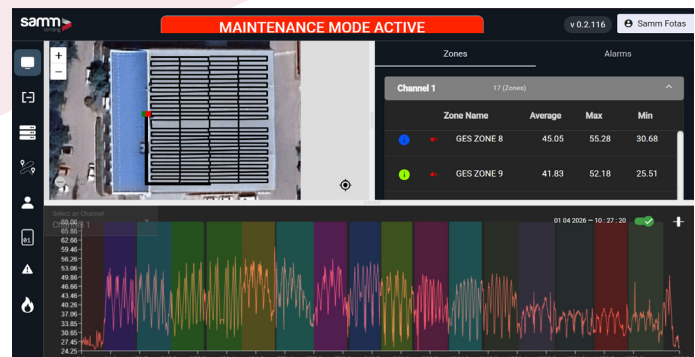


APEX SERIES DTS LHD Controller

The APEX SERIES is a revolutionary Fiber Optic Linear Heat Detection (LHD) controller that moves beyond simple fire alarms. By integrating cutting-edge optical fiber sensing technology with next-generation analytics, we offer unparalleled location accuracy, simplified installation, and reliable early warning of a fire condition.

Key Features

- **Locational accuracy (1 metre sampling)** - pinpoint the exact fire location with extreme precision, minimising response times and asset damage.
- **Operational intelligence** - learns the normal temperature profile and detects rate-of-change deviations before a fire reaches a critical alarm threshold.
- **Simplified installation** - simply connect a certified fiber optic cable, and configure either via the onboard touchscreen display or via a web browser.
- **Electromagnetic immunity** - absolute EMI/RFI immunity designed specifically for high-noise environments such as utility substations, cable trays, tunnels, data centres, etc.



Engineered for the installer and the end user

We understand that total cost of ownership (TCO) is paramount. The APEX SERIES is designed to reduce installation time (labour cost) and eliminate false alarms (operational cost).

- **Plug-and-protect design** - simplified calibration and configuration reduce installation and commissioning time.
- **Dynamic zoning** - configure up to 1,000 independent detection zones with unique alarm thresholds, all on a single cable run of up to 10km.
- **Visual fault locator** - instantly identify and locate a fiber break or system fault, minimising downtime for maintenance.
- **Passive cable, active life** - optical fiber sensing cable is non-corrosive, non-conductive, requires zero power, and has an expected service life of 30+ years, ensuring minimal maintenance.
- **Universal integration** - easy integration via Modbus TCP/IP to multiple sub systems such as SCADA, BMS, etc. (no complex, proprietary integration gateways required). 48 onboard relays for interconnection to fire panels.

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Unit Specifications

Range per channel	2km	4km	8km	10km
Number of channels	1/2/4	1/2/4	1/2/4	1/2/4

Data Acquisition

Measuring time	~5 seconds for linear heat applications (EN54-22)			
Sampling interval	1m			
Temperature resolution	0.1°C@10s, 2km	0.1°C@10s, 4km	0.3°C@10s, 8km	0.3°C@10s, 10km
Temperature accuracy	±1°C			
Fiber break alarm	Automatic detection, accuracy within < ±5m			

Optical

Laser wavelength	1550 nm
Optical budget	10 dB
Connector type	E2000
Cable type	Multi mode 50/125
Laser safety classification	Class 1

Electrical and Hardware Interfaces

Supply voltage	24VDC
Power consumption	85W (max)
Relays	Yes - 48 NO/NC relays
Modbus	MODBUS TCP / MODBUS RTU
RJ45	2 x 100Mbps
Serial	1x RS-485 - 1x RS-232
USB	1 x USB
Other	7.0-inch touch screen, 1024*600-pixel
Internal storage	> 500,000 measurements

Physical Properties

Rack height	3U
Dimensions (W*H*D)	485 x 133 x 310 mm
Net weight	10 kg
IP rating	IP40
Shipping dimensions	550 x 330 x 530 mm
Shipping weight	12 kg

Environmental Properties

Operating temperature	-10°C to +55°C
Operating humidity	0 to 95%RH
Storage temperature	-10°C to +85°C
Storage humidity	0 to 95% Relative Humidity, Non-condensing

Software

Software name	SAMM APEX DTS Software with web browser thin client
Alarm types	Max & Min, Rate of Rise and Deviation
Maximum zones	1000