



	FGR0	FGR1
GENERAL CHARACTERISTICS		
CASE	Self-extinguishing thermoplastic material	Thermoplastic glass fiber reinforced material
PROTECTION CLASS	IP67 - IEC / EN 60529	IP65 - IEC / EN 60529
RATIO	1:12, 1:25, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400	1:12, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400
DIRECT RATIO	1:25, 1:50	1:50, 1:75, 1:100
SHAFT TYPE	Stainless steel mounted on self-lubricating bush protected by sealing rings on both sides Double overhang shaft version available on request	Stainless steel Double overhang shaft version available on request
FIXING TYPE	Base fixing Front fixing (flanged)	Base fixing Front fixing (flanged)
MICRO SWITCHES	Nr 4 max - micrometric adjustment of roller lever (long life)	Nr 4 max - micrometric adjustment of roller lever (long life)
CAM BLOCK	Self-lubricating with transparent support for easier cam viewing	Self-lubricating with transparent support for easier cam viewing
CABLE ENTRY	M16 (max 2)	M16 or M20 (max 4)
AMBIENTAL TEMPERATURE	Operating: -25°C ... +70°C Storage: -30°C ... +70°C	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	MFI.7 - 6.3 x 0.8 faston terminal
STANDARD CONFORMITY	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1	IEC / EN 61058-1, UL 1054, EN 60204-1, EN 60947-1, EN 60947-5-1
MARKING	CE, cRUus, CCC, EAC	CE, cRUus, CCC, EAC
RATED INSULATION VOLTAGE - U_i	250V	250V
RATED THERMAL CURRENT - I_{th}	8A	8A
RATED OPERATING CURRENT	Resistive Load	8A - 250 V AC
	Inductive Load	3A - 250 V AC
RATED IMPULSE WITHSTAND VOLTAGE - U_{imp}	1500 V	1500 V
POSITIVE OPENING	NC positive opening (→)	NC positive opening (→)
CONTACT BLOCKS	1NC - 1 NO changeover snap action / silver plated - self cleaning	1NC - 1 NO changeover snap action / silver plated - self cleaning
PROTECTION CLASS	IP40 (IP00 terminals) in according to EN 60529	IP40 (IP00 terminals) in according to EN 60529
OPTIONS		
DOUBLE OVERHANG SHAFT	Available	Available
POTENTIOMETER	According to customer request	-
ENCODER	-	-
CAM SHAPES	5 different cam shapes	5 different cam shapes
PINIONS	On request	20 different pinion shapes on request

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.

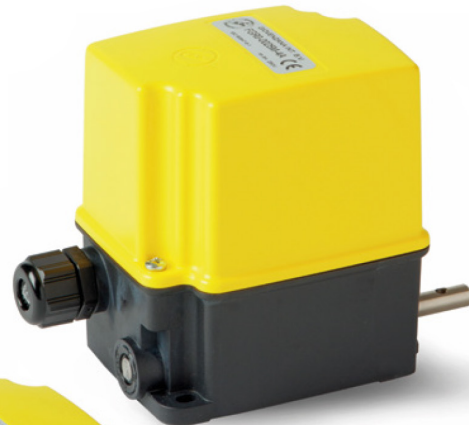
The system change allows you to choose different ratios from 1:12 to 1:1480.

General features

- Different versions available:
 - base fixing;
 - front fixing (with standard flange);
 - with double overhang shaft (on request).
- Overall size is reduced.
- Two different cover heights depending on whether the device is equipped with 2 or 4 microswitches.
- IP67 protection class (IEC / EN 60529).
- Available in different ratios: 1:12, 1:25, 1:33, 1:50, 1:75, 1:100, 1:150, 1:200, 1:400 (optional on request).
- Available in direct ratio: 1:25, 1:50 (others direct ratio on request).
- Available on request with pinions.
- Micro switches:
 - device available with 2 or 4 microswitches;
 - the working point is adjustable with a calibration screw;
 - each switch has 1NO + 1NC inside;
 - positive opening for NC contacts.

