



## Passive Secondary Converter (PSC)

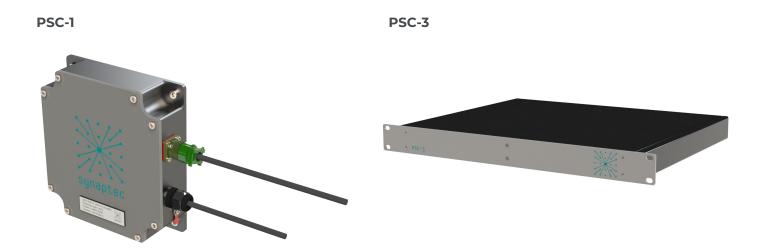
Synaptec's Passive Secondary Converter (PSC) combines industry-standard instrument transformers with Distributed Electrical Sensing (DES) technology, enabling remote circuits to be instrumented passively without data networks, control power, or expensive civil works.

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 syncronised waveform 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 standard mounting
  hole arrangement for adaptation to any suitable installation location, 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.



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



## **Specifications**

Electrical	PSC-1-C	PSC-1-V	PSC-3-C	PSC-3-V	
Rated input	1 A¹	User specified	1 A¹	User specified	
Accuracy class	1/10TPM IEC 61869-13	3P IEC 60869-3	1/10TPM IEC 61869-13	3P IEC 60869-3	
Rated continuous thermal current <sup>2</sup>	2 A	-	2 A	-	
Rated short-time thermal current	40 A, 1 s	-	40 A, 1 s	-	
Environmental					
Operating temperature range	-40 to	-40 to +80 °C		-5 to +40 °C	
Humidity		100% storage, 90% operating			
Mechanical					
Dimensions	190 x 175	190 x 175 x 52 mm		1U x 376 mm	
Weight	2.6	2.6 kg		4.8 kg	
Mounting	Universal mountin	Universal mounting hole arrangement		19" rackmount	
IP protection	IP66		IP2X <sup>3</sup>		
Optical					
Fibre type		Standard single-mode simplex			
Fibre connection	Single-mod	Single-mode fibre splice		SC/APC patch cable	

<sup>&</sup>lt;sup>1</sup>Other ratings available on request. <sup>2</sup>Assuming 1A rated current. <sup>3</sup>When installed in suitable 19 inch rack.