

Product Information

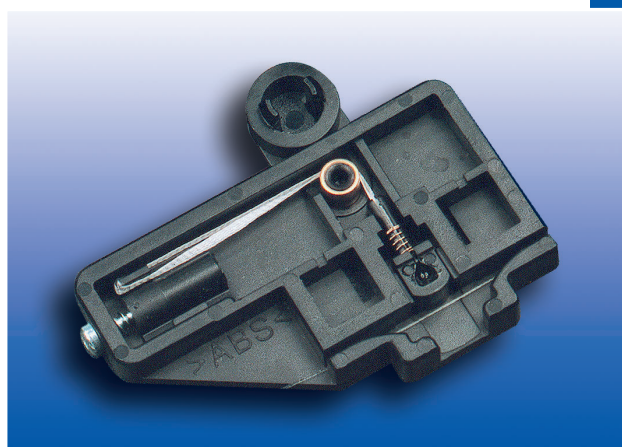
AquaSensor

for the detection of humidity intrusion into fiber optic cables

Water penetrated into splicing boxes, e.g. through damage of the sleeve, imperfect sealing or a defective cable sheath, embrittles the fiber optic cable and causes microcracks. In the long term, this leads to deterioration of the fiber properties or even to an unexpected total loss of signal transmission.

The reliably working LANCIER AquaSensor early-warning system helps to obviate these consequences. It was especially developed for detecting water in splicing boxes of fiber optic cables. If the AquaSensor comes into contact with humidity, the fiber (ITU-T G.652) is bent in a controlled way to generate a measurable increase of attenuation, which can be shown as graphic representation using the LANCIER Monitoring System.

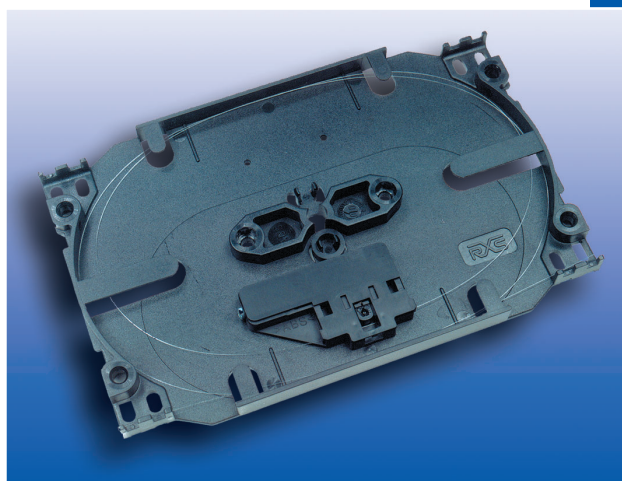
The LANCIER AquaSensor can be inserted into all current boxes, and no metallic conductor is required for signalling.



AquaSensor

The LANCIER AquaSensor

- reports humidity and water in sleeves of fiber optic cables
- short response time allows the fault to be removed in good time before the transmission quality of the fiber optic cable is reduced
- exact localisation of the defective sleeve by remote read-out of the measured values using the LANCIER Monitoring System
- the sensor continues to be used after fault information due to the reversible behaviour of the humidity measuring tape
- quick and easy installation at the splice holder



AquaSensor mounted in splicing box

Technical Data

Admissible tupe of fiber	Standard single mode fiber according to ITU-T G.652
Attenuation increase at 100 % rel. humidity and surveying wave length of 1625 nm	0.8 dB +0.3 / -0.2
Response time	≤ 5 min.
Min. bending radius of the fiber	20 mm
Dimensions (L x W x H)	46.5 x 36.0 x 6.5 mm

Ordering Data

AquaSensor

Order-no. 068969.000

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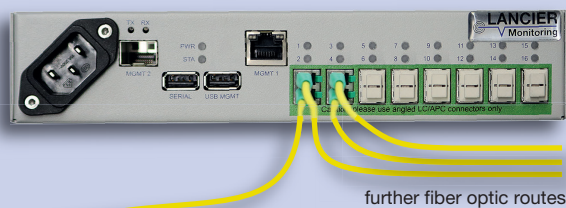
System diagramme

Option 1

Fiber optic monitoring with automatic fault localization

RTU (Remote Monitoring Unit) equipped with OTDR and optical switch for monitoring of several fiber optic routes.

OTDR with RTU and optical switches



further fiber optic routes

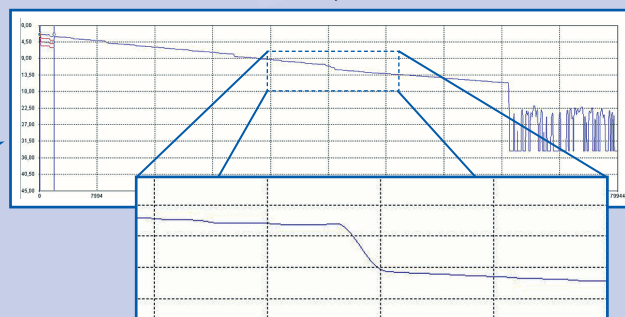
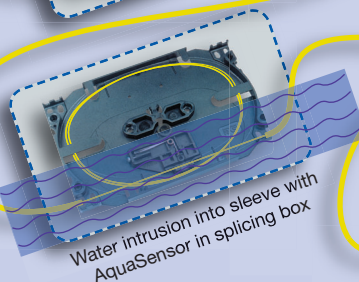
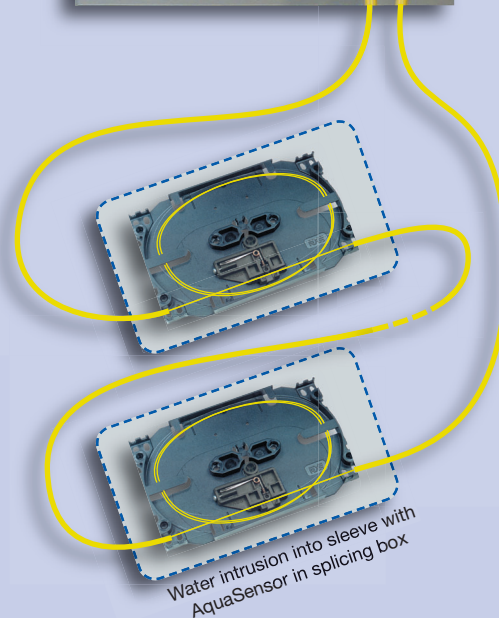
Option 2

Fiber optic monitoring with automatic alarming

Sensor FiberTxA detects optical loss.

Loop measurement or measurement in one direction with light emitter at the other end. Subsequent fault location with hand-held OTDR.

Sensor FiberTxA



OTDR trace:
Loss due to water intrusion into sleeve at 1625 nm