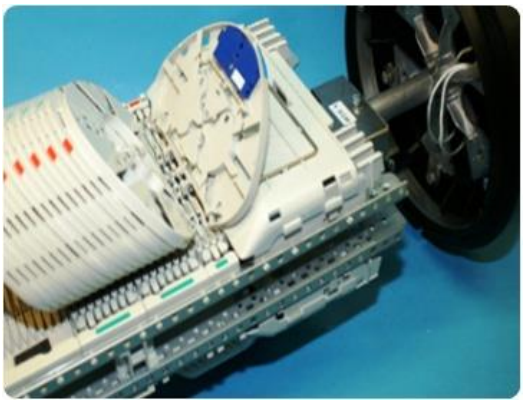
December 2012

03/4

Newsletter

Fibre optic water detectors for the new single mode generation



- **Fibre Optics CT GmbH, Stuttgart**
  completed the development and testing of their fibre optic detectors for all SM fibre types (bend-sensitive and bend-insensitive) **in September 2012**. The new water detector generation ensures the quick, reliable detection of water entry or leaks of hazardous materials in fibre routes of type DIN EN 60793-2-50 in WAN and FTTH networks.

- **Wolf GmbH, Stuttgart**
  have been producing and supplying water sensor products since 1999, for the early detection of water entry in joint boxes or collecting tanks in the following sectors: Deutsche Telekom, road and transport routes (motorways, waterways) etc. The patented water warning system can pinpoint the exact locality of water entry without electrical connections, from a few metres up to 100 km. The system thus actively helps to prevent damage to people and property.

44.1 WS-B/K1

44.2 WS-G

44.3 WS-R/

Wolf GmbH produce and supply products for the early detection and prevention of leakage by water or hazardous substances

EARLY DETECTION

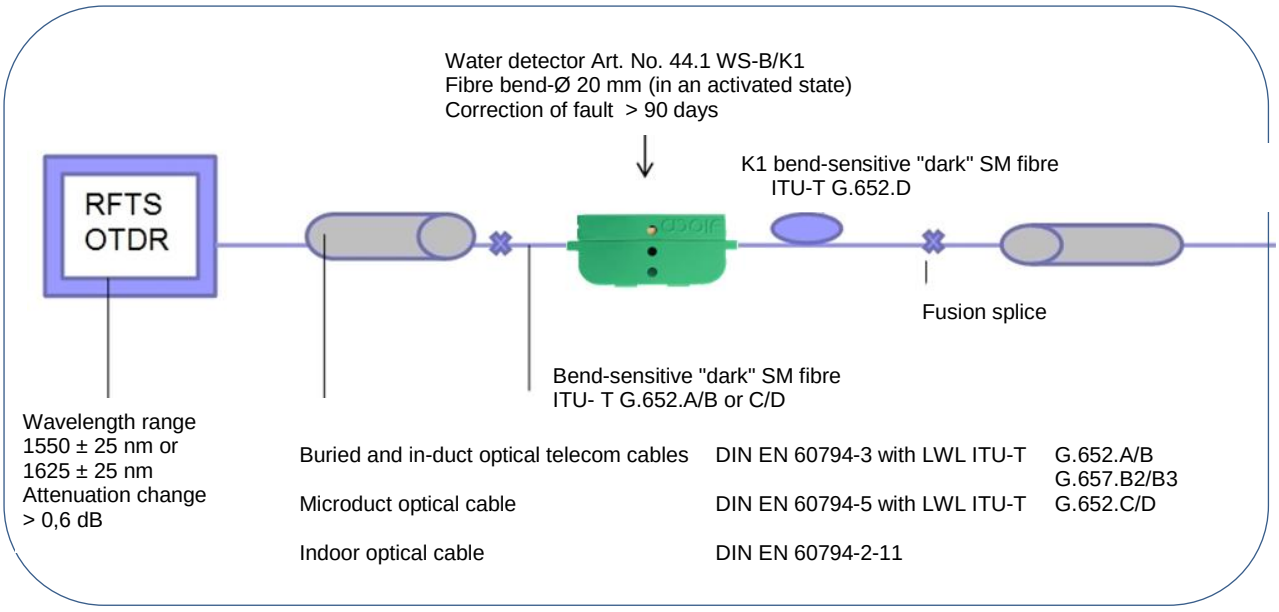
Fibre optic water sensor
for the early detection of water entry in optical fibre joint boxes and the prevention of water-induced network failure

