

# LIMITEX AG

## HAZARDOUS AREAS

### Rotary limit switch



Explosion Proof rotary limit switch.  
Sturdy and reliable, Limitex AG is used to control the movement of industrial machinery in potentially explosive areas.

## FEATURES

- It consists of a gear motor that transfers movement to the cams through a primary input reduction stage (worm gear and helical toothed gear) and one or more secondary output stages (pairs of straight toothed gears).
- Accurate adjustment of cams by means of screws.
- Positive opening NC contacts for safety functions.
- Mechanical life of switches: 1 million operations.
- IP protection degree: Limitex AG is classified IP 65 / IP 66.
- Extreme temperature resistance: -50°C to +60°C.
- It features external enclosure made of G20 cast iron, stainless steel transmission and gear driving shafts, self-lubricating technopolymer gears and driving bushes.
- All materials and components used are wear resistant and guarantee protection of the unit against water and dust.

## OPTIONS

- Revolution ratios from 1:15 to 1:499, achieved by combining different secondary output stages.
- Snap action switches with 1NO+1NC contacts.
- It can be equipped with a cam set with 2, 3 or 4 switches.
- Available with flange for direct coupling to the motor.
- Available with direct control switches to enable direct action on the motor.

## CERTIFICATIONS

- CE marking.
- Atex certification EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009.
- Conformity to Standards IECEX IEC 60079-0:2011, IEC 60079-1:2007-04 and IEC 60079-31:2008.

Fill in the "request form" for accurate product configuration.

## CERTIFICATIONS

<b>Conformity to Atex Standards</b>	EN 60079-0:2009 Explosive atmospheres - Equipment - General requirements
	EN 60079-1:2007 Explosive atmospheres - Equipment protection by flameproof enclosures "d"
	EN 60079-31:2009 Explosive atmospheres - Equipment dust ignition protection by enclosure "t"
<b>Conformity to IECEx Standards</b>	IEC 60079-0:2011 Explosive atmospheres - Equipment - General requirements
	IEC 60079-1:2007-04 Explosive atmospheres - Equipment protection by flameproof enclosures "d"
<b>Atex Certification</b>	INERIS 13ATEX0020X
<b>IECEx Certification</b>	IECEx INE 13.0051X
<b>Certification for equipment Group I, IIA, IIB and IIC with the following marks*</b>	MINING: I M2 Ex d I Mb (ATEX) Ex d I Mb (IECEx)
	GAS Zone 1 and 2: II2G Ex d IIB T6 Gb or Ex d IIC T6 Gb (ATEX) Ex d IIB T6 or Ex d IIC T6 Gb (IECEx)
	DUST Zone 21 and 22: II2D Ex tb IIIC T85°C Db IP66 (ATEX) Ex tb IIC T85°C Db IP66 (IECEx)
	GAS & DUST: II2GD Ex d IIB or IIC T6 Gb Ex tb IIC T85°C Db IP66
<b>Conformity to Community Directives</b>	2014/35/UE Low Voltage Directive
	2006/42/CE Machinery Directive
<b>Conformity to CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60204-32 Safety of machinery - Electrical equipment of machines - Requirements for hoisting machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
<b>Markings and homologations</b>	CE  IEC IECEx

## GENERAL SAFETY SPECIFICATIONS

<b>Maximum supply voltage</b>	300 Vac
<b>Maximum current intensity</b>	3 A
<b>Maximum dissipated power</b>	2 Watt
<b>Rated frequency</b>	50 / 60 Hz

