Miniature Pre-Cabled Limit Switches FA

IMO

Miniature, high accuracy, pre-cabled limit switches with robust metal cases conforming to standards NF C63-140 and NF C63-145 class Y2

- Positive break versions for safety circuits in conformity with BS60947-5-1, VDE 0660 part 206 and IEC 337-1
- Double-break Zb contacts with electrically separate NO and NC circuits
- Snap-action types
- Mounting holes are counterbored to keep screw heads within switch housing dimensions
- Standard types can be mounted using side holes or the screws in the top which also secure the actuator
- Threaded-head mounting models
- Actuator heads can be removed and rotated
- Plunger types are suitable for gang-mounting
- Lever type – Lever can be adjusted over 360˚ in 10˚ increments
- IP67
- UL and CUL approved

The product FA4515-2DN is similar to FA4115-2DN but with one difference,
it has a Positive Brack contact block with positive brake gauranteed
after 4mm movement of the roller plunger.

Datasheet will be updated in due course.

Options and ordering codes

FA 4 1 01 - 2DN*

Miniature pre-cabled limit switches	FM
1NO + 1NC contacts	4
Snap action contacts	1
Slow-action contacts with positive break for safety circuits	6

	Actuators: Switch mounted by the case
01	Stainless steel piston plunger
02	One way operation roller
08	Sealed piston plunger
15	In-line roller piston plunger
17	Transverse roller piston plunger
31	Roller lever with small offset
40	Roller lever with large offset
50	Adjustable stainless steel rod lever
	Switch mounted by threaded head
10	Stainless steel piston plunger
11	In-line roller piston plunger
12	Transverse roller piston plunger
13	Sealed piston plunger

*Versions available with 5 metre cable. Contact IMO for other available options

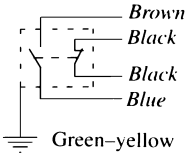
Contact ratings

BS/EN 60947-5-1 AC15 – Control of AC electromagnetic	120VAC	6A
loads>72VA sealed – replaces AC11	240VAC	4A
	400VAC	3A
DC13 – Control of DC electromagnetic	24VDC	2.5A
loads where the time taken to reach	125VDC	0.55A
95% of the rated current is equal to	250VDC	0.27A

6 times the power of the load (where P>50W) – replaces DC11

Wiring connections

Note: The positive break applies to the NC wires of the type 6 contacts only. Connections to safety circuits should be made to the black wires only. Connections to safety circuits should NOT be made using the type 1 contacts. Slow action contacts are break before make. To ensure positive breaking of the NC contacts on the type 6 models, exceed the pre-travel by 1.5mm or 25˚, according to the model.



Miniature Pre-Cabled Limit Switches FA

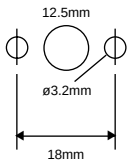
continued

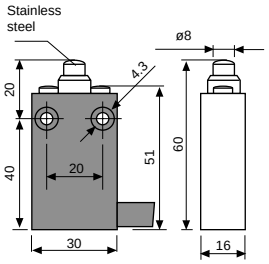
Specification

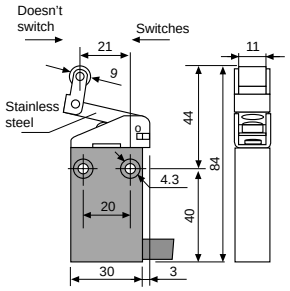
Rated thermal current Ith	10A
Rated working voltage	500VAC/600VDC
Maximum operating frequency	6000/hour
Mechanical life	20 million operations
Contact form	1NO + 1NC
Initial contact resistance	<20 mOhms
Contact material	silver
Repeat accuracy	0.01mm
Dielectric strength	4000V between current carrying parts and ground
Protection rating	IP67
Ambient operating temperature	–25 to +75 deg. C
Cable	5 core, 0.75mm2 x 2 metres long
Short-circuit protection required	10A HRC quick blow max.
Housing material	die cast metal alloy

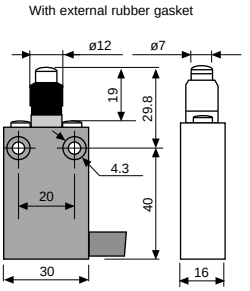
Dimensions and characteristics

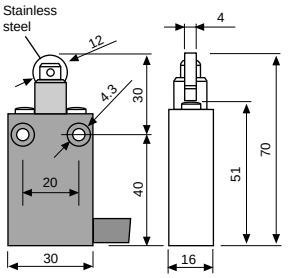
Note: Top mounting panel holes

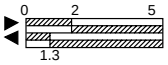
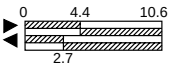
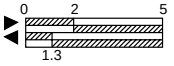
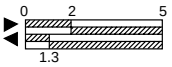
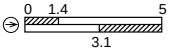
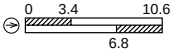
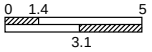
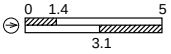










