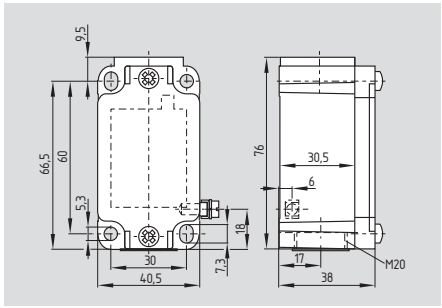
EX-Z/T 335-...-3G/D





- Ex certified
- Mounting details to EN 50041
- Metal enclosure
- Snap action with constant contact pressure up to switching point
- Slow or snap action available with 2 positive break NC contacts to EN 60947-5-1
- Slow action available with overlapping or staggered contacts
- Wide range of alternative actuators
- Actuator heads can be repositioned by 4 x 90°
- Angle of roller lever adjustable in 10° steps
- Good resistance to oil and petroleum spirit
- 1 cable entry M20 x 1.5
- Including Ex-certified screwed cable gland

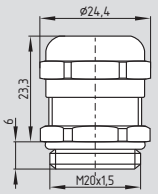
Approvals

CE

Technical data

Equipment category:	Ⓔx II 3GD
Ex protection:	EEx nC IIC T5 X Ex tD A22 IP67 T90°C X
Standards:	IEC 60947-5-1 IEC 61241-1 BG-GS-ET-15
Design:	DIN EN 50041
Enclosure:	light-alloy diecast, paint finish
Max. impact energy:	4 J
Max. actuating speed:	1 m/s
Protection class:	IP 67 to IEC/EN 60529
Contact material:	silver
Contact type:	change-over contact with double break, type Zb or 2 NC contacts, with galvanically separated contact bridges
Switching system:	⊖ IEC 60947-5-1 slow or snap action, NC contacts with positive break
Connection:	screw terminals
Cable section:	max. 2.5 mm^2 (incl. conductor ferrules)
Cable entry:	1 x M20 x 1.5
U_{imp}:	6 kV -03z, -12z: 4kV
U_i:	500 V -03z, -12z: 250 V
I_{the}:	10 A
Utilisation category:	AC-15; DC-13
I_e/U_e:	4 A / 230 VAC 4A / 24VDC
Max. fuse rating:	6 A gG D-fuse
Ambient temperature:	– 20 °C ... + 60 °C
Mechanical life:	30 million operations
Switching frequency:	max. 5000/h
Bounce duration:	snap action: in accordance with actuating speed; slow action: < 2ms
Switchover time:	snap action: < 2 ms; slow action: in accordance with actuating speed
Cable cross-section of the cable glands:	min. Ø 6 mm max. Ø 12 mm

System components



Ex-certified screwed cable gland

Ordering details

EX-①② 335-③z④-⑤-⑥-⑦-3G/D

No.	Replace	Description
①	Z	Snap action ⊖
	T	Slow action ⊖
②	For the appropriate actuator: see as of page 42	
③	11	1 NO / 1 NC
	02	2 NC
	20	2 NO*
	01/01	1 NC left / 1 NC right
	12	1 NO / 2 NC
	03	3 NC
④	h	Slow action with staggered contacts
	ü	with overlapping contacts

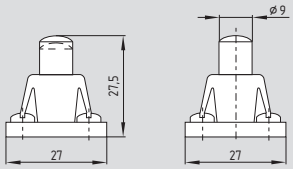
No.	Replace	Description
⑤	1297	Enclosure with transversely slotted mounting holes
⑥	2138	Roller lever 7H for safety duties
⑦	1637	Gold-plated contacts

* Switches with 2 NO contacts (20) are only suitable for positioning tasks!

