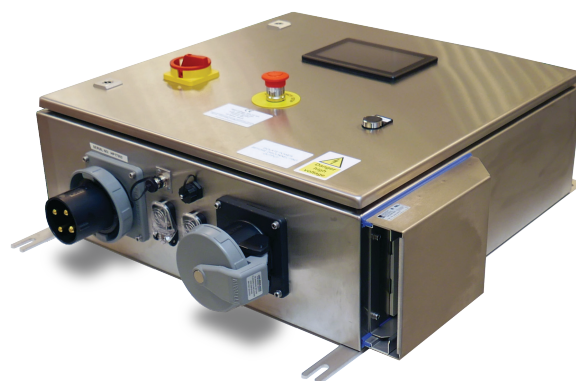


Heat Pulse System

Active distributed temperature sensing

Active distributed temperature measurements provide information about thermal transport at all locations along a fibre optic cable. This insight can be crucial for monitoring fluid presence and flow in environments with limited natural thermal gradients, or for characterising thermal properties in-situ.



Silixa's Heat Pulse System (HPS) enables active distributed temperature sensing (A-DTS) by applying heat pulses over time along a composite fibre optic cable at a constant power output per metre. It operates with an electric power supply and an optical fibre cable with embedded heating elements. HPS can be combined with any Silixa distributed temperature sensor to provide a complete monitoring solution, with both units controlled by a shared interface. The total measurement time, frequency and intensity of the heating cycles can be set to meet the measurement requirements of the installation.

Specifications

Typical deployment example

Output power	Heated length	Cable resistance	Power rate	Temperature increase*
30 kW	1 km	42 Ω /km	17 W/m	5° C

*Example based on a standard hybrid cable with 2X18 AWG twisted copper conductor as heating elements. The copper conductors are wired in series at the far end of the cable.

Power

Inlet: 220 - 600VAC, up to 50Amps

Outlet: 0 - 600VAC, up to 50Amps (max power: 30kW)

Communication options

2 X ethernet port

Physical dimensions - IP66 enclosure

Height	Width	Depth	Weight
730 mm	600 mm	250 mm	42 kg

Operating environment

Temperature: 0°C - 50°C

Humidity: 20% - 90% RH non-condensing

Panel PC

Rated IP65

OS: Windows 10 Enterprise LTSC (1809)

Certification & Compliance

Safety	EMC	FCC	CE Mark
BS EN ISO 12100 BS EN 60204-1	BS EN 61000-6-2 BS EN 61000-6-4	CFR 47:2008 Part 15 Sub Part B	2014/35/EU (safety) 2014/30/EU (EMC)

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