

# HIGH VOLTAGE CABLES

## PC.... Series



## PD.... Series



## PCL....Series



## P9C.... and P11C.... Series



### DESCRIPTION

The cables of this series are suitable for the connection of the high voltage output of ignition transformers to ignition electrodes, as well as for the connection of flame detection electrodes (also manufactured by BRAHMA). The cables can be supplied with various lengths and types of terminals (on this subject, see paragraph CONSTRUCTION CHARACTERISTICS).

### CHARACTERISTICS

- The main features of high voltage cables are the following:
- **Operating temperature range:** up to 270°C
  - **Cable insulation voltage (IEC 60-1):** 20 kV impulsive
  - **Protection rating:** IP00
  - **EMC resistor:** 1 kΩ, 2.7 kΩ, 4.7 kΩ
  - **Suitable for use with:**
    - gaseous fuels (1st, 2nd and 3rd family),
    - hydrocarbons (light and heavy oils)
    - and operating temperatures up to 270°C

### DIRECTIONS FOR INSTALLATION

After fixing the **Spark Gap** (for example 3 mm), the **Min. Clearance and Creepage distances** (see examples "PC" and "PD" series, fig. 1) must be calculated as follows:

- **Clearance distance 3 times the spark gap**  
example:  $3 \times 3_{\text{spark gap}} = 9 \text{ mm} (*)$
- **Creepage distance 6 times the spark gap**  
example:  $6 \times 3_{\text{spark gap}} = 18 \text{ mm} (*)$

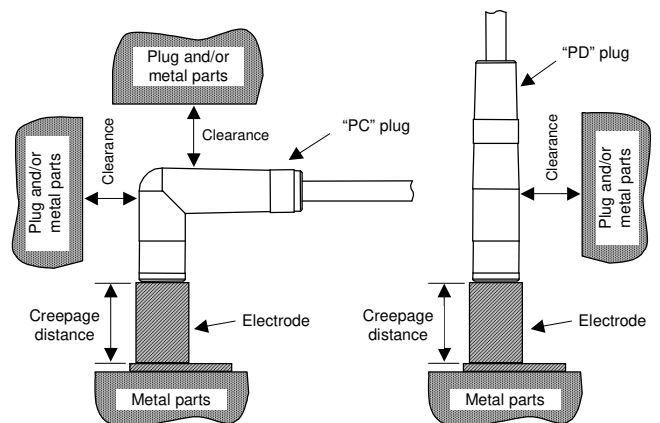


fig. 1

\* BRAHMA declines any responsibility for any improper use of the devices.

## CONSTRUCTION CHARACTERISTICS

		Y	J	K	Z	/P	X	W
90° bent plug (see fig. 2)	:	PC						
Straight plug (see fig. 3)	:	PD						
90° bent long plug – max. ceramic Ø 10 mm (see fig. 4 and 11)	:	PCL						
90° bent plug - max. ceramic Ø 9 mm (see fig. 5 and 12)	:	P9C						
90° bent plug - max. ceramic Ø 11 mm (see fig. 5 and 12)	:	P11C						
Terminal Ø 4 mm - plug side ( <b>for PC, PD and PCL series only</b> )	:	4						
Terminal Ø 6.35 mm - plug side	:	6						
Female fast-on 2.8x0.5 mm - plug side ( <b>for PC and PD series only</b> )	:	F2						
Female fast-on 2.8x0.8 mm - plug side ( <b>for PC and PD series only</b> )	:	F3						
Female fast-on 4.8x0.8 mm - plug side ( <b>for PC and PD series only</b> )	:	F4						
Female fast-on 6.35x0.8 mm - plug side ( <b>for PC and PD series only</b> )	:	F6						
Female fast-on 2.8x0.5 mm – side opposite to plug	:	2						
Female fast-on 2.8x0.8 mm – side opposite to plug	:	3						
Terminal Ø 4 mm – side opposite to plug	:	4						
Female fast-on 6.35x0.8 mm – side opposite to plug	:	6						
Terminal Ø 6.35 mm – side opposite to plug	:	7						
Female fast-on 4.8x0.8 mm – side opposite to plug	:	8						
Plug without resistor	:							
Plug with 1 kΩ resistor	:	R1						
Plug with 2.7 kΩ resistor	:	R2						
Plug with 4.7 kΩ resistor	:	R4						
Without rubber protection	:							
Rubber protection (see fig. 10 - <b>for PC and PD series only</b> )	:	/P						
Length out of plug (mm)	:	XXXMM						
Without protection – side opposite to plug (only stripped)	:							
Rubber protection for terminal Ø 4 mm – side opposite to plug (see fig. 6)	:	PG5						
Silicone protection for terminal Ø 4 mm – side opposite to plug (see fig. 7)	:	PS4						
Protection c/w heat-shrinking tube – side opposite to plug (see fig. 8)	:	TRM						
Silicone protection for sheared cable – side opposite to plug (see fig. 9)	:	PST						
Sheared cable – side opposite to plug (no unsheathing – no stripping)	:	TGL						

