

PF2C

ROTARY LIMIT SWITCH

PRODUCT DESCRIPTION

The rotary limit switch PF2C is used to control the movement of industrial machinery. It operates as an auxiliary controller of electrical motors through a power interface, such as a contactor or PLC. Suitable for heavy duty, its shaft is connected to the motor and, after a set number of revolutions, the cams operate the switches, thus starting the predetermined movement. A worm gear and a helical toothed gear combined with one or more pairs of straight toothed gears are used for the transmission of the movement from the input shaft to the output shaft. Revolution ratios ranging from 1:1 to 1:295 result from the use of different combinations of gear wheels between the input shaft and the output shaft, which is connected to the cams operating the switches. Transmission and gear driving shafts are made of stainless steel to prevent oxidation and wear. The gear wheels and the driving bushes are made of self-lubricating thermoplastic


material, suitably chosen to reduce the wear to a minimum and to maintain the accuracy of the couplings over time. Sintered bronze bushes are moulded into the base of the limit switch to optimise the shaft rotation and to prevent rubbing with plastic material. Materials and components are wear resistant and protect the equipment against water and dust.

Each cam can be set with great accuracy thanks to the cam adjusting screws. The auxiliary switches are of a positive opening type, thus suitable for safety functions. It is available with direct control switches for operating directly on the motor.


The cam-switch sets can be substituted for potentiometers suitable for the connection to electronic equipment.

The limit switch is available with a flange for direct coupling to the motor and it can be customised with labels and colours according to the customer's requirements.

GENERAL TECHNICAL SPECIFICATIONS

- Conformity to Community Directives: 2006/95/CE 2006/42/CE
- Conformity to Standards: EN 60204-1 EN 60947-1 EN 60947-5-1 EN 60529
- Storage ambient temperature: -40°C/+70°C
- Operational ambient temperature: -25°C/+70°C
- Protection degree: IP 65
- Insulation category: Class II
- Cable entry: cable clamp M20 with reduced clamping area
- Markings and homologations: **CE** ( limit switches available on request)

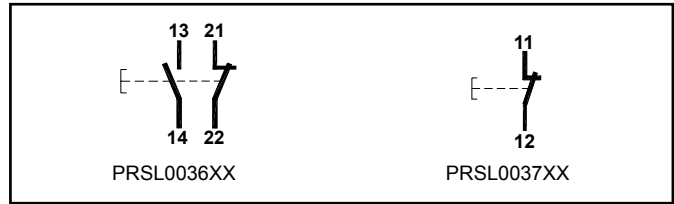
TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

- Utilisation category: AC 15
- Rated operational current: 3 A
- Rated operational voltage: 250 V
- Rated thermal current: 10 A
- Rated insulation voltage: 300 V~
- Mechanical life: 1x10⁶ operations
- Terminal referencing: according to EN 50013
- Connections: screw-type terminals with self-lifting pads
- Wires: 1x2.5 mm², 2x1.5 mm²
(UL - (c)UL: use 60°C or 75°C copper (CU) conductor and wire size N° 16-18 AWG)
- Tightening torque: 0.8 Nm
- Markings and homologations: **CE** 

