Cu-$CuSO_4$ – Polarization Probe multi-configurable – 2.5 ÷ 10 cm^2

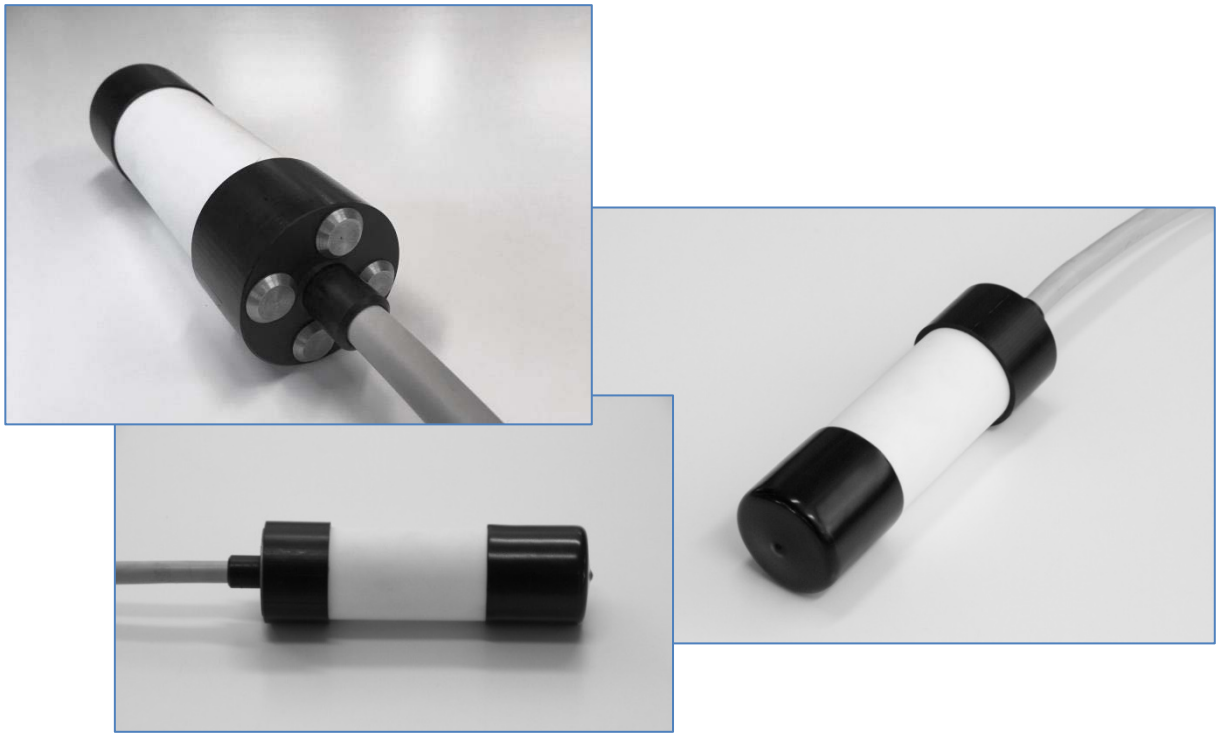
The new compact multi-configurable quadruple-Coupon Polarization Probe is a versatile electrode design with 4 coupons. Designed according to the most recent standards, it is suitable for the correct monitoring of the potential of underground structures subject to stray currents and, in general, for I·R Free measurements and current density measurements.

In this special version the porous membrane is replaced by a new generation material, suitable for both $CuSO_4$ crystals or modern copper sulphate Gel uses.

The combination of the 4 coupons allows, through simple wiring operations at the test point, to modulate from 2.5 cm^2 to 10 cm^2 the surface extension of the simulated coating holiday, thus adapting to the structure coating condition even when the C.P. system has already been switched on. High versatility and maximum reading accuracy.

The Double-Coupon Polarization Probe can be used for any buried structure, regardless of coating type and conditions; coupons shall be made of the same material as the structure.

The compact dimensions and the short activation time simplify laying operations.



