

Limit switches

FCR - FGR Series

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TECHNO-LIFTING EQUIPMENT



Rotary control switches with 300 mm rods from 3 up to 5 positions.
Control switches with rotary gear from 12 up to 200 rpm with 4 or 6 micro switches.

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for control circuits

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Rotary limit switches


FCR Series for control circuits

IP65 

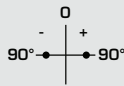
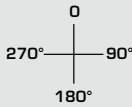
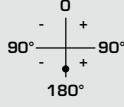
GENERAL CHARACTERISTICS

- According to IEC/EN 60947-3
- Self extinguishing thermoplastic housing VO UL 94
- IP65 Double insulation IEC/EN60529
- Prepared with aluminum rods $\square 6 \times 300$ mm with indicator position "0"
- n°1 Cable entry $\varnothing 22,5$
- Ambient temperature : operating $-25^{\circ} +55^{\circ}$ C
storage $-30^{\circ} +70^{\circ}$ C

ELECTRICAL CHARACTERISTICS

- According to IEC/EN60947-3, UL508
- Certifications: 
- Rated insulation voltage U_i 690V
- Rated thermal current I_{the} 16A
- Frequency 50/60 Hz
- Rated thermal current: AC-21A - AC-22A 690V-16A
AC23A - 3x3 230V-13A/4kW
400V-13A/7,5kW
- Rated short circuit withstand current (gG 20A-690V) 5kA



POSITION	DESCRIPTION	CODE	N° DIAGRAM
FOR SINGLE SPEED MOTOR CONTROL			
	3 Positions with mechanical interlock	FCR001	1
	3 Positions with mechanical interlock	FCR002	2
	4 Positions - Rotary	FCR003	3
	4 Positions - Rotary	FCR004	4
	4 Positions - Rotary	FCR005	5
FOR TWO SPEEDS MOTOR CONTROL			
	5 Positions with mechanical interlock	FCR006	6

Rotary limit switches

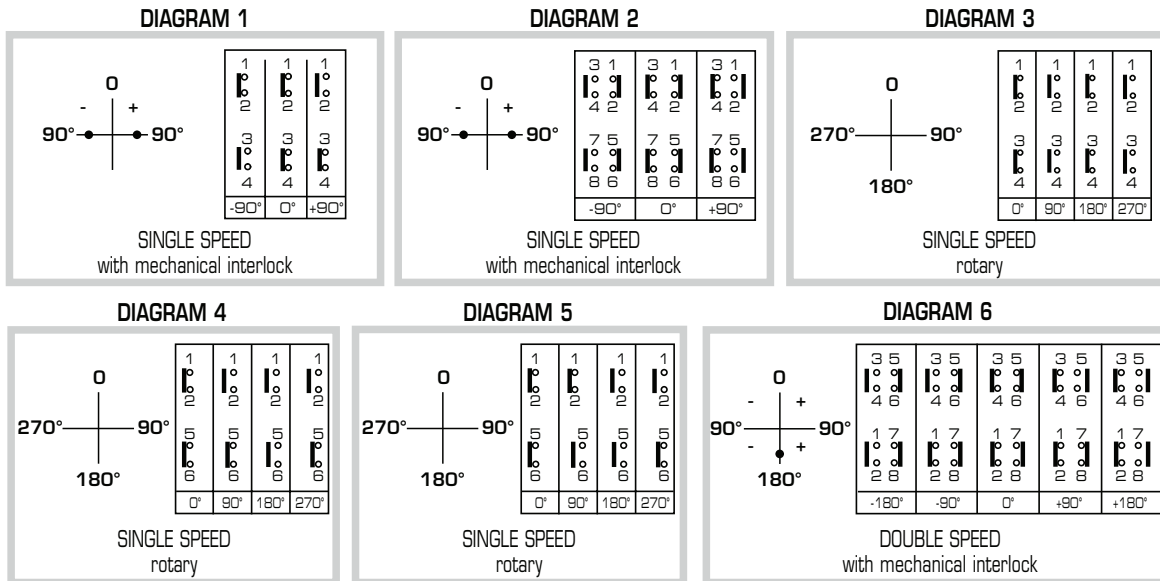
FCR Series for control circuits

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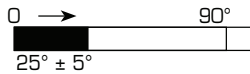
TECHNO-LIFTING EQUIPMENT

