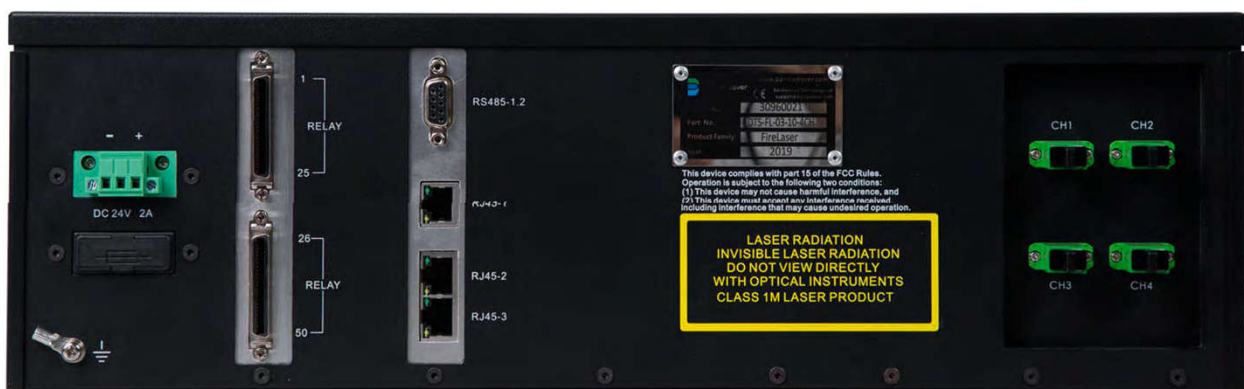


# FireLaser Distributed Temperature Sensor

## FRONT VIEW



## REAR VIEW



# FIRELASER SPECIFICATIONS

FIRELASER SPECIFICATIONS			
Range per channel	2km	5km	10km
Number of channels	1/2/4	1/2/4	1/2/4
Ordering Part Numbers	DTS-FL-03-02-1CH	DTS-FL-03-05-1CH	DTS-FL-03-10-1CH
	DTS-FL-03-02-2CH	DTS-FL-03-05-2CH	DTS-FL-03-10-2CH
	DTS-FL-03-02-4CH	DTS-FL-03-05-4CH	DTS-FL-03-10-4CH
DATA ACQUISITION			
Measuring time	From 1s/ch, generally ~5 seconds for linear heat applications (EN54-22)		
Sampling Interval	0.5m / 1m		
Temperature Resolution*	0.1°C@15s, 2.5km	0.3°C@15s, 5km	0.3°C@15s, 10km
Temperature Accuracy*	±1°C		
Fiber Break Alarm	Automatic detection, accuracy within < ±5m		
OPTICAL			
Laser Wavelength	975 nm	975 nm	1550 nm
Optical Budget**	7 dB	8 dB	10 dB
Connector Type	E2000		
Cable type	Multi mode 62.5/125 as standard		
Bandweaver Cable	FireFiber-AT – Armoured tube based cable FireFiber-TT Thermoplastic Tube cable Other cable designs available on request		
Laser Safety Classification	Class 1M		
ELECTRICAL AND HARDWARE INTERFACES			
Supply Voltage	24VDC (18 to 36 VDC)		
Power Consumption	20W (average)		
Relays	Yes - 50 relays		
Modbus	MODBUS TCP / MODBUS RTU		
RJ45	3 x 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 , 32 GB		

\* All temperature resolution and accuracy figures are for 62.5/125 fiber.

\*\* For optical budget calculations maximum loss per connector/splice is 0.3/0.1 dB. For FireLaser 2 & 5km max number of splices = 3 to 5. For 10km max number of splices = 7 to 10

## FIRELASER SPECIFICATIONS (CONT.)

### PHYSICAL

Rack height	3U
Dimensions (W * H * D)	431 x 131 x 384 mm
Net Weight	10 kg
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 (60°C for HT version)
Operating Humidity	0 to 95%RH
Storage Temperature	-10°C to +85°C
Storage Humidity	0 to 95% Relative Humidity, Non-condensing

