



**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  
 C.F. e P. IVA 01035950359 – Cap. Soc. i.v. € 750.000,00 – Codice Identificativo C.E.E. IT 01035950359  
 ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351  
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## PR5 – PRESSURE SWITCH with electric signal

Technical manual: **E 802**

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



•	<b>29.0080.00</b>	PR5	G1/4M	rated 25bar – 2.5MPa
•	<b>29.0080.05</b>	PR5	G1/8M	rated 15bar – 1.5MPa
•	<b>29.0080.10</b>	PR5	G1/4M	rated 15bar – 1.5MPa
•	<b>29.0080.18</b>	PR5	G1/8M	rated 25bar – 2.5MPa
•	<b>29.0080.50</b>	PR5	G1/4M	rated 40bar – 4 MPa
•	<b>29.0080.55</b>	PR5	G1/8M	rated 40bar – 4 MPa
•	<b>29.0080.75</b>	PR5	G1/8M	rated 10bar – 1 MPa
•	<b>29.0080.80</b>	PR5	G3/8M	rated 40bar – 4 MPa
•	<b>29.0080.85</b>	PR5	G3/8M	rated 25bar – 2.5MPa
•	<b>29.0080.88</b>	PR5	G1/4M	rated 15bar – 1.5MPa
•	<b>29.0076.15</b>	PR5	G3/8MF	rated 15bar – 1.5MPa
•	<b>29.0077.15</b>	PR5	G3/8MF	rated 15bar – 1.5MPa

- Microswitch with very high resistance openings
- Considerable resistance to high current values.
- Compact overall dimensions
- Electrical insulation: **IP55**
- Possibility to choose from 4 different pressure settings acting on the electrical switch.
- Three core cable.
- Two threaded connection versions.

### TECHNICAL SPECIFICATIONS

PART NUMBER	RATED PRESSURE bar - MPa	PERMISSIBLE PRESSURE bar - MPa	INTERVENT. PRESSURE bar - MPa	COLOR	DIFFERENT. WORKING PRESSURE bar - MPa	(1) MAX.TEMP OF THE FLUID °C	INLET	WEIGHT g
<b>29.0080.00</b>	250 - 25	280 - 28	25 – 2.5	RED	±8	90	G 1/4 M	130
<b>29.0080.05</b>	250 - 25	280 - 28	15 – 1.5	BLUE	±6	90	G 1/8 M	130
<b>29.0080.10</b>	250 - 25	280 - 28	15 – 1.5	BLUE	±6	90	G 1/4 M	130
<b>29.0080.18</b>	250 - 25	280 - 28	25 – 2.5	RED	±8	90	G 1/8 M	130
<b>29.0080.50</b>	250 - 25	280 - 28	40 - 4	BLACK	±10	90	G 1/4 M	130
<b>29.0080.55</b>	250 - 25	280 - 28	40 - 4	BLACK	±10	90	G 1/8 M	130
<b>29.0080.75</b>	250 - 25	280 - 28	10 - 1	YELLOW	±4	90	G 1/8 M	130
<b>29.0080.80</b>	250 - 25	280 - 28	40 - 4	BLACK	±10	90	G 3/8 M	130
<b>29.0080.85</b>	250 - 25	280 - 28	25 – 2.5	RED	±8	90	G 3/8 M	130
<b>29.0080.88</b>	250 – 25	280 - 28	15 – 1.5	BLUE	± 6	90	G 1/4 M	130
<b>29.0076.15</b>	250 - 25	280 - 28	15 – 1.5	BLUE	±6	90	G 3/8 MF	220
<b>29.0077.15</b>	250 - 25	280 - 28	15 – 1.5	BLUE	±6	90	G 3/8 MF	230

### ELECTRICAL SPECIFICATIONS

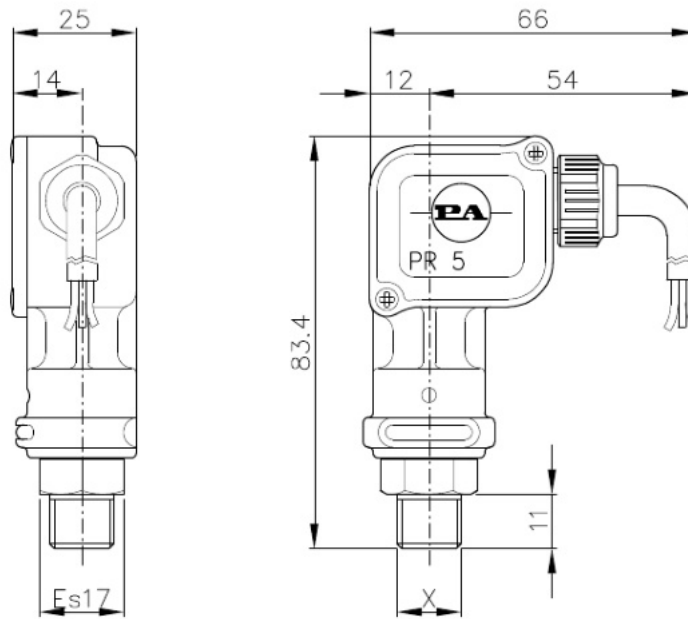
Max rated voltage:	250 V
Breaking switch:	6 (A) – resistive load - 2 (A) – inductive load
Cable length :	1000 mm – Electric wire : 3 x 0.75 mm <sup>2</sup>
Environment temp.:	75 °C – Type of action: 1C
Lifetime electrical component:	50.000 commutations, T.85°C, a 250V a.c.in line with CEE 24- VDE 0630
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.