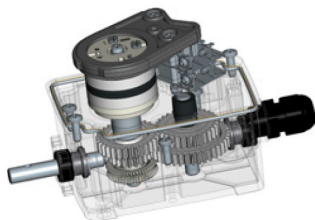
Compliance and certifications

- 2014/35/UE - 2014/33/UE - 2011/65/UE - 2015/863/UE
- EN 60947-1 (2007/A1 : 2011/A2 : 2014)
- EN 60947-5-1 (2004/A1 : 2009/AC : 2004/AC : 2005)
- EN 60204-1 (2006/A1 : 2009)
- EN 60529 (1991/A1 : 2000/A2 : 2013)
- EN 50581 (2012)
- IEC 63000 (2016)

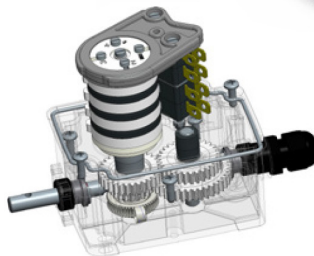


Base Fixing versions

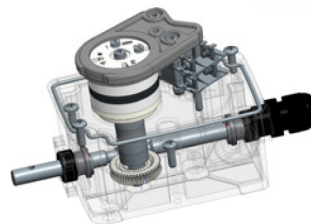
X-ray views



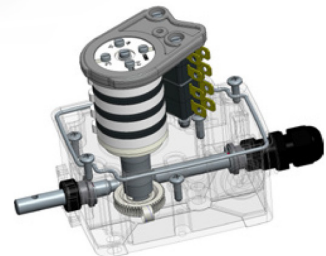
2 microswitches



4 microswitches




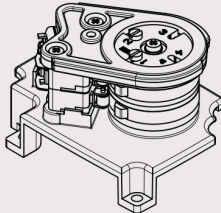
2 microswitches
Direct Ratio



4 microswitches
Direct Ratio


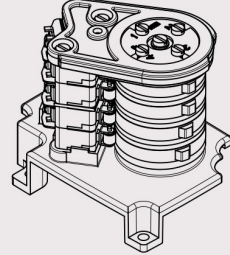
Available codes

FGR0
Internal cam pack