### SAFETY AND COMPLIANCE

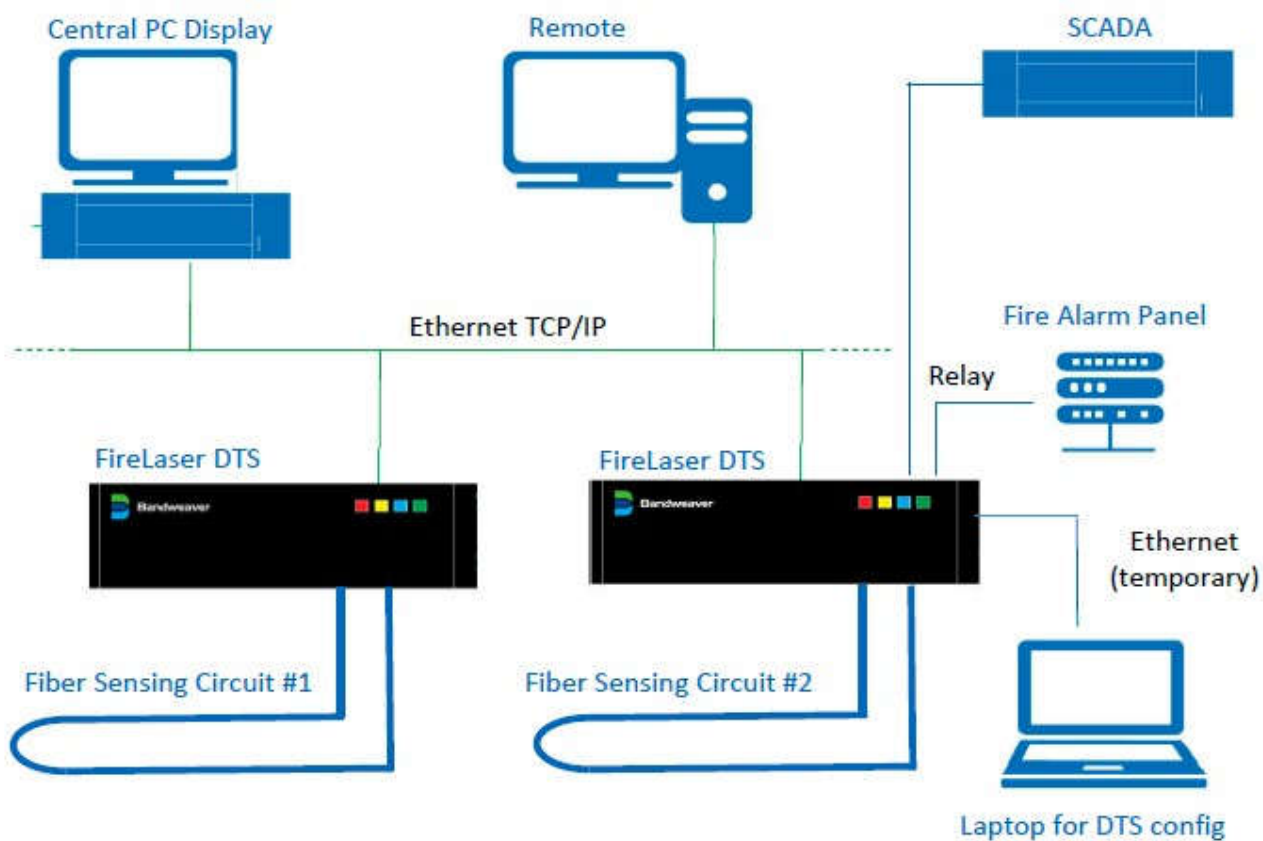
Laser Safety	IEC 60825-1:2007 (2nd Edition)
CE - EMC	EMC 2014/30/EU - EN 61000-6-3:2007+A1:2011, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61000-6-1:2007
CE - LVD	N/A
CE - RoHS	Yes
FDA	FDA Ascension number 1821008-000 (FireLaser 2km and 5km) 1920930-000 (FireLaser 10km)
FCC	47CFR Part 15:2017, ANSI C63.4:2014
Other	Explosion-proof mark: Ex iaIICT6 Ga , EN54 part 22, SIL 2

### SOFTWARE

Software Name	DTSCM2
Alarm Types	Max & Min Rate of Rise Deviation
Max. Zones	1000



## Example of System Architecture



## Tunnel Configuration Examples