Ordering details

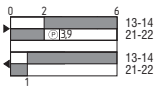
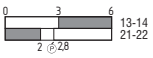
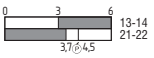
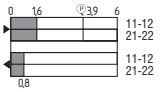
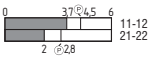
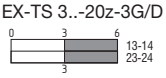
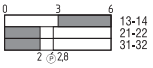
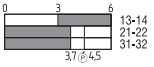
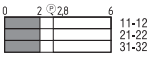
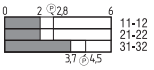
Ex-certified screwed cable gland	**1185057**

Plunger S

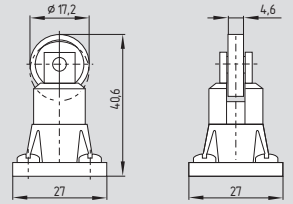


- Actuator type B to EN 50041
- Required actuating force:
  12 N for snap action,
  17 N for slow action
- Actuating speed with actuating angle 0° to switch axis, max. 0.5 m/s

Contact variants

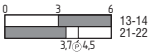
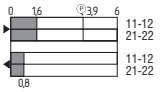
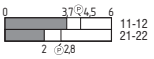
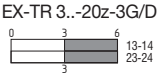
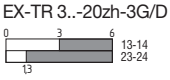
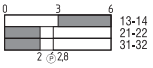
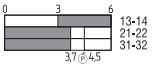
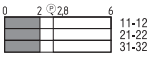
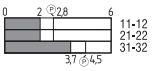
Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-ZS 3..-11z-3G/D 	EX-TS 3..-11z-3G/D 	EX-TS 3..-11zü -3G/D 	
2 NC	EX-ZS 3..-02z-3G/D 	EX-TS 3..-02z-3G/D 		EX-TS 3..-02zh-3G/D 
2 NO		EX-TS 3..-20z-3G/D 		EX-TS 3..-20zh-3G/D 
1 NO **2 NC**		EX-TS 3..-12z-3G/D 	EX-TS 3..-12zü -3G/D 	
3 NC		EX-TS 3..-03z-3G/D 		EX-TS 3..-03zh-3G/D 

Roller plunger R

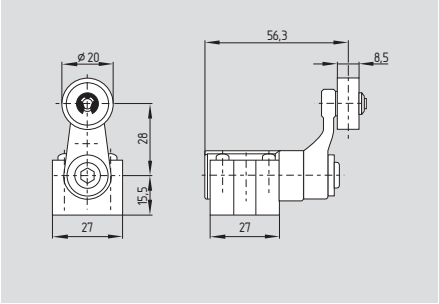


- Actuator type C to EN 50041
- Required actuating force:
  12 N for snap action,
  17 N for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 0.5 m/s

Contact variants

Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-ZR 3..-11z-3G/D 	EX-TR 3..-11z-3G/D 	EX-TR 3..-11zü-3G/D 	
2 NC	EX-ZR 3..-02z-3G/D 	EX-TR 3..-02z-3G/D 		EX-TR 3..-02zh-3G/D 
2 NO		EX-TR 3..-20z-3G/D 		EX-TR 3..-20zh-3G/D 
1 NO **2 NC**		EX-TR 3..-12z-3G/D 	EX-TR 3..-12zü-3G/D 	
3 NC		EX-TR 3..-03z-3G/D 		EX-TR 3..-03zh-3G/D 

Roller lever H



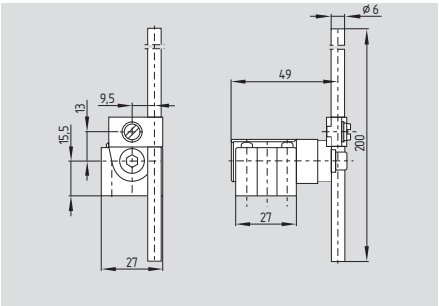
- Actuator type A to EN 50041
- Required actuating torque:
  26 Ncm for snap action,
  31 Ncm for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 2.5 m/s

On version TVH ...-01/01z positive break only to one side.

Contact variants

Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z4VH 3..-11z-3G/D	EX-T4VH 3..-11z-3G/D	EX-T4VH 3..-11zü-3G/D	
2 NC	EX-Z4VH 3..-02z-3G/D	EX-T4VH 3..-02z-3G/D		EX-T4VH 3..-02zh-3G/D
2 NO		EX-T4VH 3..-20z-3G/D		EX-T4VH 3..-20zh-3G/D
1 NC left **1 NC right**		EX-TVH 3..-01/01z-3G/D		
1 NO **2 NC**		EX-T4VH 3..-12z-3G/D	EX-T4VH 3..-12zü-3G/D	
3 NC		EX-T4VH 3..-03z-3G/D		EX-T4VH 3..-03zh-3G/D

