

# PipeTDR-2C BT

## Time domain reflectometer

for fault location in plastic jacket pipes

With a Time Domain Reflectometer (TDR), damage on and in cables can be detected and located with pinpoint accuracy. The LANCIER **PipeTDR-2C BT** was specially developed for use on plastic jacket pipes with Nordic sensor technology.

In addition to wire short circuits and breaks, it can also detect water ingress into the thermal insulation layer caused by, e.g., welding seam defects, pipe breaks or damage to the pipe jacket. To do this, it feeds electrical impulses into the pipe that are reflected at fault locations or cable ends, a function similar to that of a radar unit. By measuring the runtime of the reflected impulses, the **PipeTDR-2C BT** determines the distance to the fault location and can even determine the type of fault.

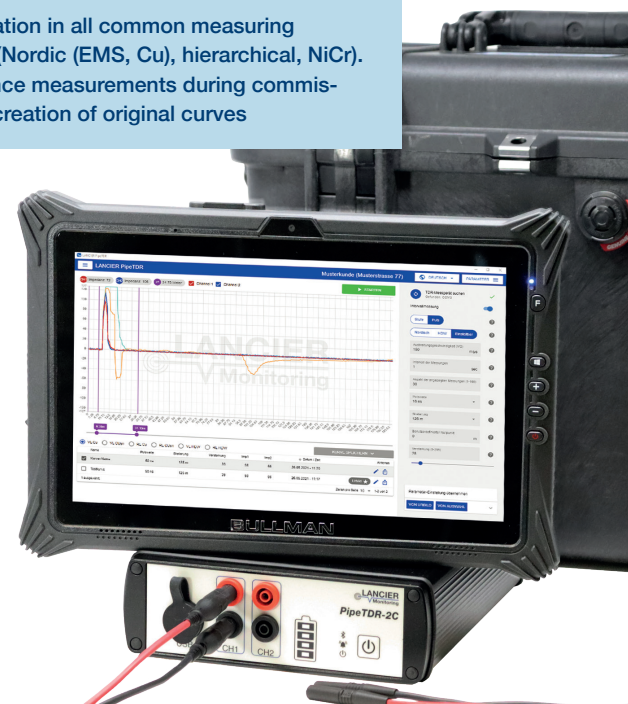
The LANCIER **PipeTDR-2C BT** is a compact, robust two-channel reflectometer that is connected to a splash-proof outdoor tablet via a Bluetooth or USB 3.0 interface. The measuring device is powered by an integrated rechargeable battery.

Thanks to the user-friendly operating and evaluation software, the **PipeTDR-2C BT** is quick and easy to use and optimized for locating faults in small and medium-sized plastic jacket pipes. The determined measurement graphs can, for example, be stored in a database as an original image of a district heating

pipe and used as a reference graph for later fault determination. The measured graphs can also be made available to other users for the purpose of evaluation / comparison.

### Applications of the PipeTDR-2C BT

- Fault location in all common measuring systems (Nordic (EMS, Cu), hierarchical, NiCr).
- Acceptance measurements during commissioning / creation of original curves



## Technical Data

### Measuring device

Supply voltage	Built-in rechargeable battery / USB 3.0 port
Measurement channels	2 (e. g. for flow and return of a district heating pipe)
Battery life	> 8 hours in Bluetooth mode
Measurement range	62.5 to 64,000 m
Location fault	0.01 % to 0.2 % of measured value (12.5 cm to 8.0 m, depending on the subsections)
Impedance	45 to 500 $\Omega$ , individually adjustable
Impulse width	10 ns to 50 $\mu$ s
V/2	50.0 to 150.0 m/ $\mu$ s
Impulse amplitude	10 V with matched load
Input sensitivity	1 mV
Dynamic range	80 dB
Operating temperature	-20 to +40 $^{\circ}$ C

### Display and control tablet

Operating system	Microsoft Windows 11
Operating temperature	-20 to +40 $^{\circ}$ C

## Ordering Data

### PipeTDR-2C BT

Time domain reflectometer for fault location in plastic jacket pipes equipped with Bluetooth module