2 microswitches

MFI.3

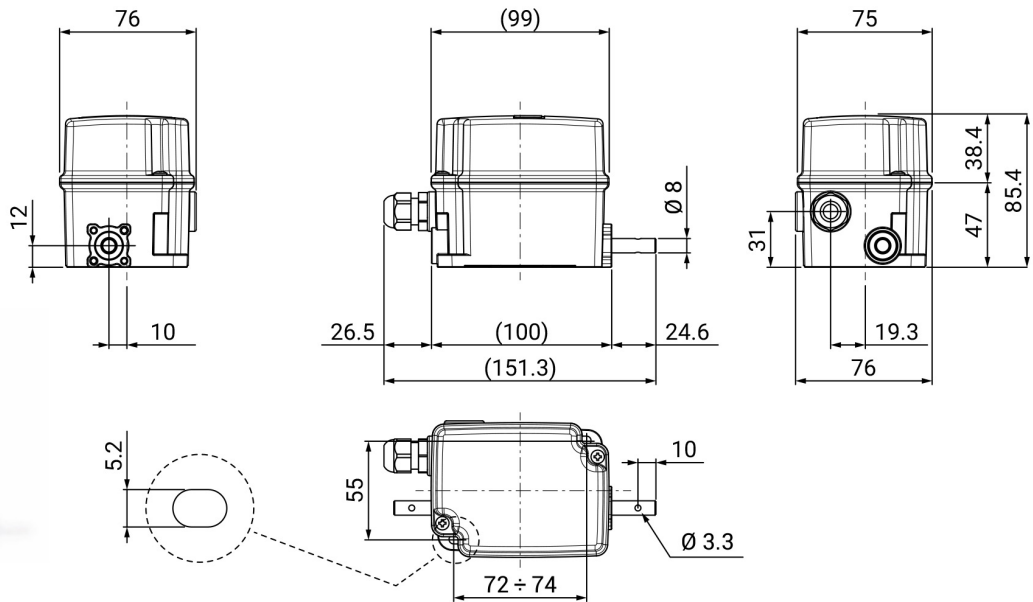
FGR0
Internal cam pack
4 microswitches

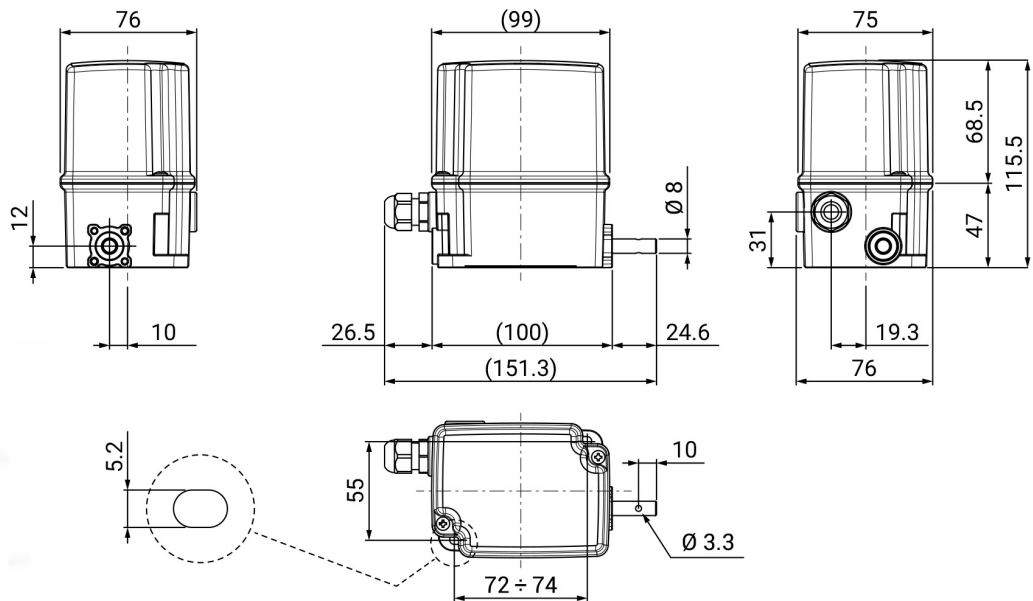
MFI.3



Base fixing
2 microswitches



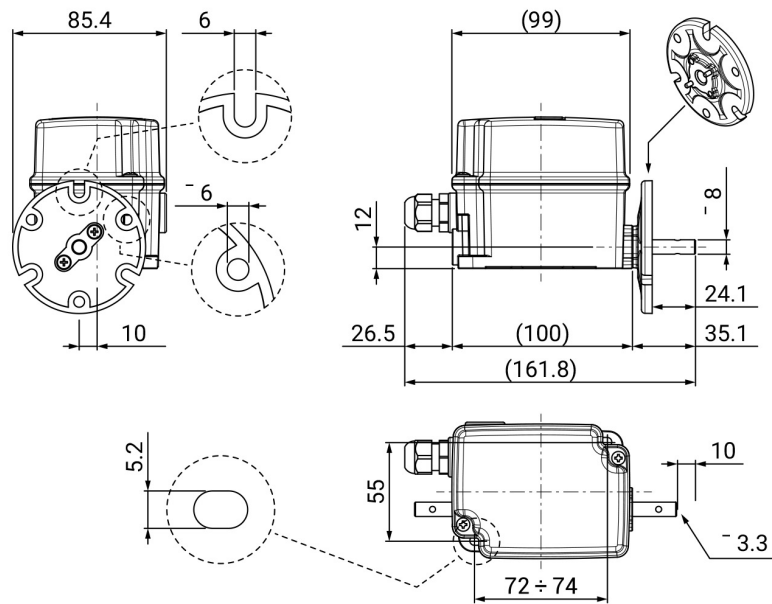
Base fixing
4 microswitches



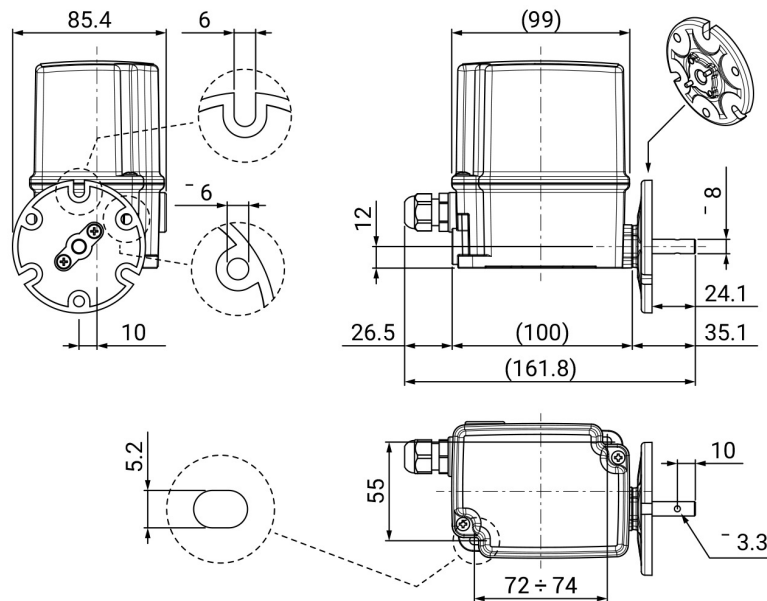
Available codes



Front fixing
2 microswitches



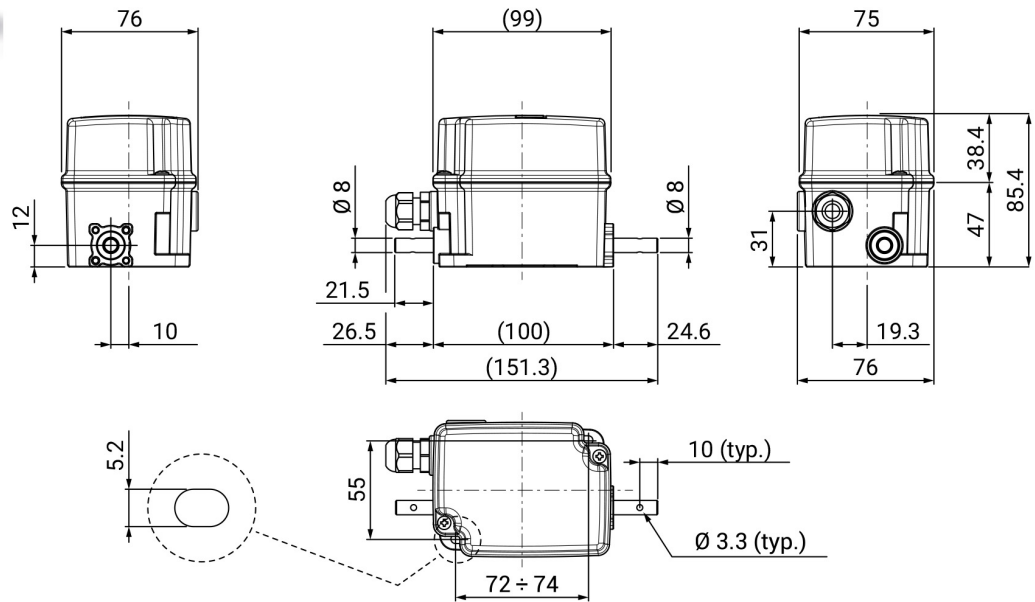
Front fixing
4 microswitches



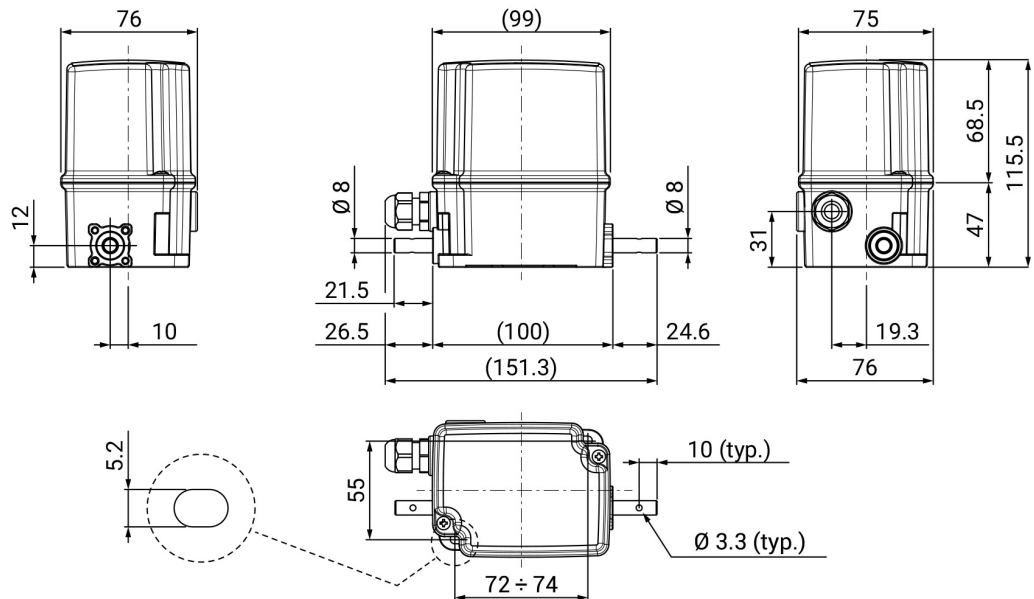
Available codes



Double overhang shaft
2 microswitches



Double overhang shaft
4 microswitches



Coding system

The **FGR0** coding system is very clear: each block of digits identifies a specific function. The code provides all the informations that can be used to specify each customization.