SCHEMS

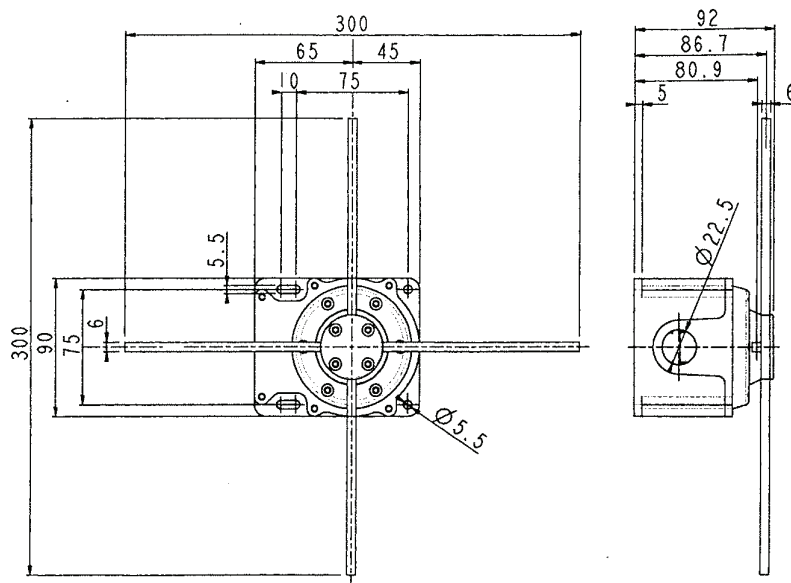
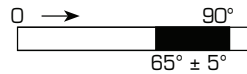


ANGULAR TRIPPING CONTACTS

CONTACT BLOCK NORMAL CLOSED



CONTACT BLOCK NORMAL OPEN



Rotary gear limit switches

FGR Series for control circuit

IP65

GENERAL CHARACTERISTICS


The series is directed towards control of turns of the rotating drums which wrap cables, machinery etc... Equipped with adjustable "micro" means a registry screw, lives independently on each one of the cam. Operating operating microswitches, permits, using a screwdriver, calibration of the race and then opening or closing of contacts according to functional needs. Available in two versions based FGR, standard FGR ... B shaft coaxial to use encoder.

GENERAL CHARACTERISTICS

- Certifications
- Housing with cast aluminum body with lid thermopolymer extinguishing VD UL 94
- Protection rating according IP65 IEC/EN 60529
- Drive shaft with steel worm plated mounted on ball bearings
- Cams and micrometric adjustment screws in PA
- Maximum number of operating contacts n.6 (6 cams)
- n. 2 Cable entries with M20 cable glands
- Operating temperature:

in use	-25°C + 70°C
storage	-30°C + 70°C

ELECTRICAL CHARACTERISTICS

- Comply with IEC/EN 61058-1, UL 1054
- Certifications: 
- Contact blocks μ 1 NC + 1NO changeover switch (C format) snap action contacts with positive opening NO contact \odot
- Self cleaning silver alloy contacts 0,8 x 6,3 mm
- Rated insulation voltage U_i 250V
- Rated thermal current I_{th} 8A
- Rated operating current: resistive load 8A - 250V ac
inductive load 3A - 250V ac
- IEC/EN 61058-1 8(3)A-250V ac, UL 1054 8A - 250Vac

FGR - STANDARD VERSION



N° TOURS CAM/MOTORSHAFT REV RATIO	CODE		WEIGHT gr	MIN. PACK QTY.
	with 4 macro switches	with 6 macro switches		
1/12	FGR2006	FGR20066	1.100	1
1/33	FGR2007	FGR20076	1.100	1
1/50	FGR2008	FGR20086	1.100	1
1/100	FGR2009	FGR20096	1.100	1
1/200	FGR2010	FGR20106	1.100	1

Rotary gear limit switches

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TECHNO-LIFTING EQUIPMENT

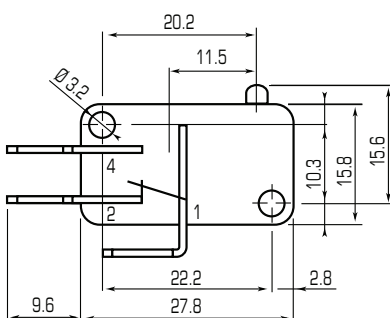
FGR.B. - COAXIAL SHAFT VERSION



N° TURNS CAM/MOTORSHAFT REV RATIO	CODE		WEIGHT gr	MIN. PACK QTY.
	with 4 macro switches	with 6 macro switches		
1/12	FGR2006B	FGR2006B6	1.200	1
1/33	FGR2007B	FGR2007B6	1.200	1
1/50	FGR2008B	FGR2008B6	1.200	1
1/100	FGR2009B	FGR2009B6	1.200	1
1/200	FGR2010B	FGR2010B6	1.200	1

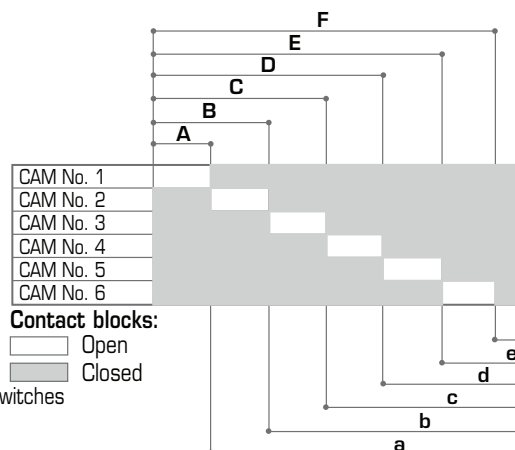
REVOLUTIONS REFERRED TO THE CAM'S ACTIVATION

MICRO SWITCH SCHEME



The trip refer to the action of the cam on contact 1-2 (NC)

Note: All micro switches have changeover contacts.



