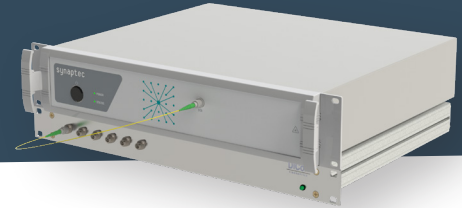


# mDES Interrogator



**The multi-channel Distributed Electrical Sensing (mDES) Interrogator is designed for periodic monitoring of large numbers of electrical sensors with unprecedented efficiency.**

The mDES Interrogator comprises an interrogation module coupled to a multi-channel optical switch module, allowing up to 20 sensors per fibre to be multiplexed across up to 16 fibres. Measurements from each channel are reported at custom timescales from tens of seconds to hours, enabling large-scale, long-term measurement coverage for condition monitoring applications.

## Specifications

Mechanical	
Dimensions	19" 3U rack (2U interrogation module [483x 400 x 88 mm], 1U optical switch module [483 x 342 x 43.65 mm])
Weight	9.8 kg (7 kg interrogator module, 2.8 kg optical switch module)
Power supply	
Voltage	2x 100-240 VAC
Frequency	50/60 Hz
Maximum power consumption	24.2 W (20 W interrogator module, 4.2 W optical switch module)
Redundancy	Single
Environmental	
Operating temperature	0 to +50 °C
Storage temperature	-20 to +60 °C
Humidity	to 80% at +40 °C
Shock endurance	Per IEC 60068-2-27
Sinusoidal vibration endurance	Per IEC 60068-2-6
EMC requirements	Per IEC 61326-1
IP rating	IP20
Optical input	
Supported sensors	Passive Secondary Converter (PSC)
Accuracy	3% (typ.)

### Optical channels

Number of optical channels	16
Representative number of PSC sensors per channel	20 <sup>1</sup>
Fibre type	Standard simplex single-mode
Interface	FC/APC

### Communications interfaces and IO

Ethernet interface	2x RJ45
Protocol(s)	SCPI over TCP
Supported sampling rates	1 kHz

### Time synchronisation

Protocol(s)	NTP
-------------	-----

### HMI

Software configuration and management	Automatic configuration via Synthesis®
Configuration port	RJ45 Ethernet
LEDs	Indicators for power (both modules) and status (interrogation module only)

<sup>1</sup> Maximum number of sensors per fibre for a given system will depend on fibre network topology and measurement specifications.