**Note:** F2, F3, F4 and F6 (plug side) are not standard versions.

For example, the designation “PC64R1 600MM PS4” refers to a cable with the following features:

<b>Plug side</b>		<b>Side opposite to the plug</b>	
90° bent plug .....	PC	Terminal Ø 4 mm .....	4
Terminal Ø 6.35 mm .....	6	Length of the cable out of plug 600 mm .....	600MM
Plug with 1 kΩ filter resistor .....	R1	Silicone protection for terminals Ø 4 .....	PS4

## DIMENSIONS

### • Cable with 90° bent plug: PC

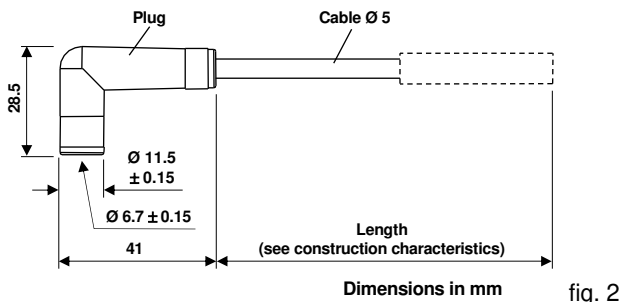


fig. 2

### • Cable with 90° bent long plug: PCL

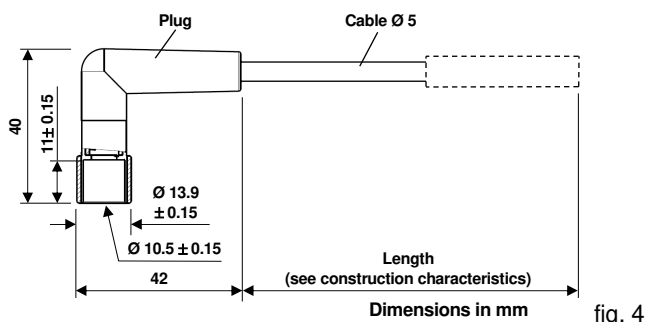


fig. 4

### • Cable with straight plug: PD

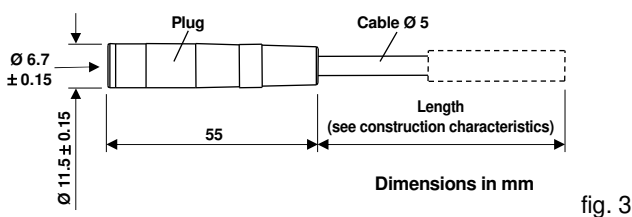


fig. 3

### • Cable with 90° bent plug: P9C and P11C

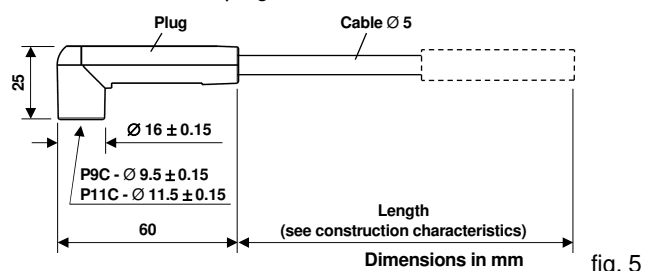


fig. 5

## PROTECTIONS (side opposite to the plug)

- Rubber protection: **PG5**

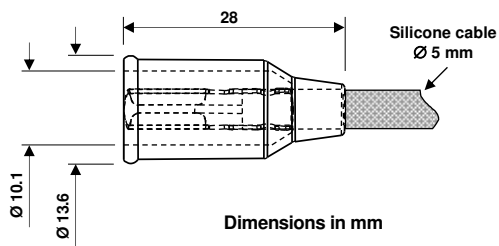


fig. 6

- Silicone protection for terminals  $\varnothing$  4 mm: **PS4**

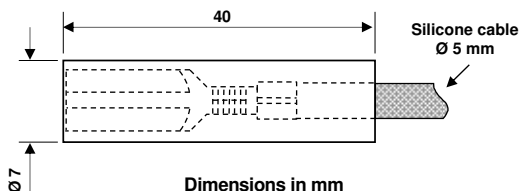


fig. 7

- Protection with heat-shrinking tube: **TRM**

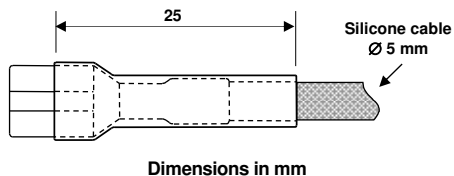


fig. 8

- Silicone protection for sheared cable: **PST**

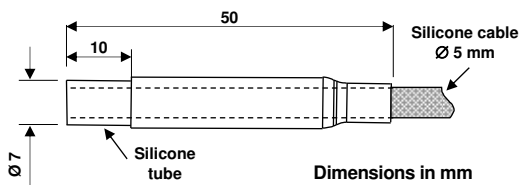


fig. 9

