


**P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO**

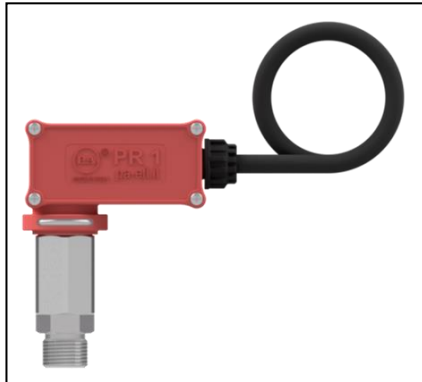
VIA MILANO, 13 – CASELLA POSTALE 115 – 42048 RUBIERA (REGGIO EMILIA) – ITALY  
 Tel. +39 0522 623611 – Fax. +39 0522 629600 – R.E.A. RE 156319 – R.I. RE11535 – Mecc. RE 013446  
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 ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351  
**Web:** <http://www.pa-etl.it> – **E-mail:** [info@pa-etl.it](mailto:info@pa-etl.it)



## PR1 – PRESSURE SWITCH with electric signal

**Technical manual: E 805**

Electro-mechanical device, which, upon reaching a pre-set pressure, opens or closes an electrical control contact.



- **29.0010.00** PR1 rated 45 bar – 4.5 MPa
- **29.0010.25** PR1 rated 25 bar – 2.5 MPa

- Microswitch with very high resistance to openings.
- Considerable resistance to high current values.
- Electrical insulation: **IP55**
- Three core cable
- Sst threaded connection

### TECHNICAL SPECIFICATIONS

PART NUMBER	RATED PRESSURE bar - MPa	PERMISSIBLE PRESSURE bar - MPa	INTERVENT. PRESSURE bar - MPa	DIFFERENTIAL WORKING PRESSURE bar - MPa	MAX.TEMP. OF THE FLUID (1) °C	INLET	WEIGHT g
<b>29.0010.00</b>	600 - 60	660 -66	45 – 4.5	±6	90	G 3/8 M	280
<b>29.0010.25</b>	600 - 60	660 -66	25 – 2.5	±6	90	G 3/8 M	280

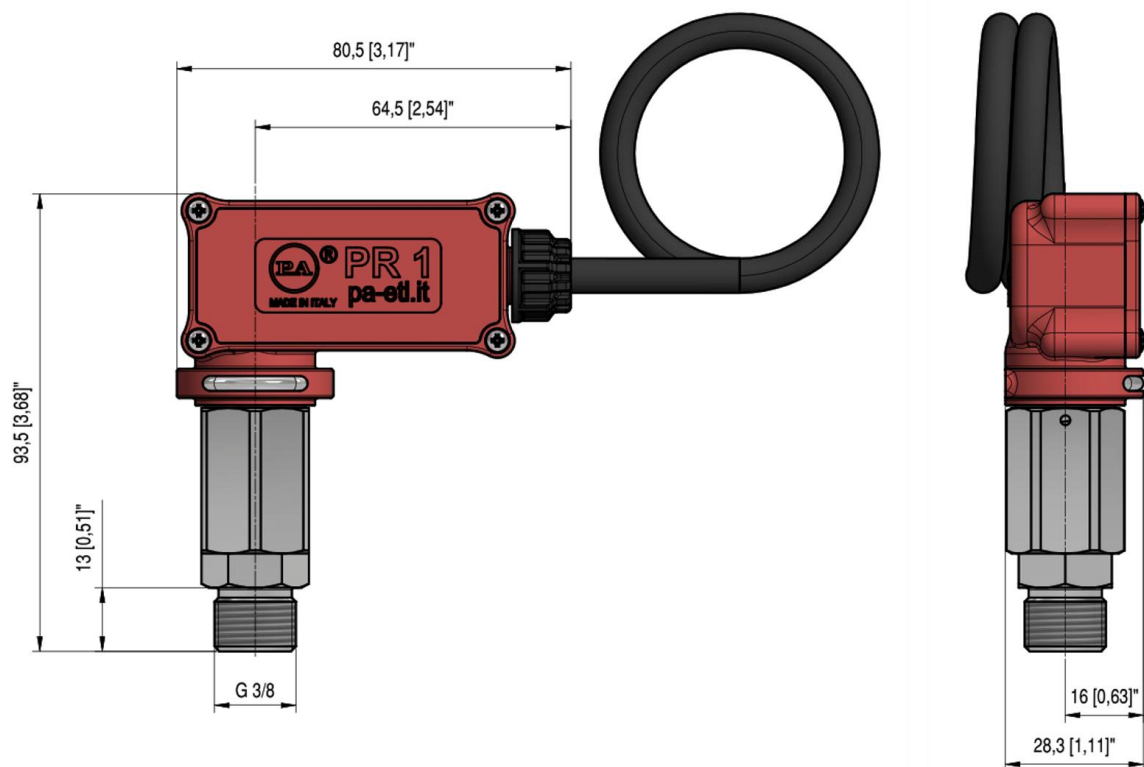
### ELECTRICAL SPECIFICATIONS

Max rated voltage:	250 V
Breaking switch:	16 (A) – resistive load - 6 (A) – inductive load
Cable length:	1200 mm – Electric wire: 3 x 1 mm
Max. amperage cable:	10 A
Environment temp.:	75 °C – Type of action: 1C
Lifetime electrical component:	50.000 commutations, T.85°C at 250V a.c. in line with CEE 24- VDE 0630
Pollution situation of the device control:	High

**(1)** The Pressure switch has been designed for a continuous use at a water temperature of 60°C. It can resist for short periods at a maximum temperature of 90°C.

