

ariadna
instruments

Network Identifiers

*MV/LV cable
locator & identifier
in a single tool*

NEW!

*Specially designed for
electric utilities and
contractors*



ARIADNA TRZ

ELECTRIC CABLE LOCATOR & IDENTIFIER

Ariadna Instruments S.L.
www.ariadna-inst.com

Transmitter



The new **ARIADNA TRZ** has been developed for easily locating and positively identifying live and de-energized Medium Voltage (MV) and Low Voltage (LV) networks.

Two type of signals are available for this purpose:

- Active frequency signal by current clamp induction
- Directional Current Pulse (DCP) injection on live or de-energized cables

Active signal induction is used for accurate cable location by coupling a current frequency with the TX transmitter, and detecting it along the trace with the RX receiver. Two arrows are displayed for precise cable location, and the push of a single button determines the depth of the underground conductor.

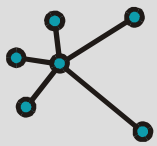
DCP feature is used to positively identify a live or de-energized MV or LV cable, either from above the surface (LV) or from a bunch of conductors (MV and LV) in an accessible place.

DCP's main advantage is that they don't leak into adjacent cables or conductors, appearing only on the path from the point of injection to the power transformer that feeds it.

With this system, the Ariadna TRZ can locate, trace and identify the desired cable where other similar instruments just provide information that must be processed by the user, without being able to conclude whether the located cable is the target one or not.

Receiver

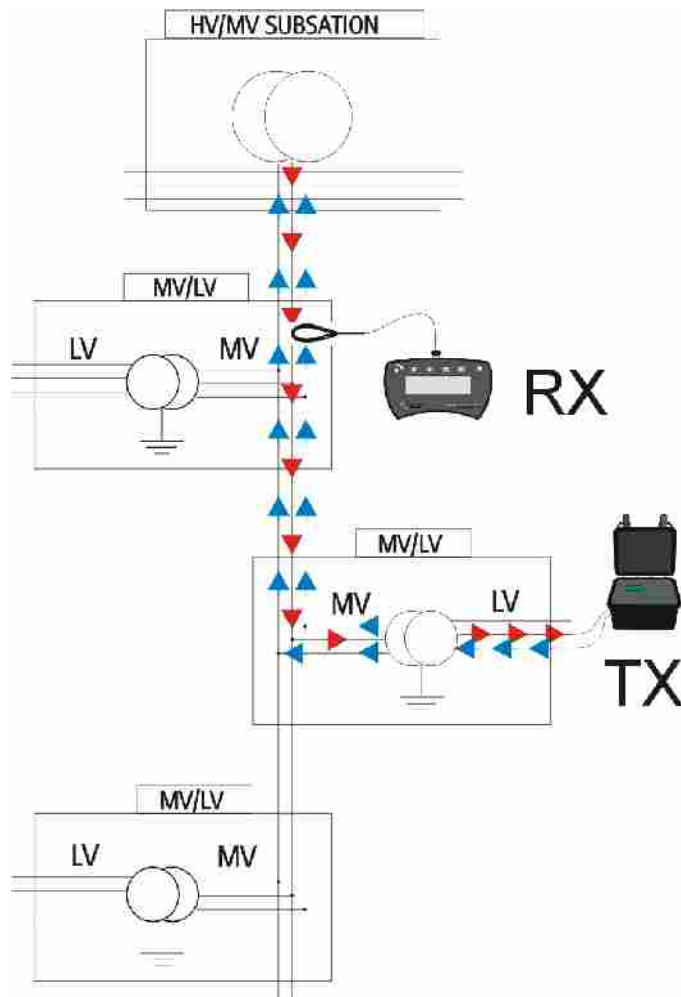




Medium Voltage cable identification

With this feature an MV cable can be positively identified by DCP injection:

- **Live MV cable:** injecting DCPs from the LV side. Current signals travel through the MV network, from the MV/LV transformer where the TX equipment has been connected to, to the HV/MV substation that feeds it. This cable path can then be detected on manholes, trenches, transformer substations, etc. with the RX receiver.