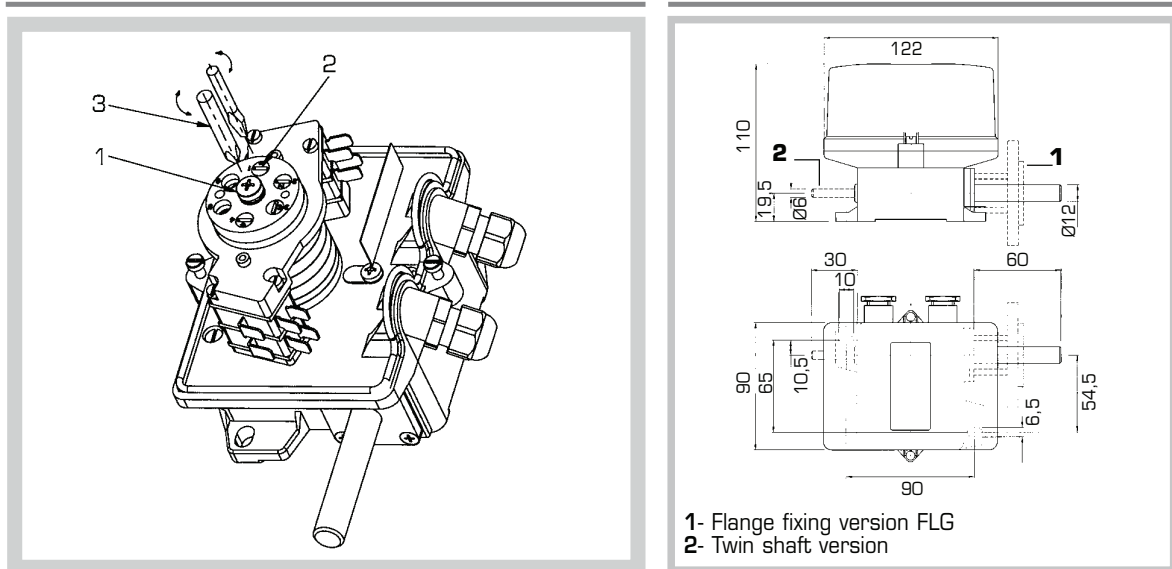
No ROUND MINUTES	REVOLUTIONS REFERRED TO THE CAM'S ACTIVATION											
	A	a	B	b	C	c	D	d	E	e	F	f
12 rounds	1,25	10,75	2,5	9,5	3,75	8,25	5	7	6,25	5,75	7,5	4,5
33 rounds	3,5	29,5	7	26	10,5	22,5	14	19	17,5	15,5	21	13
50 rounds	5	45	10	40	15	35	20	30	25	25	30	20
100 rounds	10	90	20	80	30	70	40	60	50	50	60	40
200 rounds	20	180	40	160	60	140	80	120	100	100	120	80

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DIMENSIONS



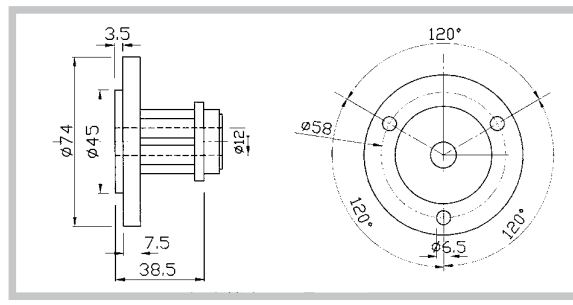
ACCESSORIES

MICRO-SWITCH



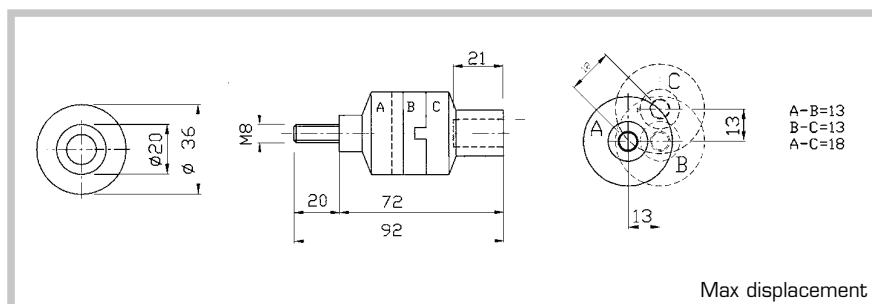
MFI

FLANGE



FLG

OLDHAM COUPLING



FGH