

PRY-CAM DTS

Distributed Temperature Sensing Module



The Modular DTS for Critical Asset Monitoring

PRODUCT DESCRIPTION

The PRY-CAM DTS is a distributed temperature sensing (DTS) interrogator designed for temperature measurements in single-ended configuration using telecommunication grade single mode or multi mode optical fibers. It is based on a Raman OTDR architecture. This technology is specifically suited for installations where the sensing fiber may be subjected to strain, providing temperature measurements without its influence. The system follows a modular, single channel approach (one optical channel per module), enabling simultaneous monitoring of multiple assets without channel multiplexing and increased monitoring architecture robustness.

APPLICATIONS

- Power cable (offshore / onshore)
- Pipeline
- Subsea oil & gas infrastructure
- Industrial (tank, conveyor belt, tunnel)

KEY FEATURES

- Automatic detection of temperature hotspots, coldspots, gradients, and fiber break
- Measurement range up to 40 km
- Compatible with standard SM (ITU-T G.652/654/655/657) or MM (OM2/OM3/OM4)
- Based on Raman OTDR architecture
- 1 built-in measurement channel
- Modular design allowing simultaneous monitoring of multiple cables (no channel multiplexing)
- Very low power consumption: < 5 W
- Integrated with EOSS Monitoring Platform

PRY-CAM DTS'S FEATURES AND TECHNICAL SPECIFICATIONS

Sensing Performance	Technology/architecture	Raman DTS
	Measured variables	Temperature
	Distance range (per channel)	Up to 40 km (optical budget @1550 nm: 6 dB SM; 8.8 dB MM)
	Optical channels (built-in)	1
	Sensor configuration	Single-ended
	Compatible sensing fiber	Multi-mode: OM2/OM3/OM4 (50/125 µm) Single-mode: ITU-T G.652/G.654/G.655/G.657 (9/125 µm)
	Spatial resolution (setting)	1 m
	Spatial sampling interval (setting)	0.5 m
	Measurement time (setting)	1s to 30 minutes
	Temperature Repeatability, 1 σ (typical)	<0.8 °C for 30 km, OM2 fiber, 1 m spatial resolution and 5 minutes measurement time.
Interfaces & Data	Parameter to be specified on a project basis by EOSS.	
	Communication Port	1 × Ethernet (RJ45)
	Digital I/O	External module to be specified on a project basis.
	Protocols (options)*	Modbus; DNP3; IEC 60870-5-104; IEC 61850
Mechanical & Electrical	Data format*	csv files
	Optical connectors	E2000/APC
	Rack / form factor	19-inch rack, 1HU
	Dimensions	482 × 330 × 44 mm (W × D × H)
	Weight	5 kg
Environmental & Compliance	Power supply / Consumption	110–240 V AC; 5 W (typ.); 10 W (max)
	Operating / Storage temperature	–10 °C to +50 °C / –20 °C to +60 °C
	Relative humidity	5–95% (non-condensing)
	Protection rating	IP51 (indoor use)
	Laser classification	Class 1M (IEC 60825-1:2014)
	Standards	Laser: IEC 60825-1/-2; safety: IEC/EN 61010-1, UL/CSA 61010-1; EMC: IEC/EN 61326-1
	Sustainability	Environmental Product Declaration In accordance with ISO14025:2006 and EN50693:2019

* via EOSS Monitoring Platform

ED_PD008 Datasheet PRY-CAM DTS

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