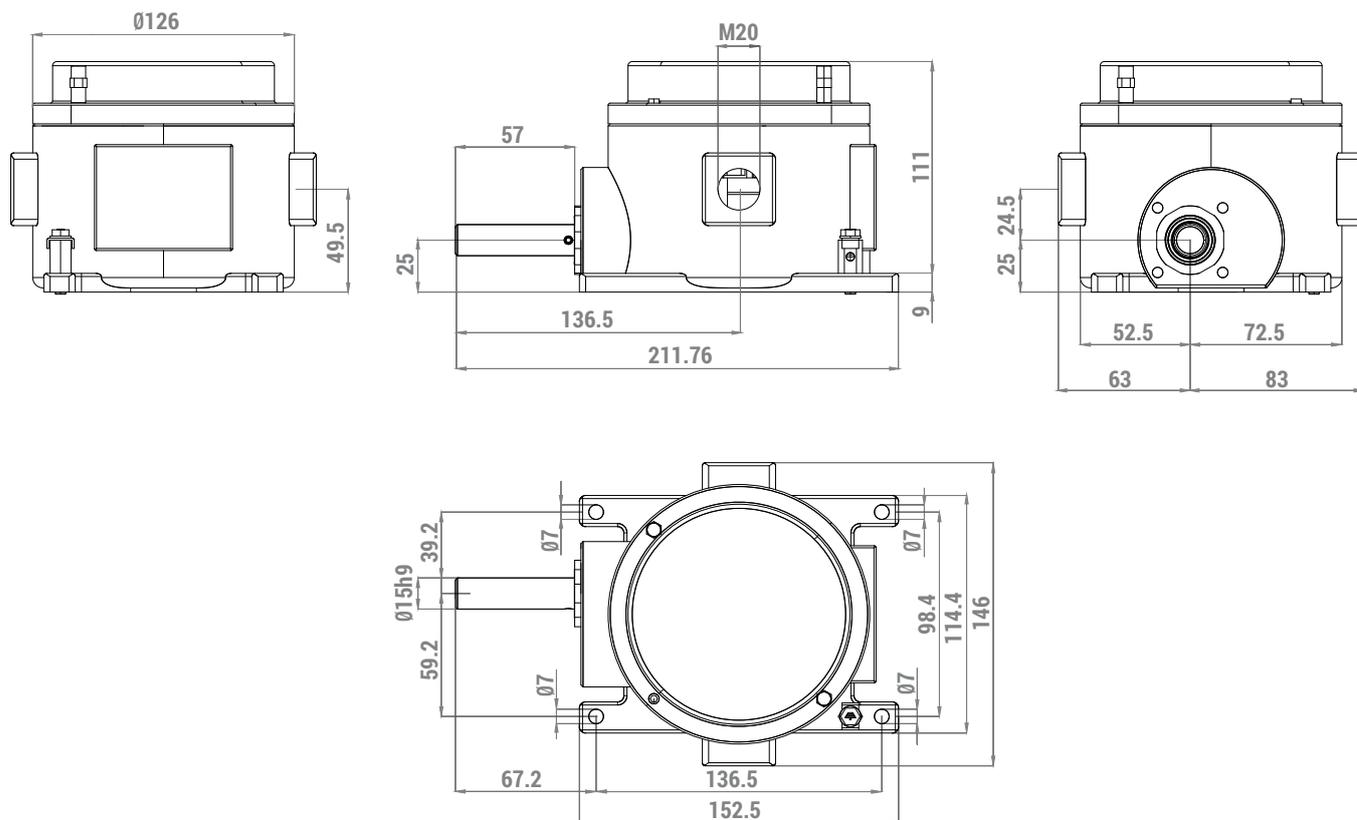
## GENERAL TECHNICAL SPECIFICATIONS

<b>Operational ambient temperature</b>	-50°C/+60°C
<b>IP protection degree</b>	IP 65 / IP 66
<b>Maximum rotation speed</b>	800 rpm
<b>Cable entry</b>	No. 2 M20x1.5 (standard)
	No. 2 M25x1.5 (available on request)
	No. 2 ½ NPT (available on request)

