Product Information

LANCIER Monitoring

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PipeTDR-2C

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*** 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*** determines the distance to the fault location and can even determine the type of fault.

The LANCIER ***PipeTDR-2C*** is a compact, durable dual-channel reflectometer that connects to a splashproof outdoor tablet via an integrated USB interface. Power is supplied to the tablet via the USB interface.

Thanks to the user-friendly operating and evaluation software, the ***PipeTDR-2C*** 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.

Technical Data

Measuring device ***PipeTDR-2C***	
Supply voltage	via USB 2.0 interface from a control tablet
Measurement channels	2 (e. g. for flow and return of a district heating pipe)
Measurement range	62.5 .. 64 km
Location fault	0.01 % .. 0.2 % of the measured value (12.5 cm to 8.0 m, depending on the subsections)
Impedance	25 .. 600 Ω, individually adjustable
Impulse width	10 ns .. 50 µs
V/2	50.0 .. 150.0 m/µs
Impulse amplitude	10 V with matched load
Input sensitivity	1 mV
Dynamic range	80 dB
Operating temperature	-20 .. +40 °C

Display and control tablet ***PipeTDR-2C***	
Operating system	Microsoft Windows 10
Operating temperature	-20 .. +40 °C

Applications of the PipeTDR-2C
- Fault location in the Nordic (EMS) system.
- Acceptance measurements during the commissioning of district heating networks.

Ordering Data

PipeTDR-2C Time domain reflectometer for fault location in plastic jacket pipes	**Order-no. 076376.000**