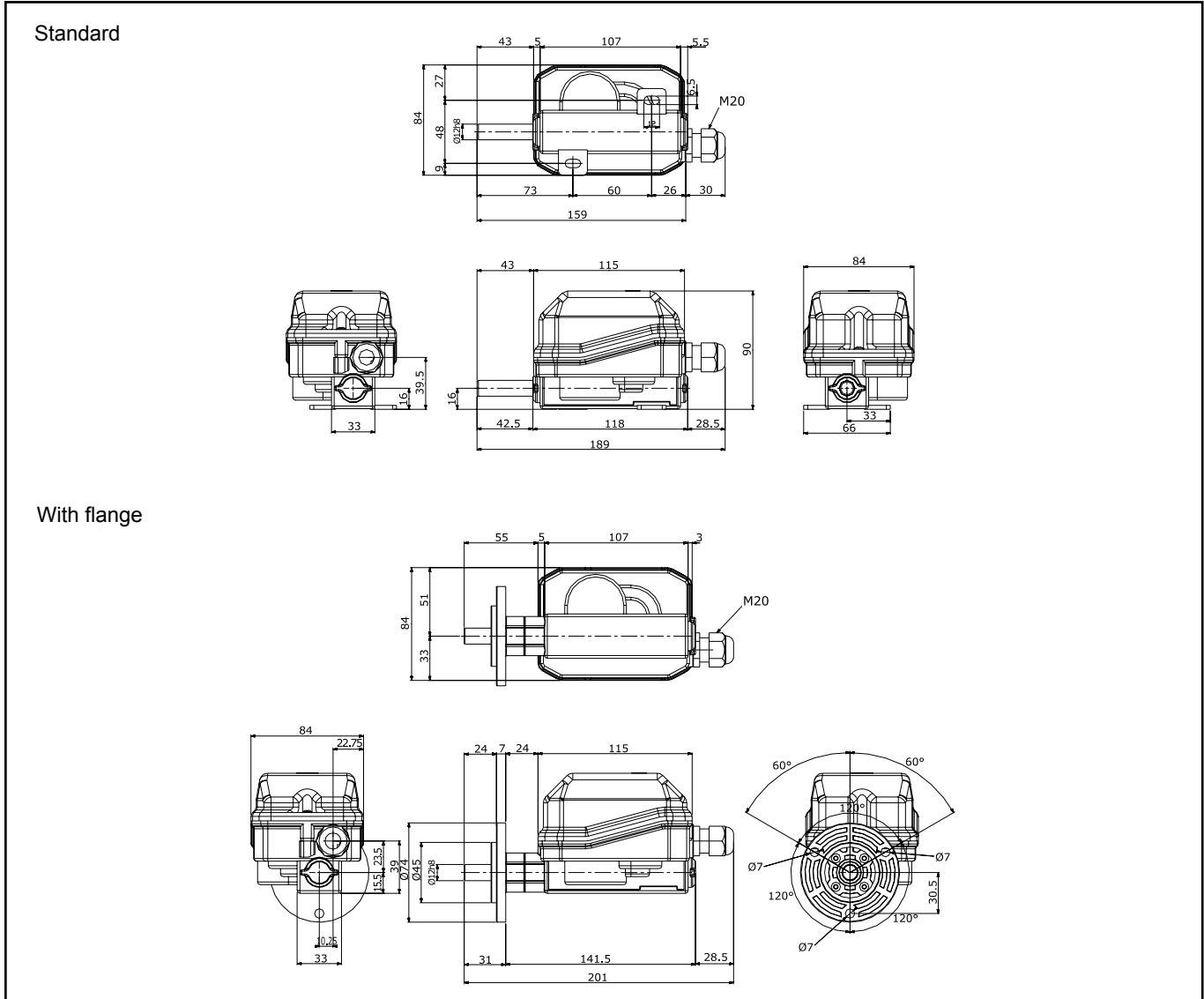
FEATURES OF THE SWITCHES

The snap action single switch PRSL0036XX has 1 NO + 1 NC change over contacts with 2 connecting terminals each.
The slow action single switch PRSL0037XX has 1 NC contact.
All NC contacts are of the positive opening operation type.

The switches have the following reference for internal wiring.