Order-no. 076376.100

### Accessories

#### TDR-Echopulser

to assist in fault location

Order-no. 077132.000

#### Carrying bag for PipeTDR-2C BT

with rain protection

Order-no. 076907.000

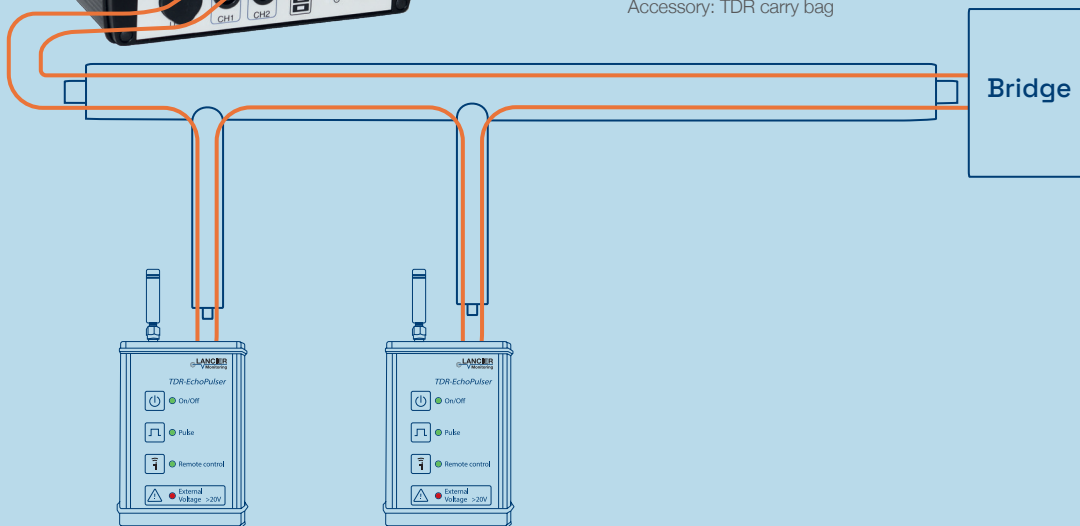
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Time domain reflectometer for fault location in plastic jacket pipes

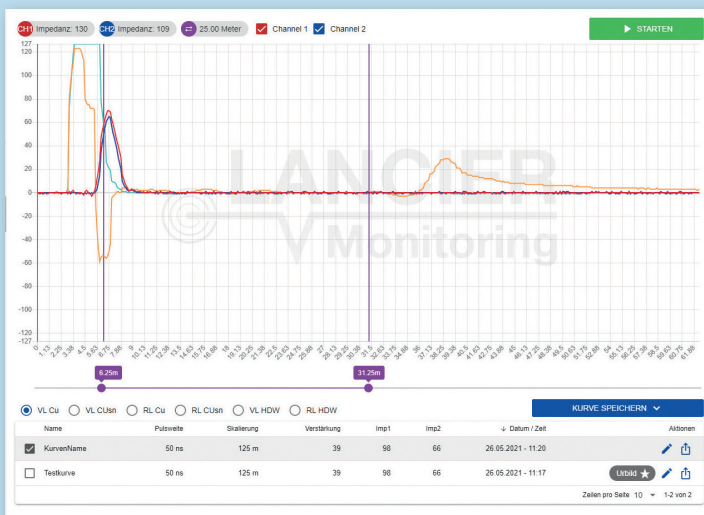
Application example: District heating pipe fault location at house exits using the PipeTDR-2C BT and TDR EchoPulser



Accessory: TDR carry bag



TDR-EchoPulser



Fault location with the LANCIER Monitoring PipeTDR-2C BT

## The TDR-EchoPulser

- Generates clear signals (normally closed/ normally open) for localization
- Is an indispensable tool for network diagnostics

## Technical Data

### TDR-EchoPulser

Supply voltage	9 V DC, block or rechargeable battery
Pulse rate	1x or 5x /sec, switchable
Wireless connectivity	Any number, up to 1 km distance
Voltage on measuring track	max. 20 V DC or AC
Dimensions	116 x 85 x 75 mm (H x W x D)
Weight	290 g

