

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.

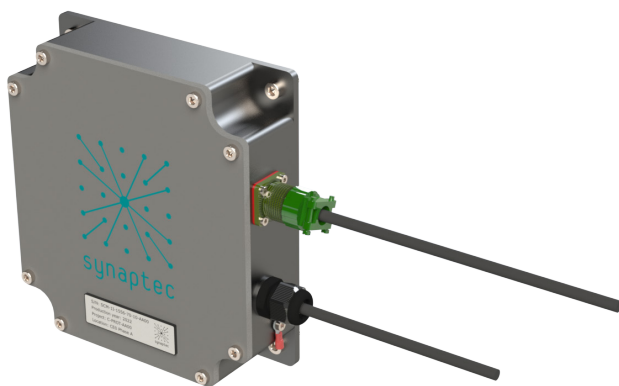
Utilising passive sensing techniques, the PSC encodes the secondary electrical quantity of a CT or VT into an analogue optical signal in standard single-mode telecoms fibre.

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 synchronised 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.

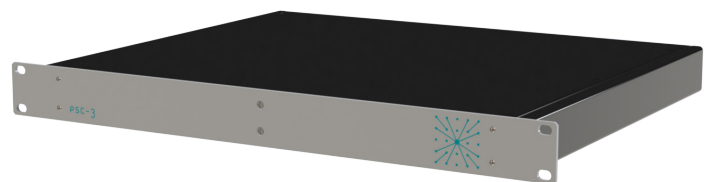
The PSC is available in two form factors:

- 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.

PSC-1



PSC-3



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 A ¹	User specified	1 A ¹	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 ²	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 mounting hole arrangement		19" rackmount	
IP protection	IP66		IP2X ³	
Optical				
Fibre type	Standard single-mode simplex			
Fibre connection	Single-mode fibre splice		SC/APC patch cable	

¹Other ratings available on request. ²Assuming 1A rated current. ³When installed in suitable 19 inch rack.