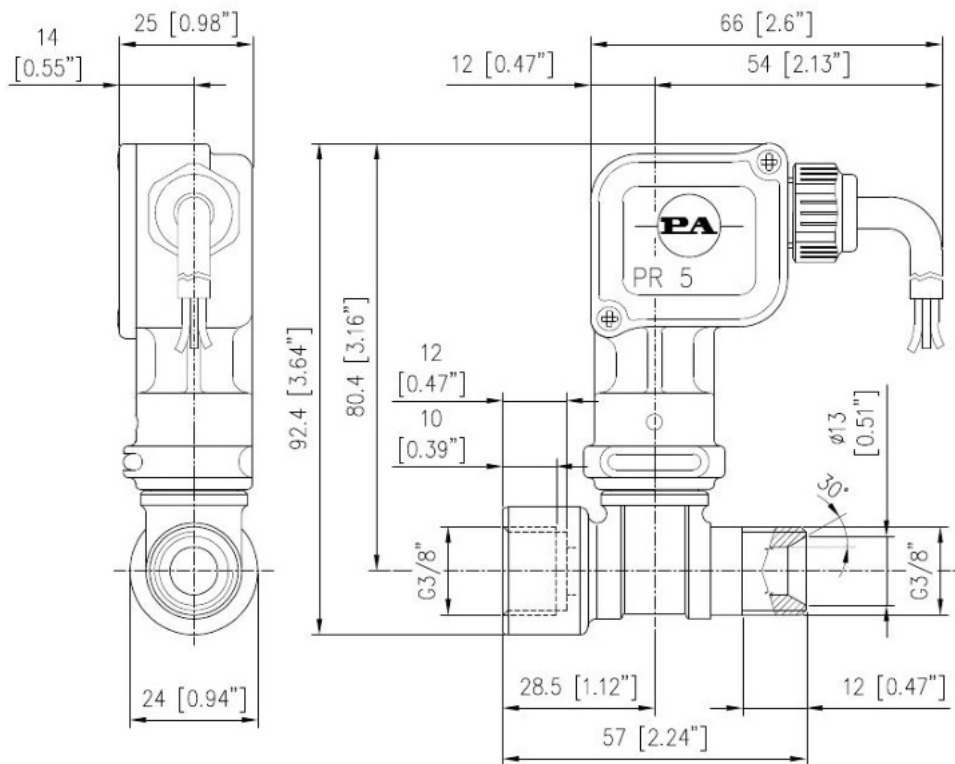
<b>Instruction manual, maintenance, installation, spare parts.</b> For a correct utilization, follow the directions of this manual. <b>Re-print them on the use and maintenance booklet of the machine</b>	n. 12.9802.00
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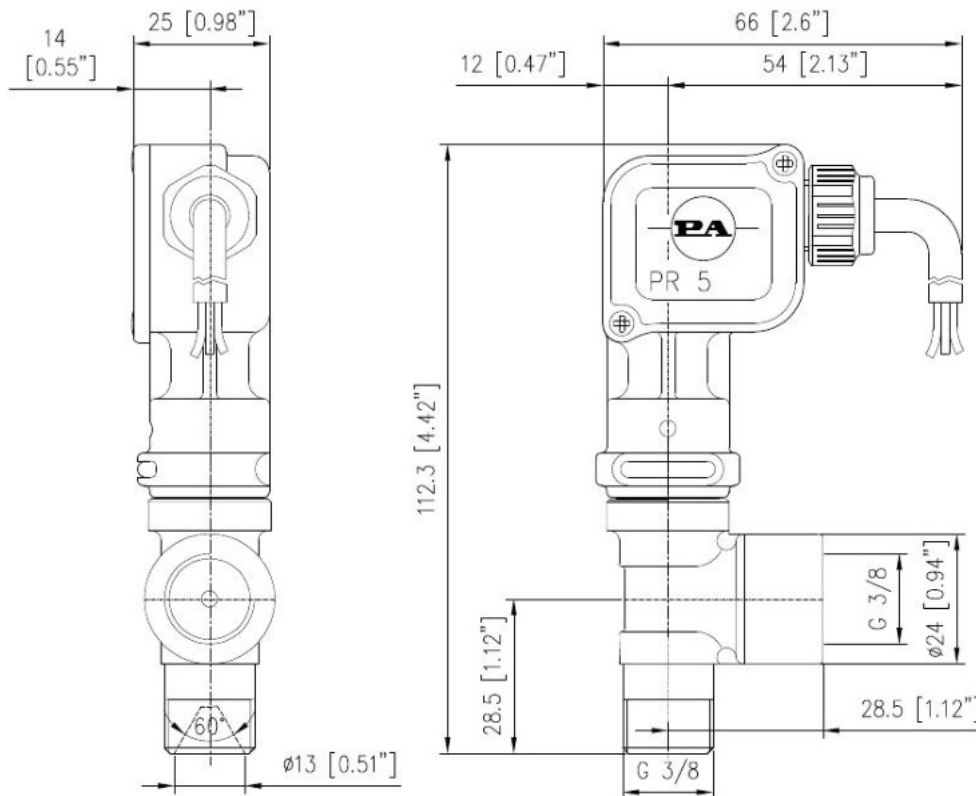
**DIMENSIONAL DRAWING**

