



## Rotary Gear Limit Switches

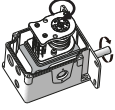
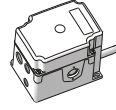
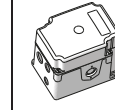
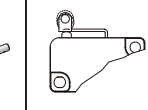
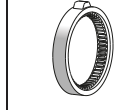
The **FGR1** rotary gear limit switch is a device used to control the number of rotation or direction angle of industrial and building machines. A typical application is controlling the position of the rolling shutter door or overhead cranes etc. The unit, through a gear system and cams transmission, controls 2, 4 or more microswitches so that after a defined number of revolutions, it can prepare the motor or the device to start or stop running. The microswitches have a calibration screw that operates independently on each cam; so it can calibrate the opening and closing of each micro according the functional requirements needed. The gear-based transmission system allows you to choose different ratios. It can also be supplied with rear shaft version or complete of linear detector (potentiometer or encoder) too.



Markings	<b>CE</b>	
Case	thermoplastic glass fiber reinforced	
Ratio	012-033-050-075-100-150-200-400	
Protection class	IP65	
Shaft type	steel	
Fixing type	bottom / front (flanged version)	
Max n° of microswitch	4	
Climate temperature	Operating	-25° C + 70° C
	Storage	-30° C + 70° C
Cable entry	M20 or M16 (max 4)	
Microswitch cams	self-lubricating	
Micrometric adjustment screw	zamak material	
Weight KG (approx)	0.75	
Microswitch product ID	MF1.3 – Giovenzana line wheel drive control (long life)	
Standards	IEC/EN 61058-1, UL 1054	
Markings	<b>CE</b>	
Rated insulation voltage [U <sub>i</sub> ]	250V	
Rated thermal current [I <sub>th</sub> ]	16A	
Rated operating current	Resistive load	16A-250VAC
	Inductive load	4A-250VAC
Positive opening contacts	☞	
Contact block	function	1NC+1NO changeover fast trigger
	contact	silver plated / self cleaning
	connections	fast-on 0.8x6.3mm

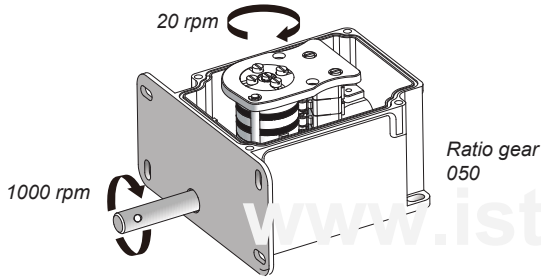
Options	
Rear shaft	available
Potentiometer	2.5 / 5 / 10 k $\Omega$ (*)
Encoder	-
Cam's shape/Pinion available	5 / 15

(\*) Standard potentiometers: available other versions on request

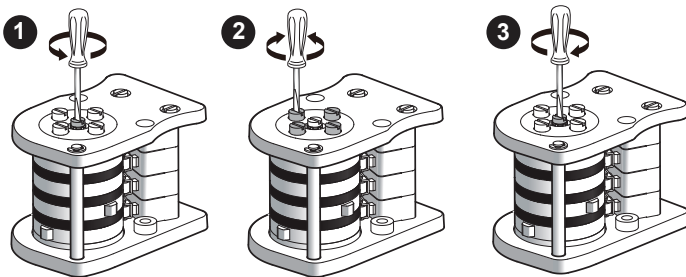
Ratio	Base Fixing	Flanged Fixing	N° microswitches 2-3-4	Microswitch cams
				
012	FGR1-100124	FGR1-100124F	4 silver plated	STANDARD
033	FGR1-100334	FGR1-100334F	4 silver plated	STANDARD
050	FGR1-100504	FGR1-100504F	4 silver plated	STANDARD
075	FGR1-100754	FGR1-100754F	4 silver plated	STANDARD
100	FGR1-101004	FGR1-101004F	4 silver plated	STANDARD
150	FGR1-101504	FGR1-101504F	4 silver plated	STANDARD
200	FGR1-102004	FGR1-102004F	4 silver plated	STANDARD
400	FGR1-104004	FGR1-104004F	4 silver plated	STANDARD

### Ratio

The **FGR1** rotary gear limit switch are available in different transmission ratio. The ratio is the difference between the number of rotation of the main shaft and the number of rotation of the cams



### Microswitch' s system calibration



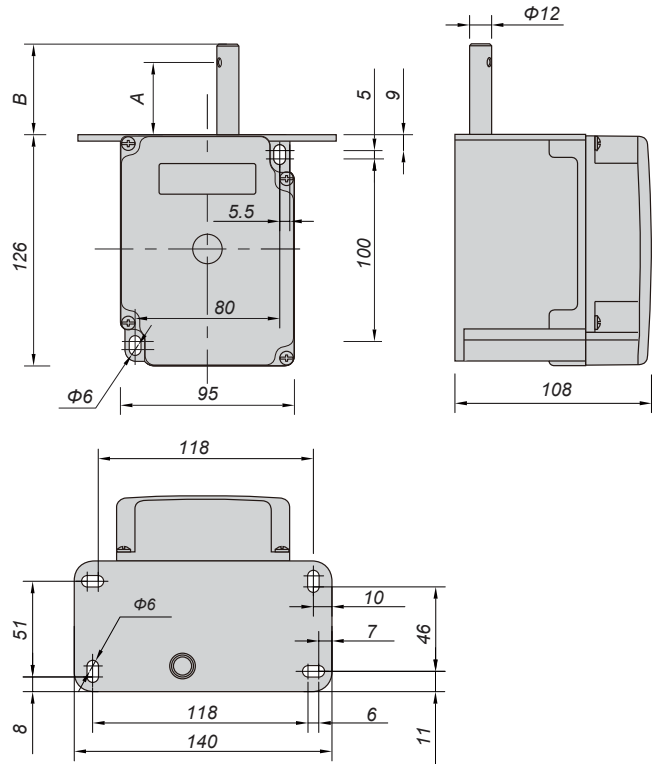
- Loosen the main screw. (1.5-2 circle)
- Adjust clockwise or anticlockwise, through a small blade screwdriver, the four screws to calibrate each cam
- Tighten the main screw

### Dimensions

Flanged fixing  
FGR1-SERIES

Product size (mm)

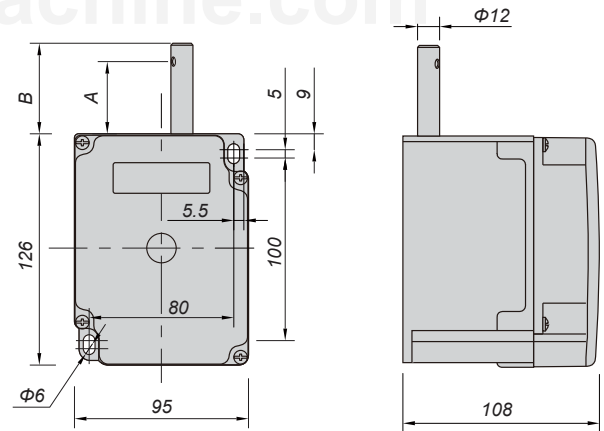
	170 Long worm	180 Long worm
A	39mm	49mm
B	49mm	59mm



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FGR1-SERIES

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### Camshapes

