

The **FGR0** is a device for controlling revolutions of rotating components or the angular position of industrial or construction machinery.

A typical application is for small cranes. Also suitable for different applications such as automatic doors or automatic roofs in greenhouses.

The unit, through a system of gears and cams transmission, controls 2 or 4 microswitches so, after a certain number of revolutions, predispose the motor or the equipment to the start or stop operation.

The microswitches have a calibration screw that works independently on each cam; so you can calibrate the opening and closing of each micro according to the necessary functional requirements.

The system change allows you to choose different ratios from 1:12 to 1:1480.

### AVAILABLE VERSIONS

	
<b>Base fixing</b> 2 microswitches	<b>Base fixing</b> 4 microswitches
	
<b>Double overhang shaft</b> 2 microswitches	<b>Double overhang shaft</b> 4 microswitches
	
<b>Front fixing</b> 2 microswitches	<b>Front fixing</b> 4 microswitches

### GENERAL CHARACTERISTICS

<b>CASE</b>	Self-extinguishing thermoplastic material
<b>PROTECTION CLASS</b>	<b>IP67 - IEC / EN 60529</b>
<b>RATIO</b>	1:12, 1:25, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400
<b>DIRECT RATIO</b>	1:25, 1:50
<b>SHAFT TYPE</b>	Stainless steel mounted on self-lubricating bush protected by sealing rings on both sides Double overhang shaft version available on request
<b>FIXING TYPE</b>	Base fixing Front fixing (flanged)
<b>MICRO SWITCHES</b>	Nr 4 max - micrometric adjustment of roller lever (long life)
<b>CAM BLOCK</b>	Self-lubricating with transparent support for easier cam viewing
<b>CABLE ENTRY</b>	M16 (max 2)
<b>AMBIENTAL TEMPERATURE</b>	Operating: -25°C ... +70°C Storage: -30°C ... +70°C


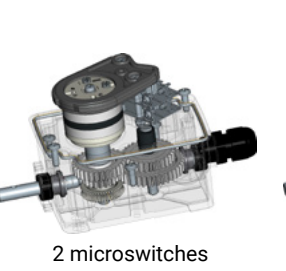
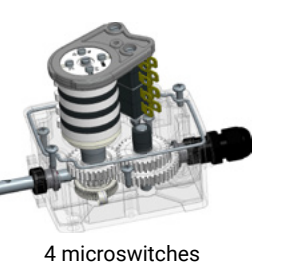
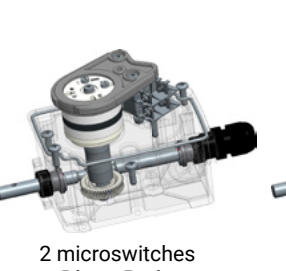
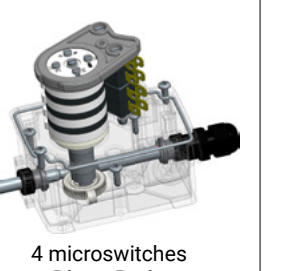
### ELECTRICAL CHARACTERISTICS

<b>MICRO SWITCHES CONNECTIONS</b>	MFI.3 - 6.3 x 0.8 faston terminal MFI.3STP - Screws M3 for wire 1.5 mm <sup>2</sup> with plate protection
<b>STANDARD CONFORMITY</b>	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1
<b>MARKING</b>	CE, cRUus, CCC, EAC
<b>RATED INSULATION VOLTAGE - U<sub>i</sub></b>	250V
<b>RATED THERMAL CURRENT - I<sub>th</sub></b>	8A
<b>RATED OPERATING CURRENT</b>	Resistive Load: 8A - 250 V AC Inductive Load: 3A - 250 V AC
<b>RATED IMPULSE WITHSTAND VOLTAGE - U<sub>imp</sub></b>	1500 V
<b>POSITIVE OPENING</b>	NC positive opening 
<b>CONTACT BLOCKS</b>	1NC - 1 NO changeover snap action / silver plated - self cleaning
<b>PROTECTION CLASS</b>	IP40 (IP00 terminals) in according to EN 60529

### OPTIONS

<b>DOUBLE OVERHANG SHAFT</b>	Available
<b>POTENTIOMETER</b>	According to customer request
<b>ENCODER</b>	-
<b>CAM SHAPES</b>	5 different cam shapes
<b>PINIONS</b>	On request