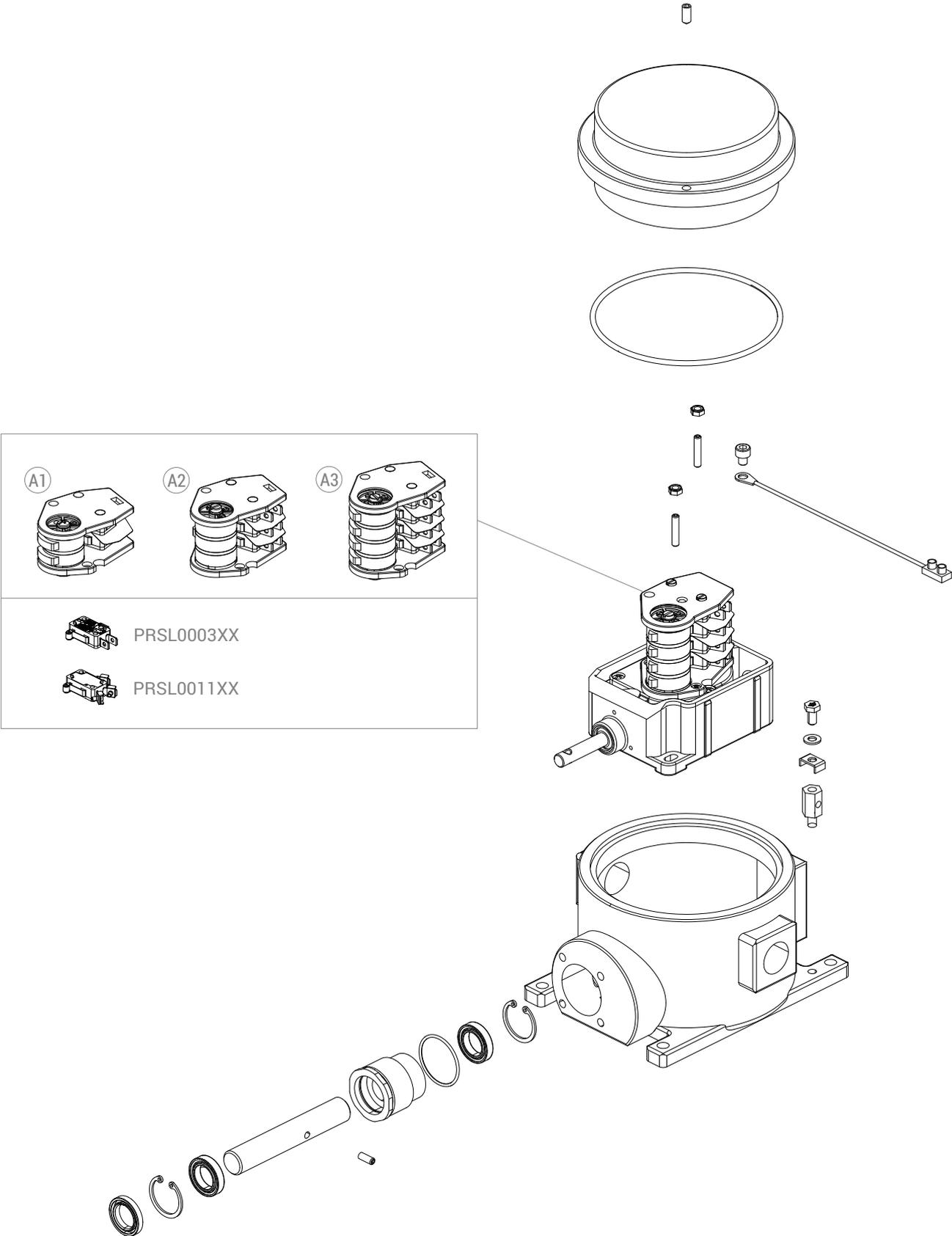
## TECHNICAL SPECIFICATIONS OF THE SWITCHES

Code	PRSL0003XX	PRSL0011XX
Utilisation category	AC 15	
Rated operational voltage	250 Vac	
Rated operational current	3 A	
Rated thermal current	10 A	
Rated insulation voltage	300 Vac	
Mechanical life	1x10 <sup>6</sup> operations	
Connections	6.3 mm Faston taps	Screw-type terminals
Wires	-	2x0.5mm <sup>2</sup> , 2x1.5 mm <sup>2</sup> , 1x2.5 mm <sup>2</sup>
Tightening torque	-	0.5 Nm
Switch type	Single break, snap action	
Contacts	1NO+1NC (All NC contacts are of the positive opening operation type ⚡)	1NO+1NC
Scheme		

## OVERALL DIMENSIONS (mm)



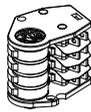
ASSEMBLY DRAWING



Refer to the following table for descriptions of components: "Standard cam sets".

