

Passive Strain Transducer (PST)

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The Passive Strain Transducer (PST) utilises established, high-performance mechanical sensing techniques which are fully compatible with our Distributed Electrical Sensing (DES) technology, enabling remote circuits to be instrumented passively without data networks, control power, or expensive civil works.

Up to 15 PSTs can be daisy-chained per fibre over a distance of up to 60 km from the substation and can be combined with Synaptec’s current and voltage sensors to obtain high-fidelity, synchronised measurements of intrusion, weather damage, or asset tampering over a wide area.

Measurements are available in real time within the substation firewall through Synaptec’s Interrogator unit, and are published using the standardised IEC 61850 sampled value protocol.

Specifications

Performance	
Strain resolution	0.1 $\mu\epsilon$
Operating strain range	$\pm 2500 \mu\epsilon$
Operating temperature range	-40 to +80 °C
Mechanical	
Dimensions	31.5 x 15.0 x 7.6 mm
Weight	15 g (sensor only without cable or fixings)
Housing material	302 stainless steel
Cable type	3 mm armoured cable
Mounting method	Spot-weld, epoxy