PREVENTION

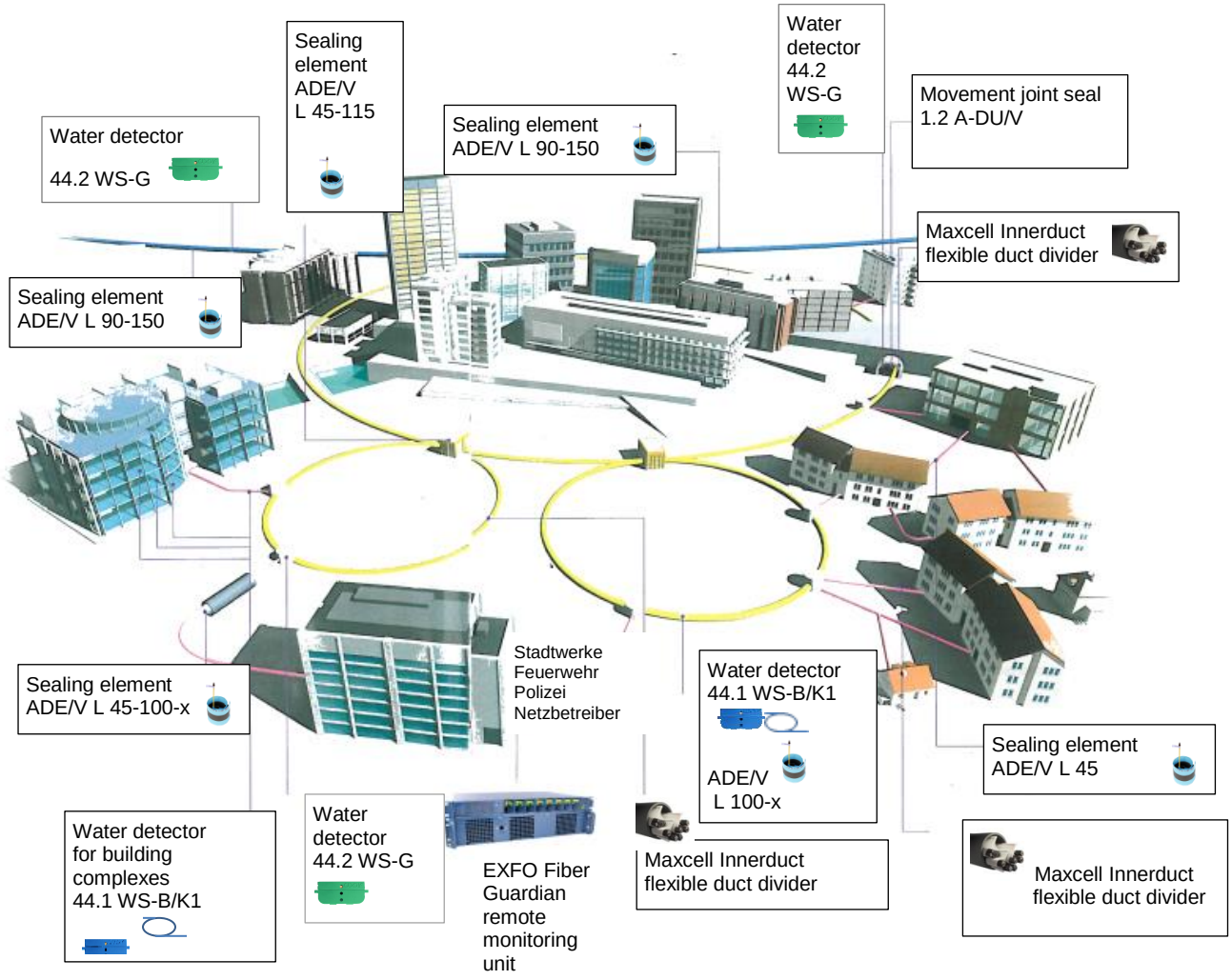
Reusable valve sealing systems
for tight-sealing cable ducts against gas and pressurised water, and preventing water from continuing unchecked throughout the system

Functional principle of the fibre optic water detectors

The water detector makes it possible to monitor very large areas with cable length of up to 100 km from a single point without the need of amplifiers or regenerators.
Water detectors function without an external power source, which means they are suitable for use in hazardous zones requiring secondary explosion protection. The energy for activating the water detector is stored in a viscous sponge in the form of mechanical energy. This energy is released suddenly if water enters, causing permanent bending in the optical fibre laid in the water alert box. The bend remains even after drying out.



Your cable network could be protected like this too



Water detector accessories

OTDR (back scatter) measuring instrument or a fully automatic remote monitoring system
e.g. EXFO Fiber Guardian **with**

- All-in-one OTDR remote testing and monitoring
- Multitasking test system for multiple users
- Network element recognition & auto-provisioning
- SMS-triggered test-on-demand
- Flexible alert system
- OTDRs with high measurement range and peak-level monitoring
- Secure, seamless integration in LAN-system

Intensive course/ seminar at fibre optics CT Consulting & Testing GmbH

Fibre Optics CT GmbH offers a 1-day intensive course on water detectors:

Course name: **Fibre optic detectors for the early detection of leakage by water or hazardous substances**

Themes:

Theory, Parts 1 and 2:

Part 1: Causes and effects of water entry in telecommunication facilities

Part 2: Application areas of fibre optic water detectors

Practice, Part 3:
Demonstration and practice on 3 test routes

Assessment of the function of fibre optic detectors for the early detection of leakage by water or hazardous substances with various optical fibre types ITU-T G.652.A/B, G.652.D, G.657.A1/A2 and G.657.B2/B3 and water detectors Art. No. 44.1 WS-B, WS-B/K1 or 44.2 WS-G.

Test routes of different lengths:

Route length	Detector placement intervals
a) 3.2 km	800 m
b) 56.0 km	> 4000 m
c) 115 m to > 1.5 km	2.5, 5.0, 10, 50 and 100 m (building complexes)

fibre optics
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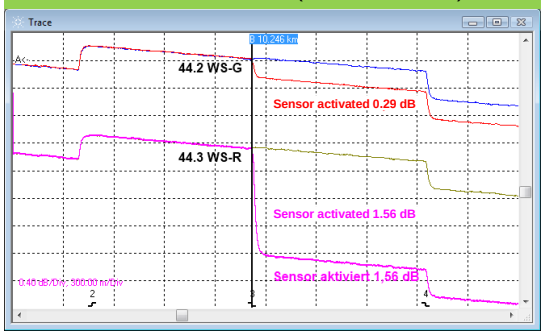
Fibre No. 3 G.657.A/B (bend-insensitive)



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