

# Tx-121™ isolation transformer

LV power cable core-to-core short-circuit fault-finding accessory

## DESCRIPTION

The Tx-121 isolation transformer is a Tx-10™ transmitter accessory designed to help in locating core to core short faults on a twisted core-type 3-phase LV mains distribution cables.

Radiodetection's Tx-121 isolation transformer can be connected across a pair of shorted faulty cores on a buried, live or out of service, LV cable\* to couple a locating signal from a Tx-10 transmitter. The location of the fault can then be determined using a suitable Radiodetection RD7000+™ or RD8000™ locator.

The Tx-121 helps to reduce the need for exploratory digs and 'cut-to-find' isolation tasks, reducing the cost of repairs and minimising disruption to the public.

\*Rated for connection to CAT IV mains circuits up to 230V phase-to-neutral. Maximum phase-to-phase voltage differential: 3V rms at 50/60Hz.

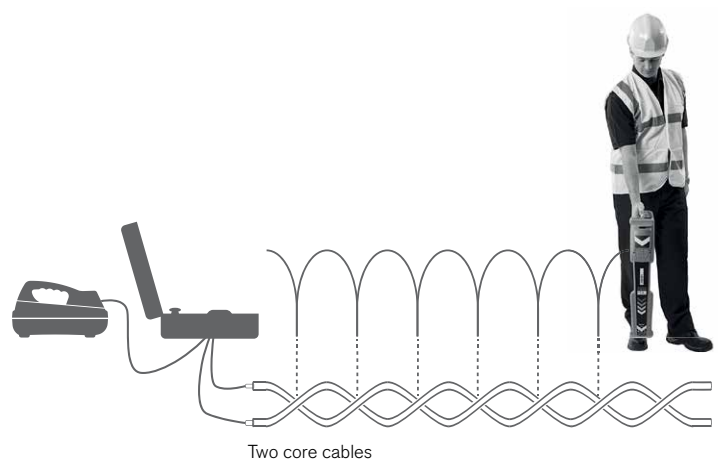


## LOCATING A CORE-TO-CORE FAULT

Once the route of the buried cable has been established and marked, the Tx-121 is connected across the faulty cores, with the Tx-10 connected to the Tx-121 input. A low frequency locate signal is generally recommended.

By using the locator with the blade inline with the direction of the cable's route, the operator can follow the regular variations of signal strength as the connected cores twist in the cable – known as the cable lay effect. The position of a fault is identified by a drop in the relative signal strength.

Cable joints may also be located using the Tx-121 with the Tx-10 transmitter.



CABLE LAY EFFECT

**TX-121 ISOLATION TRANSFORMER SPECIFICATION:**

|  |   |
|--|---|
| Sales part number:                           | 10/TX121-xx<br>(Use 'EN' for English labels, 'FR' for French 'NL' for Dutch, 'DE' for German) |
| Rated connection:                            | Rated for connection to CAT IV mains circuits up to 230V phase-to-neutral                     |
| Fuse rating:                                 | 3.15A, 500V, Very Fast Acting (FF), 6.3 x 32mm, UL recognized                                 |
| Fuse type:                                   | SIBA 70-125-40 3.15A (one in each test lead)  |
| Operating frequency range:                   | 256Hz to 8kHz (optimum range 512Hz to 940Hz)  |
| Maximum phase-to-phase voltage differential: | 3V rms at 50/60Hz   |
| Operating signal power:                      | 10VA max  |
| Ingress protection:                          | IP54  |
| Temperature range:                           | -20°C to +80°C (-4°F to +176°F) – Storage<br>-20°C to +50°C (-4°F to +122°F) – Operating      |
| Relative humidity:                           | 80% RH for temperatures up to 31°C, decreasing linearly to 17% RH at 50°C<br>Non condensing   |
| Operating altitude:                          | 2,000m (6500') max  |
| Dimensions:                                  | Length 330 x Width 406 x Height 174 (mm) / 13" x 16" x 6.8"                                   |
| Weight:                                      | 8.6kg / 19lbs   |
| Housing material:                            | Ultra high impact structural copolymer  |
| Transmitter compatibility:                   | Radiodetection Tx-10" and T10" transmitters   |
| Compliance:                                  | CE  |
| Safety                                       | Complies with BS EN 61010-1:2010  |
| Warranty:                                    | 12 months   |



**⚠ WARNING!** Fault location on power cables must only be undertaken by appropriately authorised and qualified personnel.



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