



Selection table for safety switches SGP

Version									
Standard		TW							
		One actuating head made of metal							
		TWIN, 2 actuating heads made of metal							
Connection									
		M		SR11					
				Thread M20 x 1.5 for cable gland					
				Plug connector; 11 pin + PE					
Switching element									
				Four contacts					
				2 NC ⊖ + 2 NO,					
				3 NC ⊖ + 1 NO,					
				4 NC ⊖					
									
Standard	Version	Standard	TW	Connection	M	SR11	Switching element	Four contacts	Page
●				●			●		36
●						●	●		37
		●		●			●		38





Safety switch SGP

- ▶ Actuating head made of metal
- ▶ Cable entry M20 x 1.5
- ▶ Plug connector optional



Approach direction



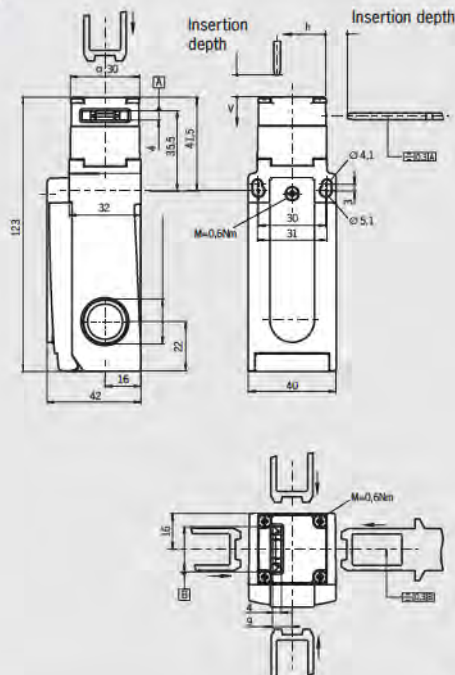
Horizontal and vertical
Can be adjusted in 90° steps

Switching elements

- ▶ **2121** Slow-action switching element
4 NC ⊖
- ▶ **2131** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

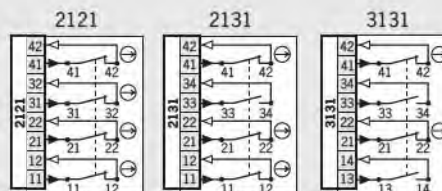
Dimension drawing



Please order
actuator separately
(see pages 80-82)

For cable glands see page 89

Wiring diagrams Actuator inserted



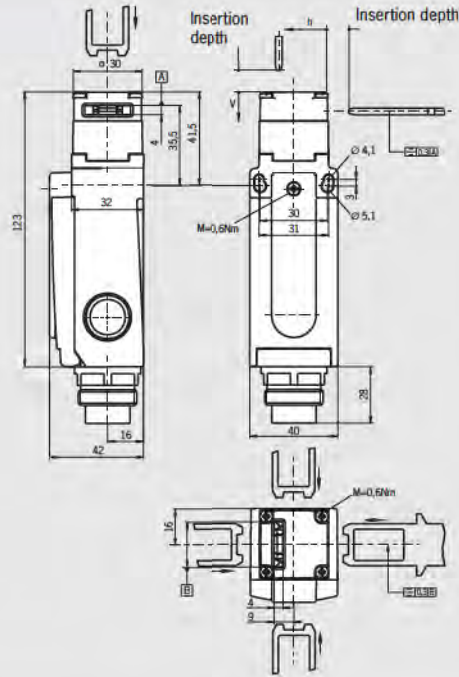
Ordering table

Series	Connection	Switching element	Version	Order No. / Item
SGP	1 Cable entry 3 x M20 x 1.5	2121 4 NC ⊖		097 705 SGP1E-2121A-M
		2131 3 NC ⊖ + 1 NO		097 706 SGP1E-2131A-M
		3131 2 NC ⊖ + 2 NO		097 707 SGP1E-3131A-M



Plug connector SR11
11-pin + PE

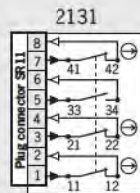
Dimension drawing



Please order actuator separately (see pages 80-82)

For plug connectors see page 88

Wiring diagrams Actuator inserted



Ordering table

Series	Connection	Switching element	Order No. / Item
SGP	2 Plug connector SR11	2131 3 NC ⊖ + 1 NO	099 084 SGP2E-2131ASR11

For safety precautions see page 136
For technical data see page 99



Safety switch SGP-TW

- ▶ 2 actuating heads made of metal
- ▶ Simultaneous monitoring of two safety guards
- ▶ Cable entry M20 x 1.5
- ▶ Lock function optional



Lockfunction

If the switch has a lock function, the drive's safety circuit can be opened and retained in this position. In this way unintentional starting of the system can be prevented.

The lock function setting is indicated in the window.

Two keys are included.