Rod lever 10H

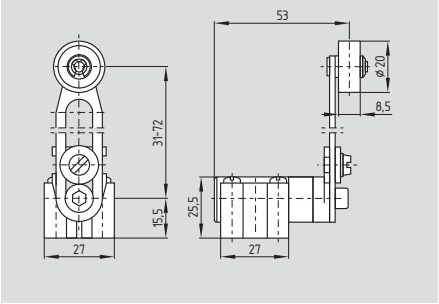


- **Only for positioning tasks**
- Actuator type D to EN 50041
- Plastic rod
- Required actuating torque:
  26 Ncm for snap action,
  31 Ncm for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 2.5 m/s
- Aluminium rod, ordering suffix -1183

Contact variants

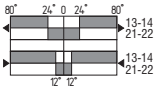
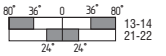
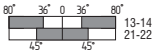
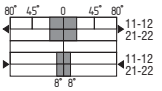
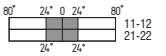
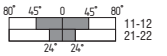
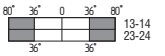
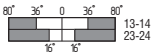
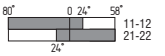
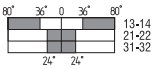
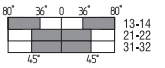
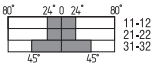
Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z4V10H 3..-11z-3G/D	EX-T4V10H 3..-11z-3G/D	EX-T4V10H 3..-11zü-3G/D	
2 NC	EX-Z4V10H 3..-02z-3G/D	EX-T4V10H 3..-02z-3G/D		EX-T4V10H 3..-02zh-3G/D
2 NO		EX-T4V10H 3..-20z-3G/D		EX-T4V10H 3..-20zh-3G/D
1 NC left **1 NC right**		EX-TV10H 3..-01/01z-3G/D		
1 NO **2 NC**		EX-T4V10H 3..-12z-3G/D	EX-T4V10H 3..-12zü-3G/D	
3 NC		EX-T4V10H 3..-03z-3G/D		EX-T4V10H 3..-03zh-3G/D

Roller lever 7H

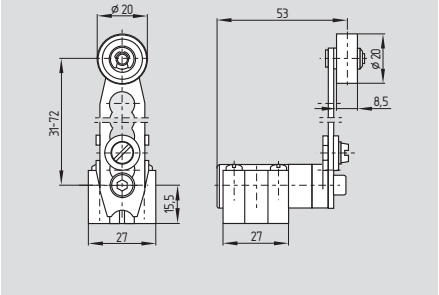


- **Only for positioning tasks**
- Required actuating torque:
  26 Ncm for snap action,
  31 Ncm for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 2.5 m/s

Contact variants

Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z4V7H 3..-11z-3G/D 	EX-T4V7H 3..-11z-3G/D 	EX-T4V7H 3..-11zü-3G/D 	
2 NC	EX-Z4V7H 3..-02z-3G/D 	EX-T4V7H 3..-02z-3G/D 		EX-T4V7H 3..-02zh-3G/D 
2 NO		EX-T4V7H 3..-20z-3G/D 		EX-T4V7H 3..-20zh-3G/D 
1 NC left **1 NC right**		EX-TV7H 3..-01/01z -3G/D 		
1 NO **2 NC**		EX-T4V7H 3..-12z-3G/D 	EX-T4V7H 3..-12zü-3G/D 	
3 NC		EX-T4V7H 3..-03z-3G/D 		EX-T4V7H 3..-03zh-3G/D 

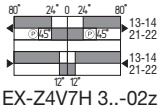
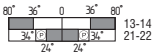
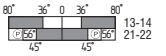
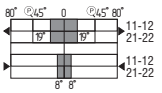
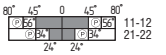
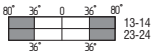
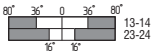
Roller lever 7H-2138



- For safety tasks ⊖, positive break, ordering suffix -2138
- Required actuating torque:
  26 Ncm for snap action,
  31 Ncm for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 2.5 m/s

On version TV7H ...-01/01z-2138 positive break only to one side.