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			

Available codes

Base fixing
2 microswitches



FGR0-0012M-2A
FGR0-0025M-2A
FGR0-0033M-2A
FGR0-0050M-2A
FGR0-0075M-2A
FGR0-0100M-2A
FGR0-0150M-2A
FGR0-0200M-2A
FGR0-0400M-2A

Base fixing
4 microswitches



FGR0-0012M-4A
FGR0-0025M-4A
FGR0-0033M-4A
FGR0-0050M-4A
FGR0-0075M-4A
FGR0-0100M-4A
FGR0-0150M-4A
FGR0-0200M-4A
FGR0-0400M-4A

Double overhang shaft
2 microswitches



FGR0-0012B-2A
FGR0-0025B-2A
FGR0-0033B-2A
FGR0-0050B-2A
FGR0-0075B-2A
FGR0-0100B-2A
FGR0-0150B-2A
FGR0-0200B-2A
FGR0-0400B-2A

Double overhang shaft
4 microswitches



FGR0-0012B-4A
FGR0-0025B-4A
FGR0-0033B-4A
FGR0-0050B-4A
FGR0-0075B-4A
FGR0-0100B-4A
FGR0-0150B-4A
FGR0-0200B-4A
FGR0-0400B-4A

Front fixing
2 microswitches



FGR0-0012MF-2A
FGR0-0025MF-2A
FGR0-0033MF-2A
FGR0-0050MF-2A
FGR0-0075MF-2A
FGR0-0100MF-2A
FGR0-0150MF-2A
FGR0-0200MF-2A
FGR0-0400MF-2A

Front fixing
4 microswitches



FGR0-0012MF-4A
FGR0-0025MF-4A
FGR0-0033MF-4A
FGR0-0050MF-4A
FGR0-0075MF-4A
FGR0-0100MF-4A
FGR0-0150MF-4A
FGR0-0200MF-4A
FGR0-0400MF-4A

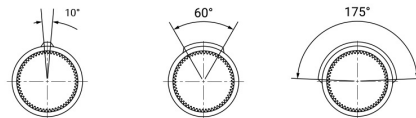
AVAILABLE CONTACT TYPES



MFI.3

MFI.3STP

AVAILABLE CAM SHAPES



16020081

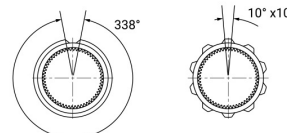
16020097

16020094

A (10°) - STANDARD

B (60°)

C (180°)



16020095

16020093

D (opposite)

E (10 tips)