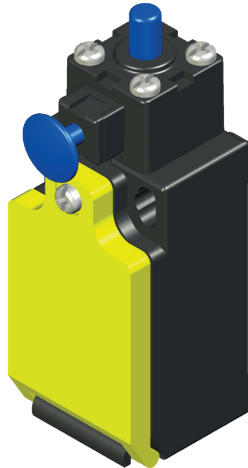




# FTN1R31...



## LIMIT SWITCH WITH Ø5.8 PLASTIC END PLUNGER AND MANUAL RESET

Thermoplastic limit switch with manual reset

Vertical action

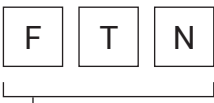
Adjustable head (90° step)

Electrically independent contacts (Zb)

IP rating: IP67

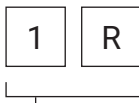
Compliance: EN 50041, IEC/EN 60947-5-1, UL 508

Marking: CE, CCC, UL, EAC, UKCA



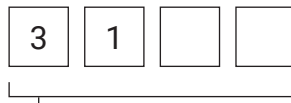
**Series**

**FTN** thermoplastic limit switch



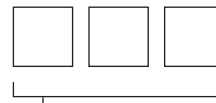
**Type**

**1R** with reset function



**Head and actuator**

**31** Ø5.8 plastic end plunger



**Contact type**

**X11** 1NO/1NC slow action Zb  
**W02** 2NC slow action Zb  
**W20** 2NO slow action Zb  
**Z11** 1NO/1NC snap action Zb  
**Z02** 2NC snap action Zb  
**W12** 1NO/2NC slow action Zb  
**W03** 3NC slow action Zb



**Lead exit dimension or type**

blank M16 (standard)  
**M** M20  
**N** 1/2NPT  
**G1** PG11  
**G3** PG13.5  
**C** 4 poles male code "A" M12×1 connector

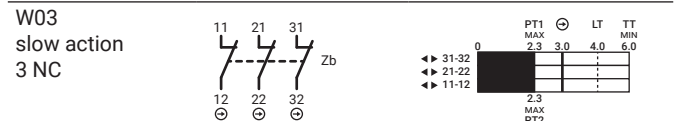
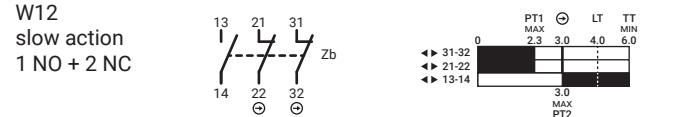
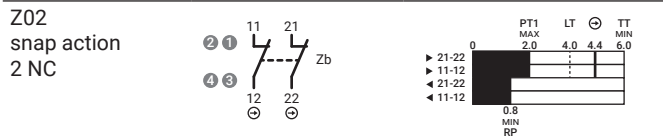
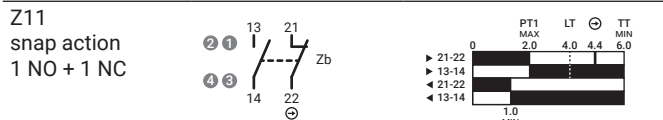
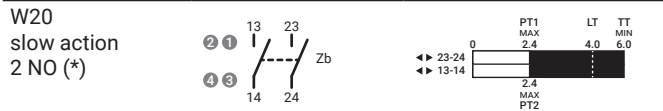
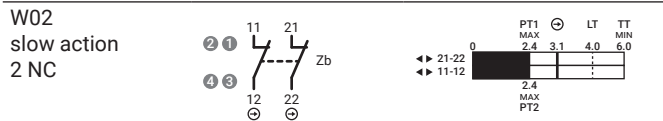
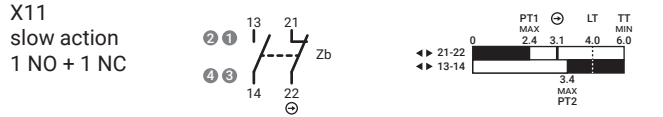


Positive opening operation		NC contact ⊖
Minimum current		5 mA - 5 V DC
Thermal current	I <sub>th</sub>	10 A
Rated insulation voltage	U <sub>i</sub>	500 V
Rated impulse withstand voltage	U <sub>imp</sub>	6 kV
Insulation resistance	min	100 MΩ (DC 500 V)
Contact resistance	max	25 mΩ (initial)
Switching speed	max	250 mm/s
Switching frequency	max	6000 operations per hour
Enclosure material		glass filled PBT (UL approved)
Enclosure IP rating		IP67
Operating temperature		-25 ... +80°C (-13 ... +176°F)
Pollution degree		3
Protection against electric shock		class II (double insulation) ▢
Mechanical life expectancy	min	1×10 <sup>6</sup> cycles
Electrical life expectancy	min	150000 cycles
Vibration	IEC 68-2-6	10-55 ±1 Hz
	excursion	0.35 mm, 1 octave/min
Fixing		2 × M4 screws

# FTN1R31...

Contact types	Categories *	Ratings **	PT1	PT2 / RP	OF	POT ⊖	POF	LT* TT**
X11 1NO 1NC			2.4 mm	3.4 mm	7.5 N	3.1 mm	22 N	
W02 2NC	slow action (Zb) A600 - Q600		2.4 mm	-	7.5 N	3.1 mm	22 N	
W20 2NO		AC15: 400 V - 4 A	2.4 mm	-	9.5 N	-	-	4.0* mm
Z11 1NO 1NC	snap action (Zb) B600 - Q600	DC13: 24 V - 6 A	2.0 mm	1.0 mm	8.5 N	4.4 mm	16.5 N	
Z02 2NC			2.0 mm	0.8 mm	8.5 N	4.4 mm	16.5 N	6.0** mm
W12 1NO 2NC	slow action (Zb) A300 - Q300		2.3 mm	3.0 mm	7.5 N	3.0 mm	23 N	
W03 3NC			2.3 mm	-	7.5 N	3.0 mm	23 N	

\* UL 508 / CSA C22-2 n° 14 \*\* IEC/EN 60947-1



(\*) Not suitable for safety applications.

- PT1 Operating travel
- PT2 Second operating travel (slow action)
- RP Release position (snap action)
- OF Operating force
- POT Positive opening travel ⊖
- POF Positive opening force
- LT Lock travel
- TT Total travel



M12 Connector pin arrangement - on request

## (1) Mounting holes

Dimensions in mm / illustrations NOT in scale