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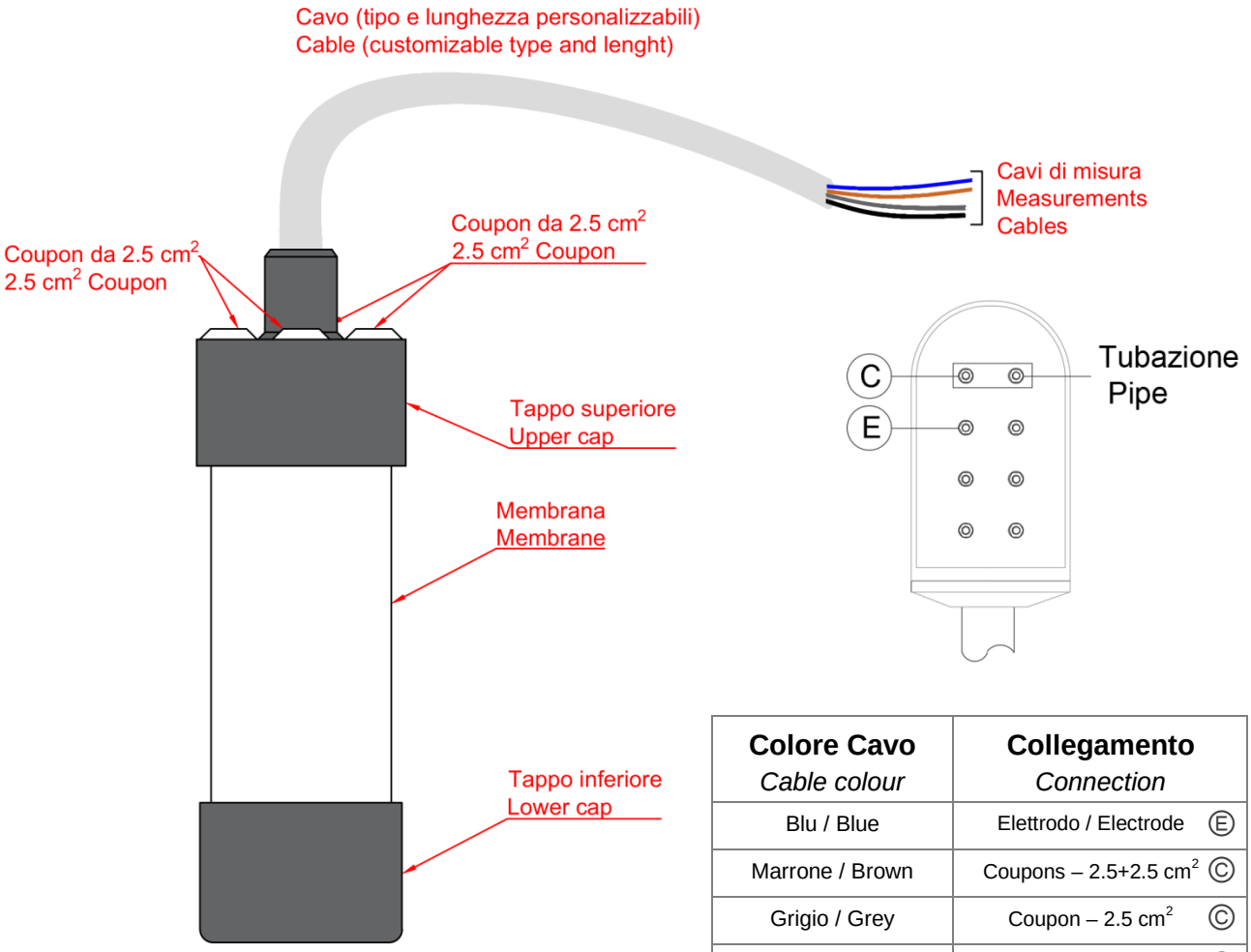
Technical details



Colore Cavo *Cable colour*	**Collegamento** *Connection*
Blu / Blue	Elettrodo / Electrode Ⓔ
Marrone / Brown	Coupons – 2.5+2.5 cm² Ⓒ
Grigio / Grey	Coupon – 2.5 cm² Ⓒ
Nero / Black	Coupon – 2.5 cm² Ⓒ

Dimension:	Ø 56 x 195 mm	Weight (cable included):	~3,5 kg
Tolerance:	± 15 mV vs. SHE	Copper element:	Pure Copper 99,98 %
Activation:	1 minute in water	Gel:	$CuSO_4$ < 25 % ; Glicerin < 50 %

Installation

The multi-configurable quadruple-Coupon electrode installation procedure is relatively simple.

In the package, the body of the electrode is packed in a special cellophane. On the electrode surface may appear some water and copper sulphate (blue) drops. This is completely normal and does not affect the behaviour of the electrode. Remove possible traces of rust from the surface of the coupons.

Before installation, remove the electrode from all its packing and submerge the electrode in water for several minutes to hydrate the electrolyte membrane.

Bury the electrode near the protected structure (0.5 to 1.5 mt), possibly at the same depth, taking care that it is positioned in a ground that is similar to that in contact with the structure. Bury the electrode in a vertical position, preferably.

Cover the electrode taking care not to damage it. The soil must be compacted around the membrane and the 4 coupons to ensure electrical continuity. Make sure that the electrode is not in direct contact with stones, rocks or gravel. Wet the soil with water to keep the membrane hydrated while the soil settles down around the electrode. Take care not to damage the electrode cable.

Electrical connections

As shown in the figure, the cable is made up of 4x2.5 sqmm conductors, each one is connected to coupons or to the internal copper bar of the electrode.

The BLUE cable is the cable of the actual electrode and must be connected to the corresponding terminal.

BLACK and GRAY cables connect individually two 2.5 sqcm coupons located on the upper side of the electrode.

The BROWN cable connects the second pair of 2.5 sqcm coupons (surface area equal to 5 sqcm).

Depending on the surface to be used, it is possible to connect one or two coupons to the protected structure.

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