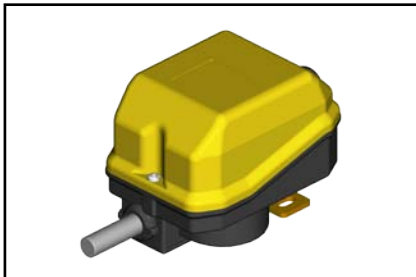


OVERALL DIMENSIONS

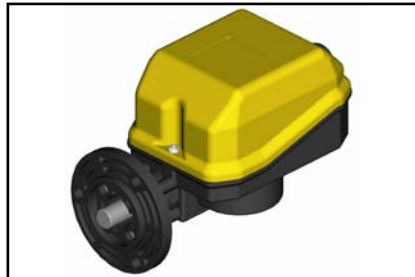


POSSIBLE ASSEMBLIES

Standard



With flange



Standard - open



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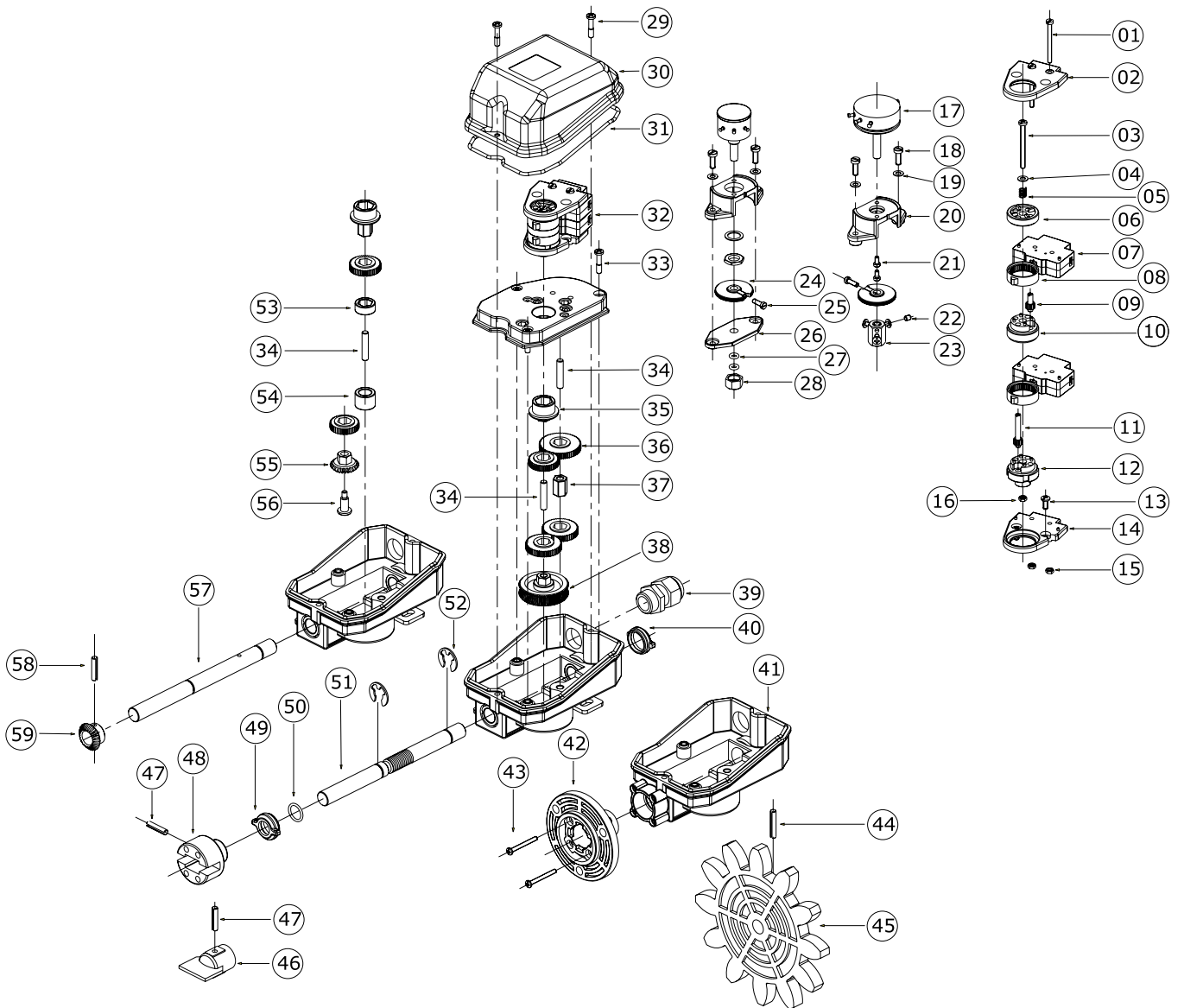
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COMPONENTS