## ACCESSORIES

When the cables are used with BRAHMA electrodes with a ceramic diameter of 8 and 10mm, and the creepage distance mentioned in paragraph "DIRECTIONS FOR INSTALLATION" cannot be respected, it is possible to fit **PC** and **PD** plugs with a rubber protection **/P** enabling to reduce the declared min. creepage distance (see fig. 1).

- Rubber protection: **/P**

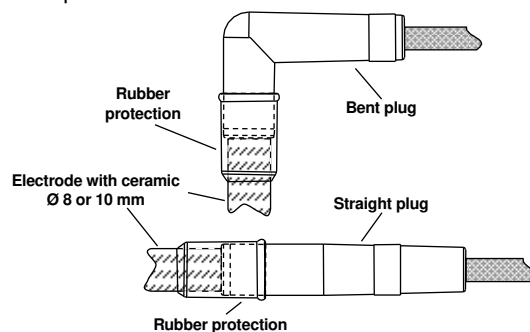


fig. 10

- Application examples of cables with plug type "**PCL**" used with BRAHMA electrode series "**ALV**", "**SALV**" and "**S2ALV**" with terminal  $\varnothing$ 4mm and  $\varnothing$ 6,35mm:

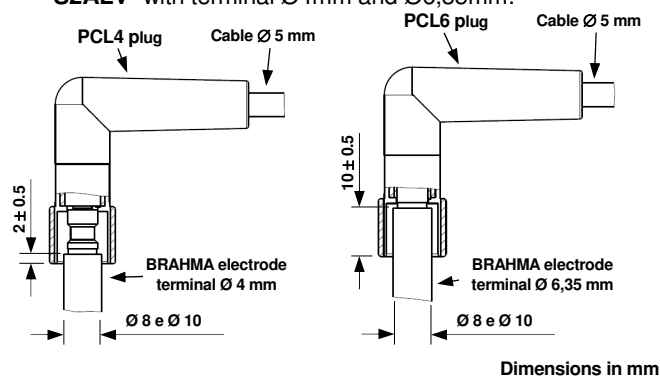


fig. 11

- Application examples of cables with plug type "**P9C**" and "**P11C**" used with BRAHMA electrode series "**ALV**", "**SALV**" and "**S2ALV**" with terminal  $\varnothing$  6,35 mm:

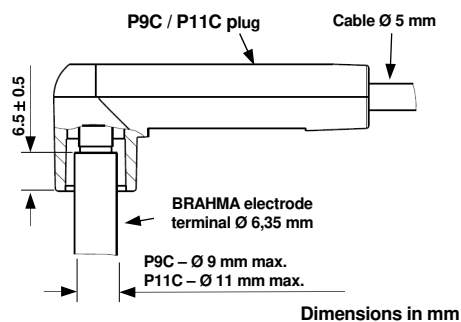


fig. 12



## NOTES ABOUT PRODUCT DISPOSAL

Electrodes cannot be disposed of as normal household waste. For the disposal procedure please refer to the local rules in force for special waste.

**ATTENTION -> Company Brahma S.p.A. takes no responsibility for any damage resulting from Customer tampering with the product.**

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