<b>Instruction manual, maintenance, installation, spare parts.</b>	n. 12.9805.00
For a correct utilization, follow the directions of this manual.	
<b>Re-print them on the use and maintenance booklet of the machine</b>	

## DIMENSIONAL DRAWING



## INSTRUCTIONS

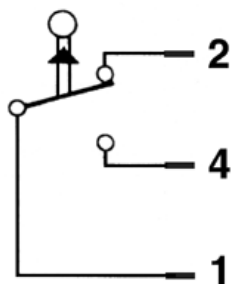
### SELECTION

Choose the appropriate pressure switch for the rated pressure of the system and for the on/off operations. Check that the value of the requested current is under the maximum rated value. In any case, the pressure of the machine should not exceed the permissible pressure rate imprinted on the pressure switch.

### INSTALLATION

When installed on machines that produce hot water, the pressure switch has to be fitted in front of the heat generator. This accessory has to be installed on a finished machine. **Electrical installation has to be carried out by a qualified person.**

**ATTENZIONE!! – Always assure earth wiring to the electric device.**



### WIRING DIAGRAM

1) RED - 2) BLUE - 4) BROWN

### ELECTRICAL CONNECTION

N.O. RED + BROWN – Normally open  
N.C. RED + BLUE – Normally closed

### OPERATIONS

The PR1 Pressure switch signals the surpass of a pre-set pressure, through a piston, which operates a switch lever.

The set pressure of 45 bar – 4.5 MPa is of the fixed type.

## PROBLEMS AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Pressure switch does not function	Electric connection faulty or loose Rupture of microlever Rupture of piston spring Rupture of microcontacts Jammed piston	Check and/or replace Replace microswitch Replace Replace microswitch Check and/or replace
Fluid in the casing	Damaged piston seals Damaged nut seals	Check and/or replace Check and/or replace

## REGULATIONS:

The accessory hereby described bears the CE marking in accordance with the Norms and Directives applied on the **Declaration of Conformity**.

For a correct utilization, follow the directions described in this manual and re-print them on the Use and maintenance manual of the machine

Make sure that you are given the Original Conformity Declaration for the accessory chosen. The present manual is valid for all Pressure switches named **PR1**

## SPARES

Use only original PA spares, in order to benefit for a correct function and long reliability.

## MAINTENANCE

STANDARD: every 400 working hours (circa 10,000 cycles), check and lubricate the seals with water resistant grease.

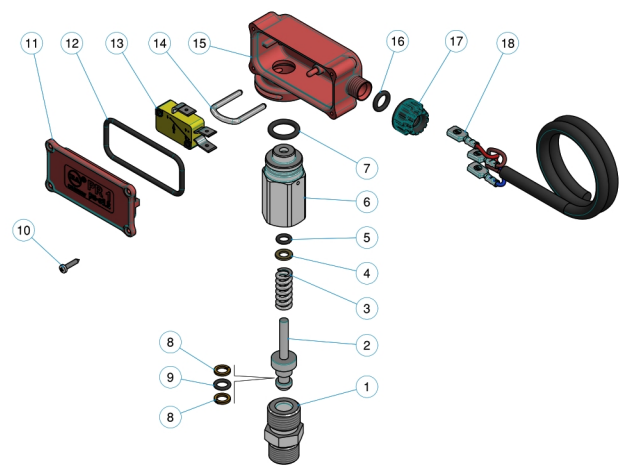
SPECIAL: every 800 working hours (circa 20,000 cycles), control the wear of the seals and internal parts and if necessary, replace with original PA parts taking care during installation and to lubricate with water resistant grease.

Maintenance has to be carried out by Specialized Technicians

For a correct assembly, follow the phases indicated on the exploded view referred.

**The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance**

Technical data, descriptions and illustrations are indicative and liable to modification without notice



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	29.0011.51R	Nipple, M18x1,5-3/8M Bsp Sst.	1					5
2	29.0002.51R	Piston, PR1 Sst.	1					5
3	29.0016.51R	Spring, 2x9x22 mm Sst.	1					10
3	29.0015.51R	Spring, 1,8x22 mm Sst. (1)	1					10
4	14.3564.00R	Washer, 5,3x9,5x1 mm brass	1					10
5	10.3049.01R	O-ring, 1,78x5,28 mm	1	•				10
6	29.0012.51R	Housing -PR1, Sst.	1					2
7	10.3177.00R	O-ring, 2,62x12,37 mm	1					10
8	10.4006.01R	Back-up ring, opn. 6,2x9x1,2 mm	2	•				10
9	10.3051.00R	O-ring, 1,78x6,07 mm Vi 70	1	•				10

Kit	P/N	Description	
K1	29.0026.24	Repair kit -PR16, 1x3pcs.	1

(1) 29.0010.25

Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
10	16.3020.00R	S/tapp. screw, 2,5x12mm chrom	4					10
11	29.0007.84R	Lid, PR1 PA red	1					1
12	10.3210.42R	O-ring, 2,62x42,52 mm	1					10
13	12.5001.00R	Microswitch, 16A 250V	1					10
14	40.5001.51R	Retainer, Sst.	1					10
15	29.0006.84R	Casing, PR1 PA red	1					2
16	10.3109.92R	O-ring, 2,4x7,3 mm	1					10
17	29.0082.84R	Locknut for cable gland, PA black	1					10
18	29.0109.84R	Locknut for cable gland, PA red (1)	1					10
18	12.5000.00R	Câble, 3x1 L.1200 mm	1					10