**FGR0**  
Internal cam pack

				
<b>MFI.3</b>	2 microswitches	4 microswitches	2 microswitches <b>Direct Ratio</b>	4 microswitches <b>Direct Ratio</b>



# FGR0 - Rotary gear limit switch with overall reduced sizes



## CODING SYSTEM

FGR0	-	0012	M	F	-	4	A	-	E1	-	01
Series	-	Nr. gear ratio	Shaft type	Flange	-	Nr. contacts	Contacts type	-	Options	-	Progressive versions
			M = single shaft B = double overhang shaft				A = MFI.3 (standard) B = MFI.3STP (on request)		E = Encoder P = Potentiometer		Not standard shaft, cams, pinions, colors, logos, extra accessories, etc...
<b>STANDARD ENCODING</b>								<b>OPTIONAL ENCODING</b>			

## CODING TABLE

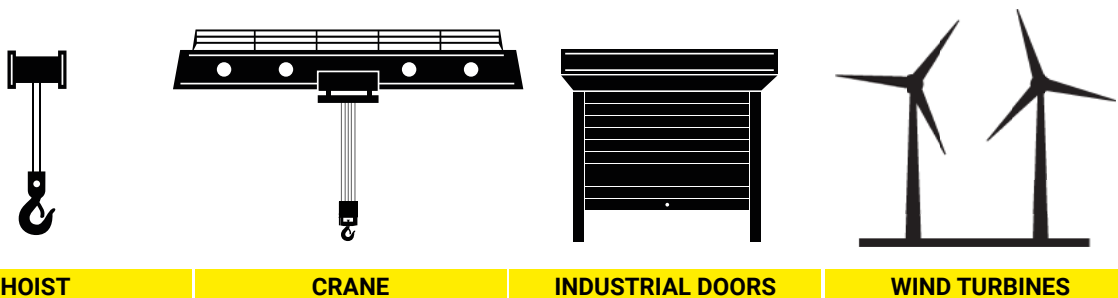
Base fixing 2 microswitches	Base fixing 4 microswitches	Double overhang shaft 2 microswitches	Double overhang shaft 4 microswitches	Front fixing 2 microswitches	Front fixing 4 microswitches
FGR0-0012M-2A	FGR0-0012M-4A	FGR0-0012B-2A	FGR0-0012B-4A	FGR0-0012MF-2A	FGR0-0012MF-4A
FGR0-0025M-2A	FGR0-0025M-4A	FGR0-0025B-2A	FGR0-0025B-4A	FGR0-0025MF-2A	FGR0-0025MF-4A
FGR0-0033M-2A	FGR0-0033M-4A	FGR0-0033B-2A	FGR0-0033B-4A	FGR0-0033MF-2A	FGR0-0033MF-4A
FGR0-0050M-2A	FGR0-0050M-4A	FGR0-0050B-2A	FGR0-0050B-4A	FGR0-0050MF-2A	FGR0-0050MF-4A
FGR0-0075M-2A	FGR0-0075M-4A	FGR0-0075B-2A	FGR0-0075B-4A	FGR0-0075MF-2A	FGR0-0075MF-4A
FGR0-0100M-2A	FGR0-0100M-4A	FGR0-0100B-2A	FGR0-0100B-4A	FGR0-0100MF-2A	FGR0-0100MF-4A
FGR0-0150M-2A	FGR0-0150M-4A	FGR0-0150B-2A	FGR0-0150B-4A	FGR0-0150MF-2A	FGR0-0150MF-4A
FGR0-0200M-2A	FGR0-0200M-4A	FGR0-0200B-2A	FGR0-0200B-4A	FGR0-0200MF-2A	FGR0-0200MF-4A
FGR0-0400M-2A	FGR0-0400M-4A	FGR0-0400B-2A	FGR0-0400B-4A	FGR0-0400MF-2A	FGR0-0400MF-4A

## AVAILABLE CONTACT TYPES AND CAM SHAPES

MFI.3	MFI.3STP	16020081 A (10°) - STANDARD	16020097 B (60°)	16020094 C (180°)	16020095 D (opposite)	16020093 E (10 tips)

## APPLICATIONS

Giovenzana rotary limit switches are suitable for several applications: from lifting machinery to industrial overhead doors and boat lifts, from theatre lighting hoists to renewable energy systems, like wind turbines.



HOIST

CRANE

INDUSTRIAL DOORS

WIND TURBINES