## COMPONENTS

### Standard cam sets

Ref.	Drawing	No. and type of cams	No. and type of switches	Code
A1		2 cams A	2 PRSL0003XX switches	PRFC0008PEC
		2 cams C	2 PRSL0003XX switches	PRFC0009PEC
A2		3 cams A	3 PRSL0003XX switches	PRFC0004PEC
		3 cams C	3 PRSL0003XX switches	PRFC0006PEC
A3		4 cams A	4 PRSL0003XX switches	PRFC0202PEC
		4 cams C	4 PRSL0003XX switches	PRFC0198PEC

Other sets with 2, 3 or 4 switches are available on request.

### Cam reference chart

Cam			Switching angle	Code
A		1 point	20.5° ±0.5°	PRSL7140PI
B		10 points	14.0° ±0.5°	PRSL7142PI
C		60° sector	78.0° ±0.5°	PRSL7141PI
E		180° sector	199.5° ±0.5°	PRSL7144PI
H		335° sector	344.0° ±0.5°	PRSL7143PI

# LIMITEX AG - REQUEST FORM FOR LIMIT SWITCH

## Instructions

- 1 Standard cam set:** write the code of the cam set required, according to the legend.
- 2 Customized cam set:** for non standard cam sets, fill in the scheme choosing the cams and the switches required, according to the legends.  
Customized cams are available on request.
- 3 Revolution ratio:** write the required revolution ratio.
- 4 Cable entry:** tick the cable entry required.

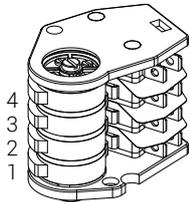
## Cable entry **4**

- No. 2 M20x1.5 (standard)
- No. 2 M25x1.5 (available on request)
- No. 2 ½ NPT (available on request)

## Standard cam set **1**

Cam set code  
\_\_\_\_\_

## Customized cam set **2**



Cam code	Switch code
4 _____	_____
3 _____	_____
2 _____	_____
1 _____	_____

## Revolution ratio **3**

- |                               |   |
|-------------------------------|---|
| <input type="checkbox"/> 1:15 | <input type="checkbox"/> 1:75   |
| <input type="checkbox"/> 1:20 | <input type="checkbox"/> 1:100  |
| <input type="checkbox"/> 1:25 | <input type="checkbox"/> 1:150  |
| <input type="checkbox"/> 1:50 | <input type="checkbox"/> 1: <input style="width: 50px; height: 15px;" type="text"/> |

## **1** Legend - Standard cam sets

No. & type of switches	No. & type of cams	Code
2 x PRSL0003XX	2 cams A	PRFC0008PEC
	2 cams C	PRFC0009PEC
3 x PRSL0003XX	3 cams A	PRFC0004PEC
	3 cams C	PRFC0006PEC
4 x PRSL0003XX	4 cams A	PRFC0202PEC
	4 cams C	PRFC0198PEC

## **2** Legend - Cams

Cam	Switching angle	Code
A	1 point 20,5° ±0,5°	PRSL7140PI
B	10 points 14,0° ±0,5°	PRSL7142PI
C	60° sector 78,0° ±0,5°	PRSL7141PI
E	180° sector 199,5° ±0,5°	PRSL7144PI
H	335° sector 344,0° ±0,5°	PRSL7143PI

## **2** Legend - Switches

PRSL0003XX	PRSL0011XX

## Remarks

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