

Passive Secondary Converter (PSC)



Passive Secondary Converter (PSC) combines industry-standard instrument transformers with Distributed Electrical Sensing (DES) technology, enabling remote circuits to be instrumented passively without data networks, control power, or expensive civil works.

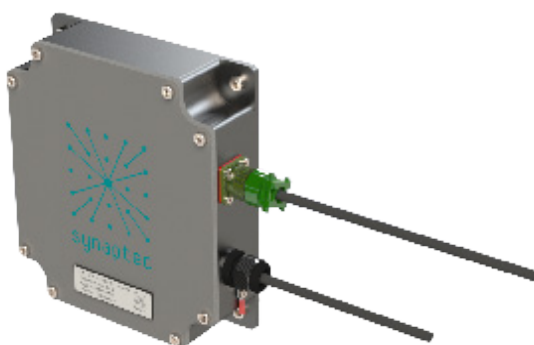
Utilising passive sensing techniques, the PSC encodes the secondary electrical quantity of a CT or VT into an analogue optical signal in standard single-mode telecoms fibre.

Networks of PSCs are multiplexed over standard single-mode fibre and monitored at a central location by Synaptec's Distributed Electrical Sensing (DES) Interrogator. This technique enables existing instrument transformers to be digitised and centralised, and new instrument transformers to be installed outside the substation fence for wide-area monitoring and multi-zone differential protection schemes without recourse to auxiliary power supplies, digital telecoms equipment or GPS receivers. In this way, footprint and weight are minimised, and the retrofitting of current and voltage sensors is made quick and safe in remote locations.

The PSC is available in two form factors:

- The **PSC-1** is designed for all-weather outdoor installations. The PSC-1 has a universal wall-mount design and provides a single-phase measurement of new or existing instrument transformers.
- The **PSC-3** is designed for installation in a substation environment. The PSC-3 installs in a standard 19 inch rack and provides a three-phase measurement of existing instrument transformers.

PSC-1



PSC-3



The PSC is available in both current (C) or voltage (V) formats.

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Specifications

	PSC-1-C	PSC-1-V	PSC-3-C	PSC-3-V
Electrical				
Nominal amplitude	1 A	User specified	1 A	User specified
Accuracy class	5P	3P	5P	3P
Rated continuous thermal current	2 A	-	2 A	-
Rated short-time thermal current	40 A, 1 s	-	40 A, 1 s	-
Environmental				
Operating temperature range	-40 to +80 °C		-5 to +40 °C	
Humidity	100% storage, 90% operating			
Mechanical				
Dimensions	190 x 175 x 52 mm		1U x 376 mm	
Weight	2.6 kg		4.8 kg	
Mounting	Universal flange-mount		19" rackmount	
IP protection	IP66		IP2X	
Optical				
Fibre type	Standard simple-mode simplex			
Fibre connection	Single-mode fibre splice		SC/APC patch cable	