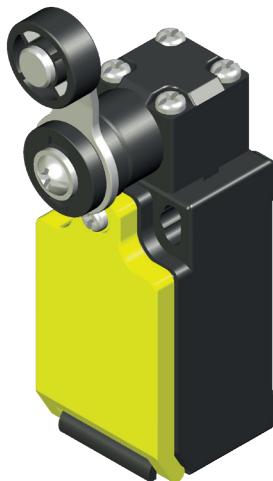




FTN138...



LIMIT SWITCH WITH Ø18 PA ROLLER LEVER

Thermoplastic limit switch

Horizontal action

Adjustable head (90° steps)

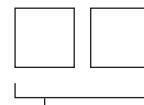
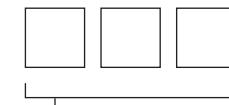
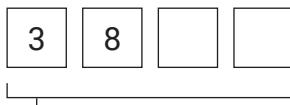
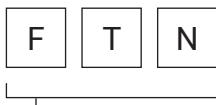
Adjustable lever (18° steps)

Electrically independent contacts (Zb)

Enclosure IP rating: IP67

Compliance: EN 50047, IEC/EN 60947-5-1, UL 508, up to SIL3

Marking: CE, CCC, UL, EAC, UKCA



Series

FTN thermoplastic limit switch



Type

1 standard

Head and actuator

38 Ø18 PA roller lever

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 \ominus
Minimum current	5 mA - 5 V DC
Thermal current	I _{th} 10 A
Rated insulation voltage	U _i 500 V
Rated impulse withstand voltage	U _{imp} 6 kV
Insulation resistance	min 100 M Ω (DC 500 V)
Contact resistance	max 25 m Ω (initial)
Enclosure material	glass filled PBT (UL approved)
Enclosure degree of protection	IP67
Operating temperature	-25 ... +80°C (-13 ... +176°F)
Pollution degree	3
Protection against electric shock	class II (double insulation)
Mechanical life expectancy	min 1x10 ⁷ cycles
Electrical life expectancy	min 150000 cycles
Vibration	IEC 68-2-6 excursion 0.35 mm, 1 octave/min
Fixing	2 x M4 screws

FTN138...

Contact types			Categories *	Ratings **	PT1	PT2 / RP	OF	POT Θ	POF	TT
X11	1NO	1NC			30°	45°	6.5 N	40°	6 N	
W02		2NC	slow action (Zb)	A600 - Q600	30°	-	6.5 N	40°	6 N	
W20	2NO				32°	-	6.5 N	-	-	
Z11	1NO	1NC			30°	10°	2.1 N	62°	5.5 N	80°
Z02		2NC	snap action (Zb)	B600 - Q600	DC13: 24 V - 6 A	30°	5°	2.1 N	62°	5.5 N
W12	1NO	2NC			32°	40°	6.5 N	45°	5.4 N	
W03		3NC	slow action (Zb)	A300 - Q300	32°	-	6.5 N	45°	5.4 N	

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

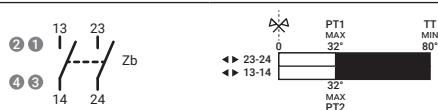
X11
slow action
1 NO + 1 NC



W02
slow action
2 NC



W20
slow action
2 NO (*)



Z11
snap action
1 NO + 1 NC



Z02
snap action
2 NC



- (1) Mounting holes
- (2) Plastic roller

W12
slow action
1 NO + 2 NC

W03
slow action
3 NC

The diagram illustrates two sets of Zb waveforms and their corresponding control parameters. Each set includes a waveform plot with numbered points (13, 21, 31 at the top; 14, 22, 32 at the bottom) and a control panel with a dial and four buttons.

W12 Control Panel:

- Dial: 0
- Buttons: ▲ 31-32, □ 21-22, ▼ 13-14
- Labels: PT1 MAX 32°, 45°, TT MIN 80°
- Bottom Labels: 40°, MAX PT2

W03 Control Panel:

- Dial: 0
- Buttons: ▲ 31-32, □ 21-22, ▼ 11-12
- Labels: PT1 MAX 32°, 45°, TT MIN 80°
- Bottom Labels: 32°, MAX PT2

(*) 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 Θ
POF	Positive opening force
TT	Total travel



M12 Connector pin
arrangement - on request

Dimensions in mm / illustrations NOT in scale

