

T-Laser DTS Distributed Temperature Sensor

FRONT VIEW



REAR VIEW



T-LASER SPECIFICATIONS

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Range per channel	2 km	5 km	10 km	20 km	30 km	40 km
Number of channels	All models 4 or 8 channels					
Ordering Part Numbers	DTS-TL-02-02-4CH	DTS-TL-02-05-4CH	DTS-TL-02-10-4CH	DTS-TL-02-20-4CH	DTS-TL-02-30-4CH	DTS-TL-02-40-4CH
	DTS-TL-02-02-8CH	DTS-TL-02-05-8CH	DTS-TL-02-10-8CH	DTS-TL-02-20-8CH	DTS-TL-02-30-8CH	DTS-TL-02-40-8CH
DATA ACQUISITION						
Measuring time	≥1s/ch	≥1s/ch	≥1s/ch	≥15s/ch	≥30s/ch	≥60s/ch
Sampling Interval	0.5m/1m	0.5m/1m	0.5m/1m	1m	1m	2m
Spatial Resolution	~1m	~1m	<2m	<2.5m	<4m	<5m
Temperature Resolution	< 0.1°C @ 4 minutes	<0.1°C @ 4 minutes	0.1°C @ 4 minutes	0.2°C @ 10 minutes	0.5°C @ 10 minutes	1.0°C @ 10 minute
Temperature Accuracy	±1°C	±1°C	±1°C	±1°C	±2°C	±2°C
Fiber Break Alarm	Automatic detection, accuracy within < ±5m					
OPTICAL						
Laser Wavelength	975nm		1550 nm			
Optical Budget	7	12	5	7	9	10
Connector Type	E2000					
Fiber type	Multi mode, graded index 50/125					
Bandweaver Cable	T-Fiber AT (metal construction)					
	T-Fiber TT (non-metal construction) (enquire for other models)					
Connection Configuration	Single Ended / Double Ended Loop					
Laser Safety Classification	Class 1M					
ELECTRICAL AND HARDWARE INTERFACES						
Supply Voltage	24VDC (18 to 36 VDC)					
Power Consumption	25W (average)					
Relays	Yes - 50 output relays: 2x Fault, 4x Fiber break, 44x user programmable					
Modbus	MODBUS TCP / MODBUS RTU					
RJ45	3x 100Mbps					
Serial	2x RS-485					
USB	1x USB On-the-go (OTG)					
Other	5.7-inch touch screen, 640*480-pixel 262K					
Internal Storage	> 500,000 measurements @10km (1m sampling) > 250,000 measurements @ 40km (2m sampling) 32GB					

** For optical budget calculations maximum loss per connector/splice is 0.3dB. For T-Laser 10 - 30km max number of splices = 3 to 5. For 40 km no splices in budget

T-LASER SPECIFICATIONS (CONT.)

PHYSICAL	
Rack height	3U
Dimensions (W * H * D)	431 x 131 x 384 mm
Net Weight	10kg
IP Rating	IP40
Material	Painted Steel
Colour/Finish	Matt Black
Shipping dimensions	550 x 330 x 530 mm
Shipping Weight	15 kg
ENVIRONMENTAL	
Operating Temperature	-10°C to +50°C
Operating Humidity	0 to 95% Relative Humidity, Non-condensing
Storage Temperature	-10°C to +85°C
Storage Humidity	0 to 95% Relative Humidity, Non-condensing
SAFETY AND COMPLIANCE	
Laser Safety	IEC 60825-1:2007 (2nd Edition)
	EMC 2014/30/EU - EN 61000-6-3:2007+A1:2011, EN 61000-3-2:2014 EN 61000-3-3:2013 EN 61000-6-1:2007
CE - EMC	
CE - LVD	N/A
CE - RoHS	Yes
FDA	FDA Ascension number 1920930-000
FCC	47CFR Part 15:2017, ANSI C63.4:2014
SIL	SIL2
SOFTWARE	
Software Name	DTSCM2
Software Compatibility	FireLaser V3 / T-Laser V2
Max. Zones	1000



EXAMPLE OF RTTR SYSTEM ARCHITECTURE

