



FGR0 - Rotary gear limit switch with overall reduced sizes



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

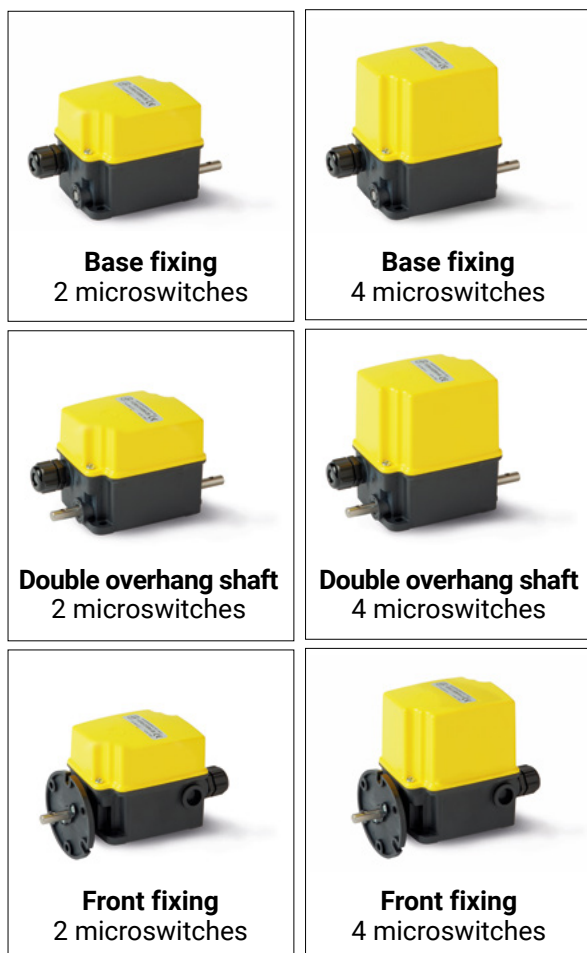
A typical application is for small cranes. Also suitable for different applications such as automatic doors or automatic roofs in greenhouses.

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



GENERAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS

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

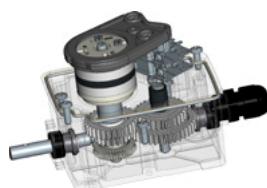
OPTIONS

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

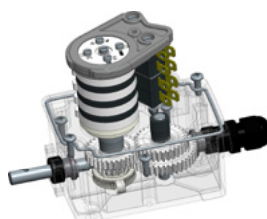
FGR0 Internal cam pack



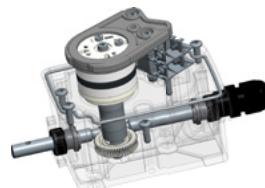
MFI.3



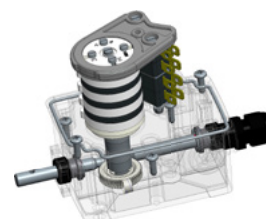
2 microswitches



4 microswitches



2 microswitches
Direct Ratio



4 microswitches
Direct Ratio



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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...
STANDARD ENCODING								OPTIONAL ENCODING			

CODING TABLE

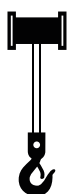
Base fixing 2 microswitches	Base fixing 4 microswitches	Double overhang shaft 2 microswitches	Double overhang shaft 4 microswitches	Front fixing 2 microswitches	Front fixing 4 microswitches
FGR0-0012M-2A	FGR0-0012M-4A	FGR0-0012B-2A	FGR0-0012B-4A	FGR0-0012MF-2A	FGR0-0012MF-4A
FGR0-0025M-2A	FGR0-0025M-4A	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

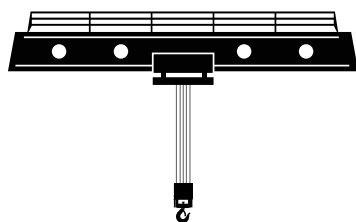
MFI.3	MFI.3STP	16020081 A (10°) - STANDARD	16020097 B (60°)	16020094 C (180°)	16020095 D (opposite)	16020093 E (10 tips)

APPLICATIONS

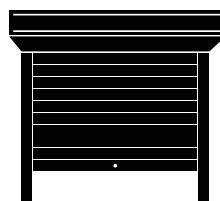
Giovanzana rotary limit switches are suitable for several applications: from lifting machinery to industrial overhead doors and boat lifts, from theatre lighting hoists to renewable energy systems, like wind turbines.



HOIST



CRANE



INDUSTRIAL DOORS



WIND TURBINES