Reference	Code	Description
07	PRSL0036XX PRSL0037XX	Snap action 1NO+1NC switch Slow action switch
08	PRSL7140PI PRSL7141PI PRSL7142PI PRSL7143PI PRSL7144PI	Pointed cam 60° sector cam 10 point cam 270° circular cam 180° cam
17	PRVV9020PE PRVV9025PE PRVV9035PE PRVV9030PE PRVV9031PE	Potentiometer Megatron 4.7 kΩ Potentiometer Megatron 10 kΩ Potentiometer Megatron 2.2 kΩ Potentiometer MCB 10 kΩ mechanical stop Potentiometer MCB 10 kΩ
20 (+18+19)	PRSL0928PI PRSL0930PI	Small support for potentiometer with O-ring Medium support for potentiometer
23 (+22)	PRSL0933PI	Fixed coupling for potentiometer 13mm
24 (+25)	PRSL0909PI	Adjusting gear
26	PRSL9409PI	Support plate for potentiometer with O-ring
28 (+27)	PRSL0927PI	Bush for potentiometer
36	PRSL6600PI PRSL6601PI PRSL6602PI PRSL6603PI PRSL6604PI PRSL6605PI PRSL6606PI PRSL6607PI PRSL6608PI PRSL6609PI PRSL6610PI PRSL6611PI PRSL6612PI PRSL6613PI PRSL6614PI PRSL6615PI PRSL6616PI PRSL6617PI PRSL6618PI PRSL6619PI PRSL6620PI	Lateral gear wheel Z 36 Lateral gear wheel Z 38 Lateral gear wheel Z 40 Lateral gear wheel Z 42 Lateral gear wheel Z 44 Lateral gear wheel Z 46 Lateral gear wheel Z 48 Lateral gear wheel Z 50 Lateral gear wheel Z 52 Lateral gear wheel Z 54 Lateral gear wheel Z 55 Lateral gear wheel Z 56 Lateral gear wheel Z 58 Lateral gear wheel Z 60 Lateral gear wheel Z 62 Lateral gear wheel Z 64 Lateral gear wheel Z 66 Lateral gear wheel Z 68 Lateral gear wheel Z 70 Lateral gear wheel Z 72 Lateral gear wheel Z 74
38	PRSL6702PI	Central gear wheel Z 70
42 (+43)	PRSL0947PI	Flange with pin
45 (+44)	PRSL0911PI PRSL0912PI PRSL0913PI PRSL0914PI PRSL0915PI PRSL0916PI PRSL0917PI PRSL0918PI PRSL0944PI	Pinion gear M10 Z12 with pin Pinion gear M12 Z10 with pin Pinion gear M14 Z10 with pin Pinion gear M16 Z10 with pin Pinion gear M20 Z8 with pin Pinion gear M5 Z12 with pin Pinion gear M6 Z11 with pin Pinion gear M8 Z12 with pin Pinion gear M12 Z12 with pin
46 (+47)	PRSL0919PI	Male coupling with pin
48 (+47)	PRSL0920PI	Female coupling with pin
51	PRTO0065PE PRTO0054PE PRTO0076PE	Single-thread worm shaft Double-thread worm shaft Flexible shaft

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REQUEST FORM FOR NON STANDARD LIMIT SWITCHES

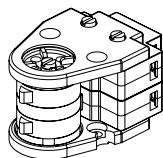
Cams

- 1  PRSL7140PI
- 2  PRSL7141PI
- 3  PRSL7142PI
- 4  PRSL7143PI
- 5  PRSL7144PI

Switches

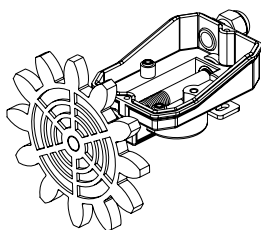
- 1 PRSL0036XX Snap action
- 2 PRSL0037XX Slow action

Cams



Switches

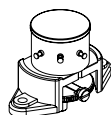
Pinion gear



- PRSL0911PI M10 Z12
- PRSL0912PI M12 Z10
- PRSL0913PI M14 Z10
- PRSL0914PI M16 Z10
- PRSL0915PI M20 Z8
- PRSL0916PI M5 Z12
- PRSL0917PI M6 Z11
- PRSL0918PI M8 Z12
- PRSL0944PI M12 Z12

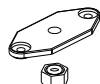
Remarks

Potentiometer



- PRVV9020PE Megatron 4.7 kΩ
- PRVV9025PE Megatron 10 kΩ
- PRVV9035PE Megatron 2.2 kΩ
- PRVV9030PE MCB 10 kΩ mechanical stop
- PRVV9031PE MCB 10 kΩ

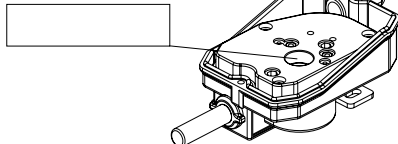
O-ring coupling



Fixed coupling



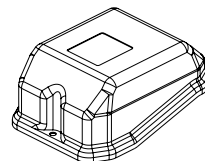
Revolution ratio



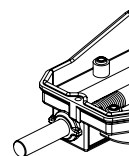
Instructions

- Write the numbers corresponding to the cams and the switches required.
- Mark the boxes corresponding to the potentiometer required and the coupling needed.
- Write the revolution ratio required.
- Mark the boxes corresponding to the components required (pinion gear, cover, shaft, coupling, flange).

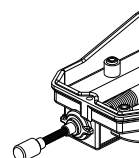
Cover



Standard shaft



Flexible shaft



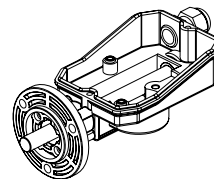
Male coupling



Female coupling



Flange



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