1NO+1NC *Snap action*	*FA 4101-*DN* 	*FA 4102-*DN* 	*FA 4108-*DN* 	*FA 4115-*DN* 
1NO+1NC *Slow action*	*FA 4601-*DN* 	*FA 4602-*DN* 	*FA 4608-*DN* 	*FA 4615-*DN* 
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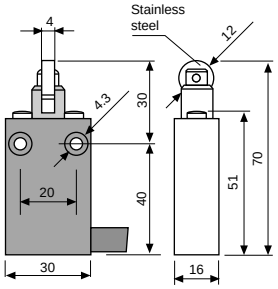
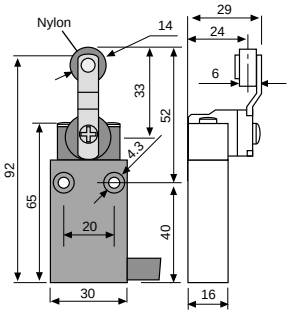
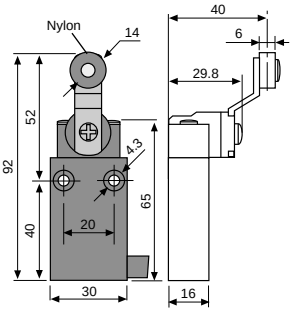
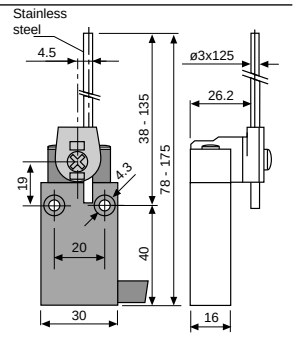
Min force	10 N (20 N)	5 N (15 N)	10 N (20 N)	10 N (20 N)

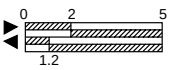
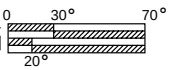
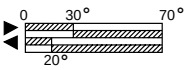
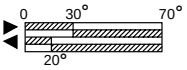
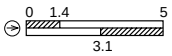
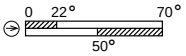
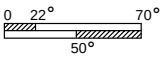
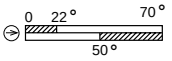
Note: force figure in brackets is the recommended minimum force to ensure positive break of the NC contacts









1NO+1NC *Snap action*	*FA 4117-*DN* 	*FA 4131-*DN* 	*FA 4140-*DN* 	*FA 4150-*DN* 
1NO+1NC *Slow action*	*FA 4617-*DN* 	*FA 4631-*DN* 	*FA 4640-*DN* 	*FA 4650-*DN* 
Max speed	0.3 m/sec with cam 15˚	1.5 m/sec with cam 30˚	1.5 m/sec with cam 30˚	1.5 m/sec
Min force	10 N (20 N)	6.5 Ncm (10 Ncm)	6.5 Ncm (10 Ncm)	6.5 Ncm (10 Ncm)

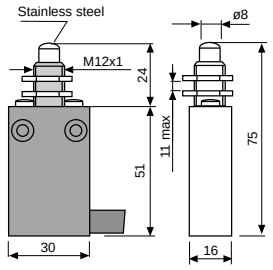
Miniature Pre-Cabled Limit Switches FA

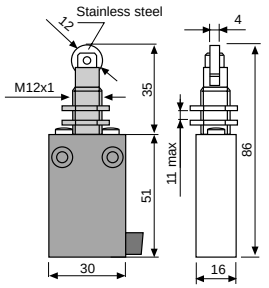
continued

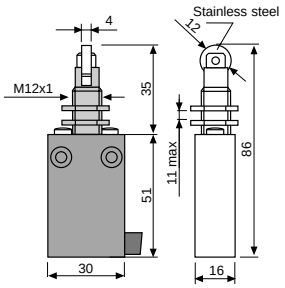
Dimensions and characteristics continued

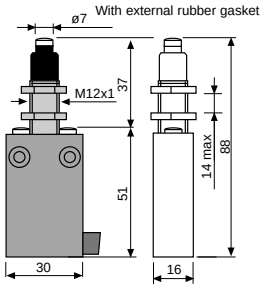
Secured by threaded head only

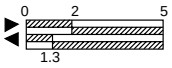
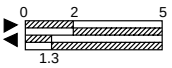
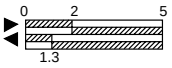
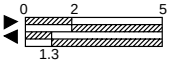
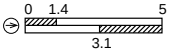
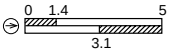
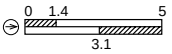
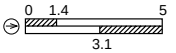
Note: Slow action models, minimum operating speed 1mm/s









1NO+1NC *Snap action*	*FA 4110-*DN* 	*FA 4111-*DN* 	*FA 4112-*DN* 	*FA 4113-*DN* 
1NO+1NC *Slow action*	*FA 4610-*DN* 	*FA 4611-*DN* 	*FA 4612-*DN* 	*FA 4613-*DN* 
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Min force	10 N (20 N)	10 N (20 N)	10 N (20 N)	10 N (20 N)

* = Cable length