

# 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 Precision 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.

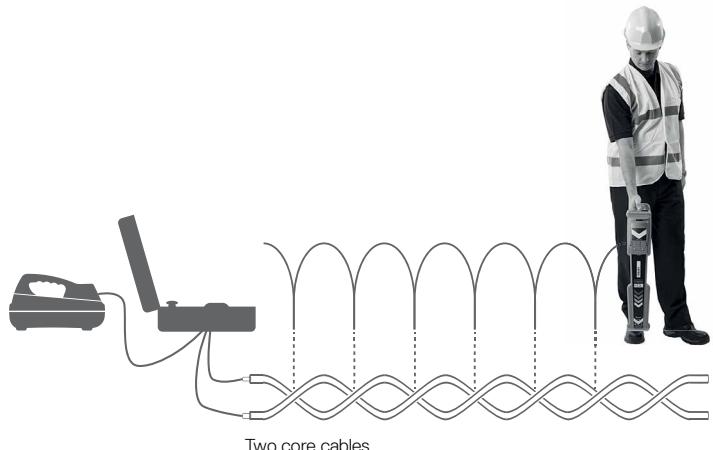


### LOCATING A CORE-TO-CORE FAULT

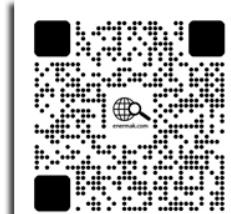
Once the route of the buried cable has been established and marked, the Tx-121 is connected across the faulty cores, with the Tx-10 connected to the Tx-121 input. A low frequency locate signal is generally recommended.

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 (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 -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 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.