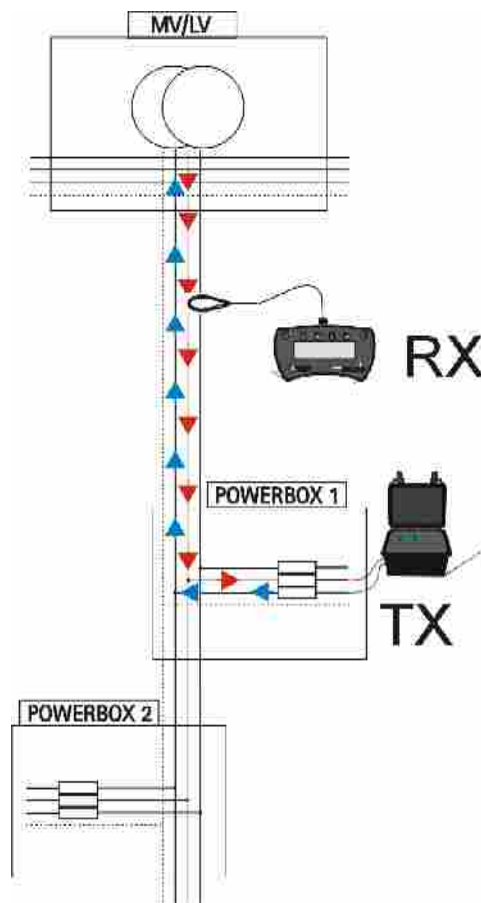


- **De-energized MV cable:** once power supply has been cut, by short circuiting cable ends and making a direct connection on one side with the TX equipment. Then it may be identified on any accesible place.0

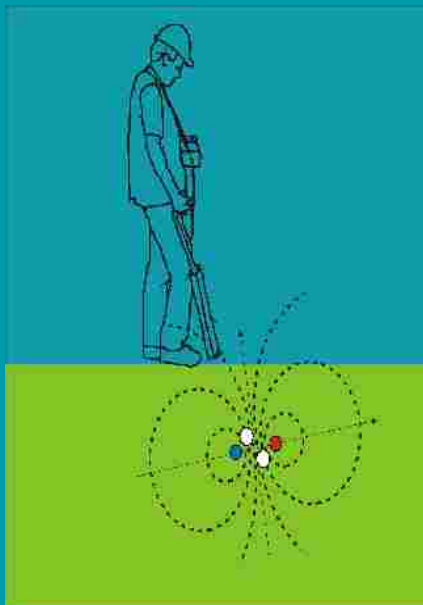
Low Voltage cable identification

With this feature an LV cable can be positively identified by DCP injection:

- **Live LV cable:** injecting DCPs on an LV accessible point. Current signals travel through the LV network, from the point of injection to the MV/LV substation that feeds it. These signals can then be detected with the RX receiver from above the surface to detect its path, and also on any accessible place (LV busbar, manhole, trench, underground-aerial conversion, etc) for positive cable selection.



- **De-energized LV cable:** once power supply has been cut, by short circuiting cable ends and making a direct connection on one side with the TX equipment. Then it may be identified on any accessible place.



FEATURES:

- Locates, traces and identifies MV/LV live and de-energized cables
- Active frequency induction for cable location and tracing .
- Directional Current Pulse injection for positive cable identification.
- Detects three different kinds of signals: passive signals (50/60 Hz), active signals induced by the transmitter and Directional Current Pulses.
- Works in Peak Mode, Null Mode and combined Peak / Null Mode .
- Arrows indicate the position of the cable, making cable location and tracing very easy.
- Two different ways of measuring cable depth: either by pressing a button (depth appears on the display) or using the 45° method.
- Measures the detected amount of active frequency signal in mA.
- By pressing a button, the DCP mode is enabled. Using this mode it is possible to confirm in a quick and accurate way that the located or traced cable is the same one where the transmitter is connected to.
- Positively identifies MV/LV cables in accesible places (busbar, manhole, trench, underground-aerial conversion, etc.) by coil or 'U' sensor.



| Transmitter | |
|-----------------------------|--------------------------|
| Active frequency | 8 kHz |
| Power | 3 W |
| Supply (battery) | rech. Li-ion 14V 6.8 Ah |
| Operation time at max power | > 30 h |
| Operation temperature | -20 °C / 55 °C |
| Dimensions / Weight | 240x185x165 mm / 3.85 Kg |
| Enclosure | IP54 |

| Receiver | |
|---------------------------------------|--------------------------|
| Active frequency | 8 kHz |
| Passive frequency | 50 / 60 Hz |
| Depth measurement's precission | 10 % |
| Maximum depth | 5 m |
| Supply (battery) | rech. Li-ion 4.2V 6.8 Ah |
| Operation time | > 24 h |
| Operation temperature | -20 °C / 55 °C |
| Dimensions / Weight (receiver module) | 700x120x45 mm / 1.5 kg |
| Dimensions / Weight (display module) | 220x130x90 mm / 1.25 kg |
| Enclosure | IP54 |