Contact variants

Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z4V7H 3..-11z -2138-3G/D 	EX-T4V7H 3..-11z -2138-3G/D 	EX-T4V7H 3..-11zü- -2138 -3G/D 	
2 NC	EX-Z4V7H 3..-02z -2138-3G/D 	EX-T4V7H 3..-02z -2138-3G/D 		EX-T4V7H 3..-02zh- -2138-3G/D 
2 NO		EX-T4V7H 3..-20z -2138-3G/D 		EX-T4V7H 3..-20zh- -2138-3G/D 
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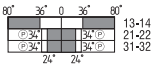
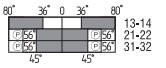
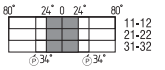
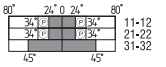
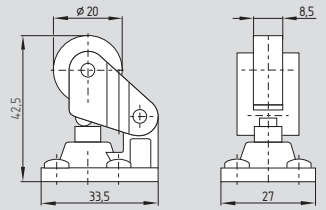
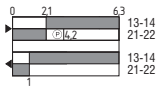
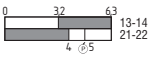
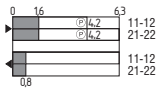
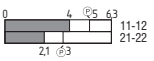
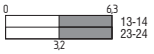
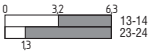
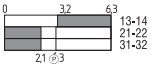
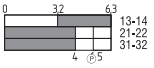
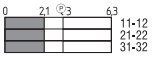
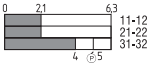
1 NO **2 NC**		EX-T4V7H 3..-12z -2138-3G/D 	EX-T4V7H 3..-12zü -2138-3G/D 	
3 NC		EX-T4V7H 3..-03z -2138-3G/D 		EX-T4V7H 3..-03zh- -2138-3G/D 

Offset roller lever 1K

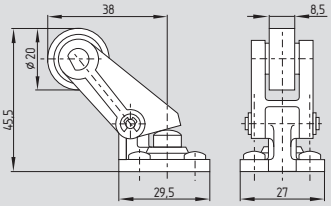


- Required actuating force:
  12 N for snap action,
  17 N for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 0.5 m/s

Contact variants

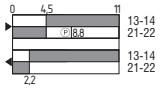
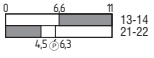
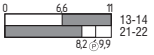
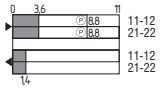
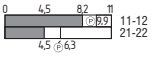
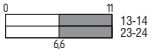
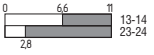
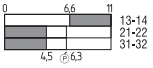
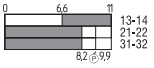
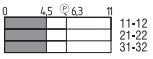
Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z1K 3..-11z-3G/D 	EX-T1K 3..-11z-3G/D 	EX-T1K 3..-11zü-3G/D 	
2 NC	EX-Z1K 3..-02z-3G/D 	EX-T1K 3..-02z-3G/D 		EX-T1K 3..-02zh-3G/D 
2 NO		EX-T1K 3..-20z-3G/D 		EX-T1K 3..-20zh-3G/D 
1 NO **2 NC**		EX-T1K 3..-12z-3G/D 	EX-T1K 3..-12zü-3G/D 	
3 NC		EX-T1K 3..-03z-3G/D 		EX-T1K 3..-03zh-3G/D 

Angle roller lever 3K



- Required actuating force:
  12 N for snap action,
  17 N for slow action
- Actuating speed with actuating angle 30° to switch axis: max. 0.5 m/s
- Actuation parallel to axis of switch from below

Contact variants

Contacts/ Switch travel	Snap action	Slow action	Slow action with overlapping contacts	Slow action with staggered contacts
1 NO **1 NC**	EX-Z3K 3..-11z-3G/D 	EX-T3K 3..-11z-3G/D 	EX-T3K 3..-11zü-3G/D 	
2 NC	EX-Z3K 3..-02z-3G/D 	EX-T3K 3..-02z-3G/D 		EX-T3K 3..-02zh-3G/D 
2 NO		EX-T3K 3..-20z-3G/D 		EX-T3K 3..-20zh-3G/D 
1 NO **2 NC**		EX-T3K 3..-12z-3G/D 	EX-T3K 3..-12zü-3G/D 	
3 NC		EX-T3K 3..-03z-3G/D 		EX-T3K 3..-03zh-3G/D 