Approach direction



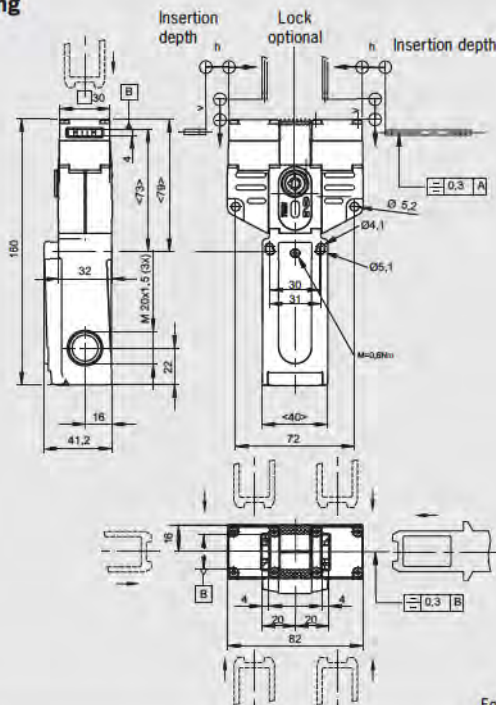
Horizontal and vertical
Can be adjusted in 90° steps

Switching elements

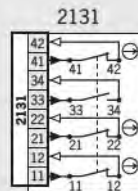
- **2131** Slow-action switching element
3 NC \ominus + 1 NO

Cable entry M20 x 1.5

Dimension drawing



Wiring diagrams Actuator inserted




Ordering table


Series	Connection	Switching element	Version	Order No. / Item
SGP-TW	1 Cable entry 3 x M20 x 1,5	2131 3 NC \ominus + 1 NO		100 809 SGP-TW-1E-2131AC-M
			with lock function (indential locking)	099 900 SGP-TW-1E-2131AC-M-S1


Safety switch SGP




The technical data on switches and switching elements apply to all connections. Further technical data are given for the connection selected.

Switch			
Parameter		Value	Unit
Material	Housing	Reinforced thermoplastic	
	Actuating head	Die-cast aluminum	
	Cam in actuating head	Stainless steel	
Mechanical life		2 x 10 ⁶ operating cycles	
Ambient temperature		-20 ... +80	°C
Weight		approx. 0.16	kg
Max. approach speed		20	m/min
Actuating force		25	N
Extraction force		25	N
Retention force		10	N
Insertion depth (minimum required travel + permissible overtravel)	Actuator S standard	Actuator L for insertion funnel	
Approach direction side (h)	24.5 + 5	28.5 + 5	mm
Approach direction from top (v)	24.5 + 5	28.5 + 5	mm

Switching element			
Parameter		Value	Unit
Switching principle		Slow-action switching element	
Switching elements with 4 switching elements	2121 4 NC ⊖	2131 3 NC ⊖ + 1 NO	3131 2 NC ⊖ + 2 NO
Switching current, min., at DC 24 V		1	mA
Switching voltage, min., at 10 mA		12	V
Contact material		Silver alloy, gold flashed	

Connection, cable entry M20 x 1.5			
Parameter		Value	Unit
Connection		Screw terminal	
Version		M20 x 1.5	
Conductor cross-section		0.34 ... 1.5	mm ²
Degree of protection according to IEC 60529		IP 67	
Rated insulation voltage U _i		250	V AC/DC
Rated impulse withstand voltage U _{imp}		2.5	kV
Conventional thermal current I _{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC-15	I _e 4 A U _e 230 V	
	DC-13	I _e 4 A U _e 24 V	


Plug connector SR11 connection			
Parameter		Value	Unit
Connection		Plug connector	
Version		11-pin + PE	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U _i		50	V AC/DC
Rated impulse withstand voltage U _{imp}		1.5	kV
Conventional thermal current I _{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC-15	I _e 4 A U _e 50 V	
	DC-13	I _e 4 A U _e 24 V	


1) Screwed tight with the related plug connector (see page 86)


Safety switch SGP-TW



The technical data on switches and switching elements apply to all connections. Further technical data are given for the connection selected.

Switch				
Parameter			Value	Unit
Material	Housing		Reinforced thermoplastic	
	Actuating head		Die-cast aluminum	
	Cam in actuating head		Stainless steel	
Mechanical life			1 x 10 ⁶ operating cycles	
Ambient temperature			- 20 ... + 80	°C
Weight			approx. 0.32	kg
Max. approach speed			20	m/min
Actuating force			25	N
Extraction force			25	N
Retention force			10	N
Insertion depth (minimum required travel + permissible overtravel)			Actuator S standard	
Approach direction side (h)			24.5 + 5	mm
Approach direction from top (v)			24.5 + 5	mm

Switching element				
Parameter			Value	Unit
Switching principle			Slow-action switching element	
Switching elements with 4 switching elements			2131 3 NC \ominus + 1 NO	
Switching current, min., at DC 24 V			1	mA
Switching voltage, min., at 10 mA			12	V
Contact material			Silver alloy, gold flashed	

Connection, cable entry M20 x 1.5				
Parameter			Value	Unit
Connection			Screw terminal	
Version			M20 x 1.5	
Conductor cross-section			0.34 ... 1.5	mm ²
Degree of protection according to IEC 60529			IP 67	
Rated insulation voltage U _i			250	V AC/DC
Rated impulse withstand voltage U _{imp}			2.5	kV
Conventional thermal current I _{th}			4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)			4	A gG
Utilization category to IEC 60947-5-1	AC-15		I _e 4 A U _e 230 V	
	DC-13		I _e 4 A U _e 24 V	