,025
1 NC + 1 NO Slow-action contact, overlapping 8070/1-5		8080015600 0,025	

Dimension drawings (all dimensions in mm) - subject to alterations



8070/1-.-HV
Adjustable roller lever

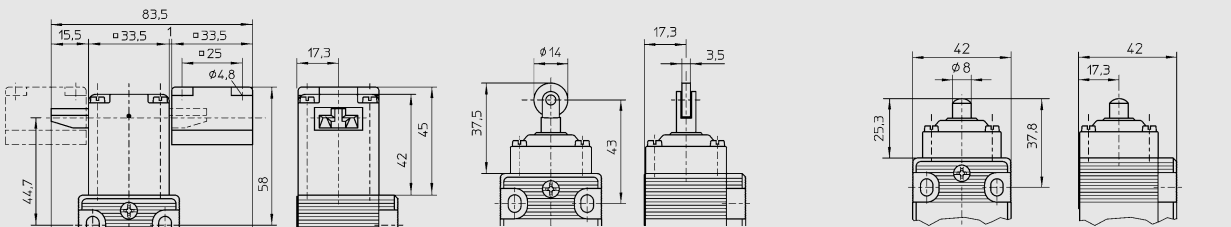
8070/1-.-HH-K
Actuating rod



8070/1-.-HR311..
Roller lever, Form A

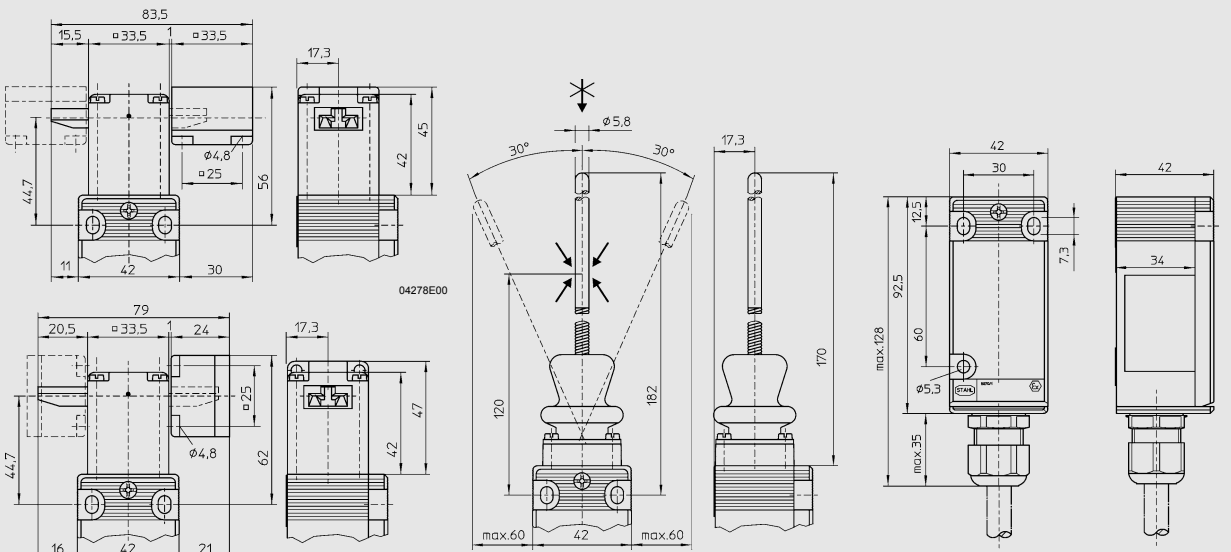
8070/1-.-AR
Angled roller lever

8070/1-.-AR
Roller lever, Form E



8070/1-.-RS
Roller plunger

8070/1-.-S
Extended plunger



8070/1-.-ZB
Safety switch with separate actuator

8070/1-2-F2
Spring rod actuator

8070/1-.-OV
Position switch without drive