CODICE CODE	X
29.0080.00	G 1/4 M
29.0080.05	G 1/8 M
29.0080.10	G 1/4 M
29.0080.18	G 1/8 M
29.0080.50	G 1/4 M
29.0080.55	G 1/8 M
29.0080.75	G 1/8 M
29.0080.80	G 3/8 M
29.0080.85	G 3/8 M
29.0080.88	G 3/8 M



**COD 29.0076.15**



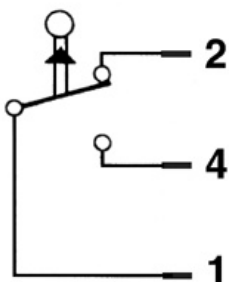
**COD 29.0077.15****INSTRUCTIONS****SELECTION**

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. The fixed setting of the switch is distinguished by three different colours of the nut. 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.**

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

**WIRING DIAGRAM**

1) RED - 2) BLUE - 4) BROWN

**ELECTRICAL CONNECTION**

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

**OPERATIONS**

The PR5 Pressure switch signals the surpass of a pre-set pressure, through a piston, which operates a switch lever. The set pressures are respectively; 10 bar – 1 MPa; 15 bar – 1.5 MPa; 25 bar – 2.5 MPa and 40 bar – 4 MPa 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 **PR5**

### 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



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## EU DECLARATION OF CONFORMITY 97/23/EC, 2014/30/EU

**We under signed declare under our responsibility that the product:**

*Noi firmatari della presente dichiariamo sotto la nostra responsabilità che il prodotto:*

### **PRESSURE SWITCH “Model PR1 – PR5 – PR16”** *PRESSOSTATO “Modello PR1 – PR5 - PR16”*

**has been designed and manufactured in accordance with the standards CEI EN 60335-2-79:2015, UNI EN 1829-1:2010, UNI EN 1267:2012 and Art. 3.3, reference annex II & III Directive EC/97/23; è stato progettato e fabbricato in conformità alle norme CEI EN 60335-2-79:2015, UNI EN 1829-1:2010, UNI EN 1267:2012 e quanto previsto da Art. 3.3, riferimento allegati II e III Direttiva 97/23/CE; to which this declaration relates is in conformity with the following standards or other normative document(s):**

*al quale questa dichiarazione si riferisce, è conforme alle seguenti norme:*

- **CEI EN 55014-1:2008 + A1:2010 + A2:2012 – Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission**
- *Prescrizione per gli elettrodomestici, gli utensili elettrici e gli apparecchi simili – Parte 1: Emissione*
- **CEI EN 55014-2:2015 – Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard**
- *Prescrizione per gli elettrodomestici, gli utensili elettrici e gli apparecchi simili – Parte 2: Immunità – Norma di famiglia per prodotti*
- **CEI EN 60335-1:2013 + A11:2015 – Household and similar electrical appliances - Safety - Part 1: General requirements**
- *Sicurezza degli apparecchi d'uso domestico e simile – Sicurezza – Parte 1: Norme generali*

**following the provisions of the Directive: 2014/30/EU.**

*in base a quanto previsto dalla Direttiva: 2014/30/UE.*

#### **Restrictions**

**When installed with other products or as part of an assembly, the EMC characteristics might change. In this case the manufacturer of the final product has to check the EMC characteristics to ensure that they are still in compliance with EMC Directive.**

