



OTS3 Series

Distributed Temperature Monitoring

How does it work? OTS3 Interrogators are based on our ROFDR technology which through analysis of Raman backscattering in optical fibre at monitored structures provides quantitative temperature measurements along the entire length of the asset.

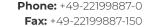
What makes OTS3 a great temperature monitoring solution? OTS3 provides outstanding temperature resolution and accuracy, has a true industrial design, is immune to electro-magnetic disturbances and is passively cooled. The sensing unit has an MTBF of more than 40 years, ensuring reliable operation in the toughest environments. OTS3 offers fast, accurate and highly reliable heat detection even in hazardous areas, prove for which is thousands of permanent installed units and over a decade of success stories.

KEY FEATURES	EXTENSIONS	APPLICATION EXAMPLES
 Highly reliable and maintenance-free MTBF 40+ years 	 Powerful and user-friendly application-oriented software platform 	 Fire detection in tunnels, conveyor belts etc. (LHD3)
 Real time condition monitoring 	Abundance of communication protocols	 LNG Monitoring and other hazardous areas
Stand-alone system	 Modeling and reporting algorithms (Real-time thermal rating, Depth of Burial) 	 Industrial infrastructure monitoring
 Wide Operating temperature range 	 Easy commissioning, consulting, and services 	Scientific research and testing

TECHNICAL SPECIFICATIONS

Distance Ranges		
OTS3-xxx-50	50µm MM (GI). Monitoring ranges per channel of up to 30km	
OTS3-xxx-62	62.5µm MM (GI). Monitoring ranges per channel of up to 10km	
OTS3-xxx-09	9 µm SM fibre, (ITU-T G.652, G655, G657). Monitoring ranges per channel of up to 30km	
OTS3S-xx-50/62	50μm, 62.5μm MM (GI) Monitoring ranges per channel of up to 4km	
LHD3-xx	62.5µm MM (GI). Monitoring ranges per channel of up to 14km	
LHD3S-x	62.5µm MM (GI). Monitoring ranges per channel of up to 5km	
Optical Data		
Optical Channels (internal)	1, 2, 4, 8 or 16	
Optical Connectors	E2000 / APC	
Fibre Types	50 μm, 62.5 μm MM and 9 μm SM	
Laser Classification	Class 1M (IEC60825-1), eye-safe wavelength	
Operational Wavelength	1550 nm, 1064nm	









Measurement Performance		
Sampling Interval	down to 0.1 m **	
Spatial Resolution (min)	0.7m (other available on request)**	
Temperature Resolution (min)	0.1° C	
Temperature Accuracy	≤2°C	
Measurement Time	2 s - 20 min **	
Areas of Application	Cryogenic, standard, high temperature, hazardous areas	
Data Storage/Communication/Int	erfaces	
Internal SSD Storage	2,8 or 16GB	
Analog Outputs	4 – 20mA (external, optional)	
Programmable Inputs / Outputs	4 / 10 (optional up to 40/106)	
Communication Interfaces	Ethernet TCP/IP (2x), RS232, USB	
Communication Protocols (options)	MODBUS TCP, DNP3, IEC60870, IEC61850	
External Sensor Inputs	PT100(2x), Current0-20mA(2x), Voltage0-10V(2x) (option)	
Fixed outputs	Collective fault and alarm	
Mechanical Data		
Dimensions (H x W x D)	19" / 3 HU rack (13.1 x 48.3 x 33.8 cm)	
Weight	13 kg	
Electrical Data		
Power Consumption (DC controller)	<25W (max. 45 W/60°C)	
Operating Voltage (DC controller)	DC nom. 12 48 V (max. 10 60 V DC)	
Mains Voltage (AC controller)	AC 100 240 V or DC 110 220 V	
Environmental Conditions		
Storage Temperature	-35°C to +75°C	
Operating Temperature	-10°C to +60°C (optional outdoor enclosure: -40°C to +60°C)	
Humidity (relative)	≤95 % (non-condensing)	
Protection Class	IP41, Type 2 enclosure (optional outdoor enclosure up to IP66)	
Conformity to Standards		
Safety	IEC/EN 61010-1, IEC/EN 60825-1	
Linear Heat Detection	Approvals: VdS (EN54-22), UL (UL521, ULC S-530), FM (Class 3210)	
Hazardous Areas	Approvals: ATEX, IECEx (IEC/EN 60079-0,28)	
	EN61326-1, EN61000-6-2,3, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61000-6-3-2, 3,	
EMC	EN50130-4, FCC 47 CFR Ch.1 Part15	
Hazardous Substances, Waste	RoHS directive 2011/65/EC, WEEE directive 2002/96/EC	
Environmental testing	IEC 60068-2-6,14,27,30	

^{**} Depends on the distance range









