



Measure...Improve

CH	Value	PO
CH1	2205.30 kPa	PO1
CH2	209.70 °C	PO1
CH3	2202.10 kPa	PO2
CH4	208.60 °C	PO2
CH5	2207.90 kPa	PO3
CH6	208.50 °C	PO3
CH7	2203.60 kPa	PO4
CH8	209.10 °C	PO4
CH9	2203.40 kPa	PO5
CH10	202.70 °C	PO5
CH11	2202.10 kPa	PO6
CH12	208.20 °C	PO6

**ROBUST & HIGH RELIABILITY
MULTI-CHANNEL SIGNAL CONDITIONER
FOR HARSH ENVIRONMENT**

Use with Opsens' WLPI fiber optic pressure, temperature, strain & displacement sensors

Key Features

- High Linearity, precision, with fast sample rates.
- Expandable up to 128 Channels.
- Modular DIN rail design.
- Flexible -Supports current & future WPLI products (P/T, Displacement, and Strain sensors).
- Wide operating temperature range.
- Low Power - <12W for 2 channel (no display). Ideal for remote applications utilizing solar panel
- Supports a variety of interface and communication protocols including RS485, TCP/IP, & ModBus.
- Application Control— programmable alarms and I/O options.

Applications

- Downhole oil & gas pressure & temperature monitoring in extreme harsh environments
- High temperature environments
- Ideal for remote monitoring
- Industrial process-control and monitoring applications
- Hazardous and strong EMI/RFI/MRI environments

Description

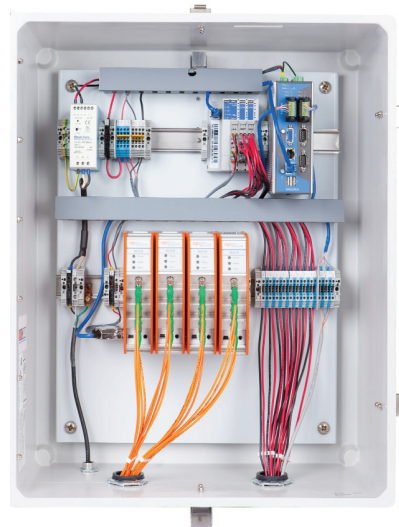
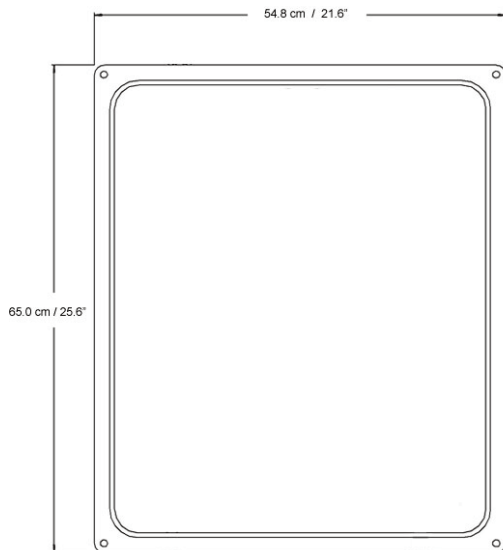
The WellSens Gen II is the next generation of surface controllers from Opsens. The WellSens Gen II is a robust and reliable multi-channel signal conditioner. It is compatible with Opsens' harsh environment interferometric fiber optic pressure and temperature sensor, the OPP-W. The WellSens Gen II can operate in a wide range of ambient temperatures from -20°C to +60 °C. The wide operating temperature and low power consumption, make it ideal for remote applications operating on solar panels or generators. The modular DIN rail design allows for seamless expansion with growing requirements. The high precision, small foot print, fast sampling rates and ease of use make it the solution of choice for oil field or industrial process applications.

At the core of the WellSens is the Opsens' White Light Polarization Interferometry (WLPI) proprietary technology†. This technology provides a means for making accurate and absolute measurements of the path length difference, which varies as a function of the parameters of interest (pressure or temperature), of any type of interferometric fiber optic sensors.

The WellSens Gen II is capable of a variety of interface and communications protocols which provides easy integration to DCS systems via RS-232, RS-485, TCP/IP on ModBus or SCPI. It is also offered with an optional LCD display, internal data storage, and can be used independently for direct automation control with programmable alarms, relay logic, and standard analog voltage and currents I/O.

The WellSens Gen II is a complete data acquisition and processing solution for any application monitoring temperature, pressure, strain, or displacement

† US patent 7,259,862. Patents pending in other countries.



Specifications

Number of channels	Up to 128 channels
Compatibility	OPP-W, OTP-W and OEP fiber optic sensors
Full Scale	30 000 nm (path length difference)
Resolution	± 0.003 % of F.S. (no averaging)
Precision	± 0.01 % of F.S. @ ±3.3 sigma limit (99.9 % confidence level)
Sampling rate	Up to 20 Hz
Output interface	RS-485, RS-232 and Ethernet (TCP/IP)
Communication protocol	Modbus and SCPI
I/O and control option	Various analog and digital outputs (4-20 mA, ±10 V, etc.)
Data storage	Up to 8 Gb (in option)
Display	LCD screen display (in option)
Input power	24 VDC or 85-264 VAC
Consumption	10 W + 1 W x number of channels (Ex.: 16-CH unit = 26 W)
Storage temperature	- 40 °C to 70 °C
Operating temperature	- 20 °C to 60 °C (-40 °C option available on request)
Humidity	95 % non condensing