#### **Limitazioni**

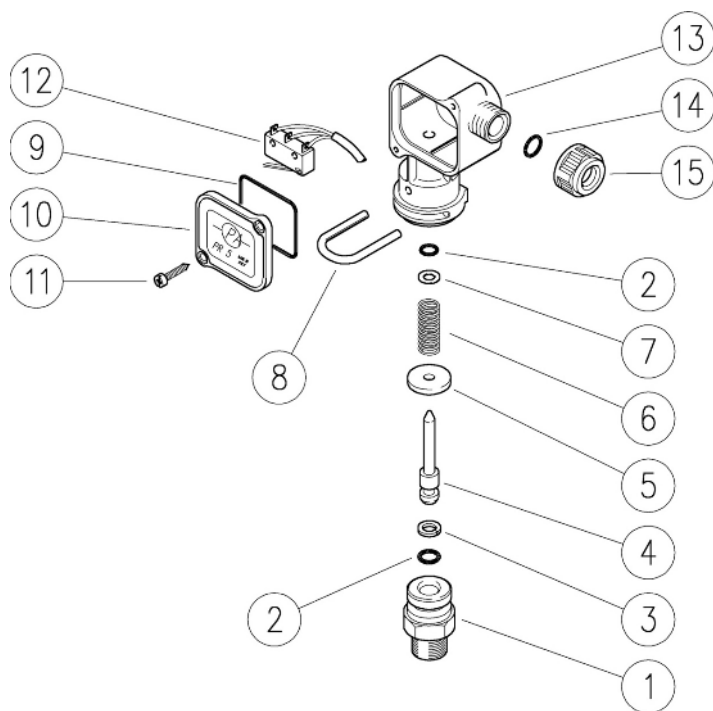
*Quando installato in altri prodotti o come parte di un insieme, le caratteristiche EMC possono essere alterate. Pertanto in tal caso il costruttore del prodotto finito deve verificare nuovamente le caratteristiche EMC per assicurare che siano ancora in conformità con la Direttiva EMC*

Rubiera, li 24/05/2017.

P.A. SpA  
**II PRESIDENTE**  
Ing. Arnaldo Benetti

29.0080.00 PR5 press.sw.,brass,1/4M Bsp 25bar red  
 29.0080.10 PR5 press.sw.,brass,1/4M Bsp 15bar blue  
 29.0080.50 PR5 press.sw.,brass,1/4M Bsp-4MPa-black

29.0080.75 PR5 press.sw.,brass,1/8M Bsp 10bar yell.  
 29.0080.80 PR5 press.sw.,brass,3/8M Bsp 40bar black



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	29.0081.31	Housing, 1/4M Bsp brass	1					5
1	29.0091.31	Housing -PR5, 1/8M Bsp brass (1)	1					3
1	29.0044.31	Housing, 3/8M Bsp brass (2)	1					5
2	10.3038.00	O-ring, 1,78x3,68 mm	2	•				10
3	10.4002.00	Back-up ring, opn. 4,2x7x1,5 mm	1	•				10
4	29.0090.31	Piston -PR5, brass	1					5
5	29.0086.31	Washer, 4x16x2,5 mm brass	1					10
6	29.0085.61	Spring, 25Bar-1,4x8x18 mm (3)	1					10
6	29.0084.61	Spring, 40Bar-1,6x8x18 mm (4)	1					10
6	29.0094.51	Spring, 15Bar 1,3x6,7x18mm Sst. (5)	1					10
6	29.0112.51	Spring, 1,2x8x18 mm Sst. (1)	1					10
7	14.3519.00	Washer, 4x8x0,5 mm brass	1					10

Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
8	29.0087.51	U-bolt, Sst.	1					10
9	10.3206.01	O-ring, 2,62x28,25 mm	1	•				10
10	29.0088.84	Lid, PR5 PA black	1					10
11	16.3020.00	S/tapp. screw, 2,5x12mm chrom	2					10
12	12.5006.00	Cable, 3x0,75 L.1000 mm+ Microswitch	1					5
13	29.0089.84	Housing, PR5 PA black	1					10
14	10.3169.00	O-ring, 2,62x6,02 mm	1	•				10
15	29.0082.84	Locknut for cable gland, PA black	1					10
15	29.0109.84	Locknut for cable gland, PA red	1					10
15	29.0110.84	Locknut for cable gland, PA blue	1					50
15	29.0111.84	Locknut for cable gland, PA yellow (1)	1					10

Kit	P/N	Description	
K1	29.0095.24	Spares kit - PR5, 5x10pcs.	1

(1) 29.0080.75 (2) 29.0080.80 (3) 29.0080.00 (4) 29.0080.50 (5) 29.0080.10