



**COST-EFFECTIVE
DISTRIBUTED TEMPERATURE SENSING
SYSTEM (DTS)
IDEAL FOR SMALL PROJECTS**

**Reliable entry-level Raman OTDR interrogator for field applications.
Measures full temperature profile over fiber optic sensing cables.**

Description

The DiTemp Light Reading Unit is designed for distributed temperature measurements for distances of up to 4km, with 2m spatial resolution and 10s measurement time.

Featuring a built-in 4 channel multiplexer, it is the most cost-effective solution for distributed temperature sensing. This rack-mountable unit can be complemented with external relay module and self-testing system. (ATTS)

The system is used in a wide range of applications that require distributed temperature sensing, such as temperature monitoring of concrete in massive structures, leakage detection of pipelines, seepage monitoring in dams and levees, waste disposal sites, smart buildings, just to name a few.

Key Features

- Up to 4 km
- Entry level system
- Short measuring time
- Multiple channel
- On-board PC
- Long term stability
- Cost effective
- Remote control

Applications

- Pipeline leak detection
- Dam and Levee seepage monitoring
- Smart buildings
- Power Cable Rating and hot spot detection
- Distributed temperature sensing

Performances

Technical features

Distance range:	0-4 km
Spatial resolution:	2 m
Sampling resolution:	2 m
Temperature resolution:	down to 0,1°C (project specific performance estimations available upon request)
Number of channels:	4 ch in-built mux
Fiber typology:	MMF 50/125 µm (ITU.T G.651)

Technical specifications

Operating temperature:	0°C to 40°C
Storage temperature:	-15°C to +65°C
Humidity:	5% to 95% RH, non condensing
AC Power:	100V – 240V, 50Hz – 60Hz
DC Power:	24V or 48V supply option
Power consumption:	40W – 50W maximum
Dimension (HxWxD):	87 x 435 x 445 mm
Weight:	9 kg
Communication options:	RS-232, Modbus, Ethernet, Volt free alarm module, TCP (through DiView Software)

Certification and compliance

SAFETY

The DiTemp Light system is classified to EN 60825-1 (2001-03) as a class 1M laser product. The DiTemp Light system (1mW mean power output) is suitable to monitor Zone 0 Hazardous areas according to the European Commission report no. EUR 16011 EN (1994)

EMC

EN 61326:1997/A1:1998; Conducted Emission: Class B; Radiated Emission: Class A**;
 EN 61000-4-6: 1996; EN 61000-4-4: 1995; EN 61000-4-2: 1995/A1: 1998/A2: 2001; EN 61000-4-11: 1994; EN 61000-3-2: 1995; EN 61000-3-2: 2000; EN 61000-3-3: 1995
 ** excluding monitor and keyboard

CE MARK

Accordance with 89/336 EEC EMC directive accordance with LVD 72/23 EEC directive: EN 41003; EN 50178; EN 60065; EN 60825-1; EN 60950; EN 61010-1

ATEX

Accordance with Directive 94/9/EC

Accessories and ordering information

- 14.2010.rm DiTemp Alarm Relay Module
- 14.2014 DiTemp ATTS
- 20.2010 DiView Data Management Software
- 40.1010 DiTemp Installation Rack

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Smartec SA reserves the right to make any changes in the specifications without prior notice