# Converter 2xPt100 1W-UNI

Connects two Pt-100 and Pt-1000 probes to 1-Wire UNI

The converter connects one or two Pt100 or Pt1000 platinum temperature sensors to the 1-Wire UNI bus.

An external Pt100 probe can measure temperature in any environment. Our "Converter 2xPt100 1W-UNI" can be connected to Poseidon2 or Ares units. The values can be shared over LAN or GSM.

The product automatically detects Pt100 and Pt1000 probes.

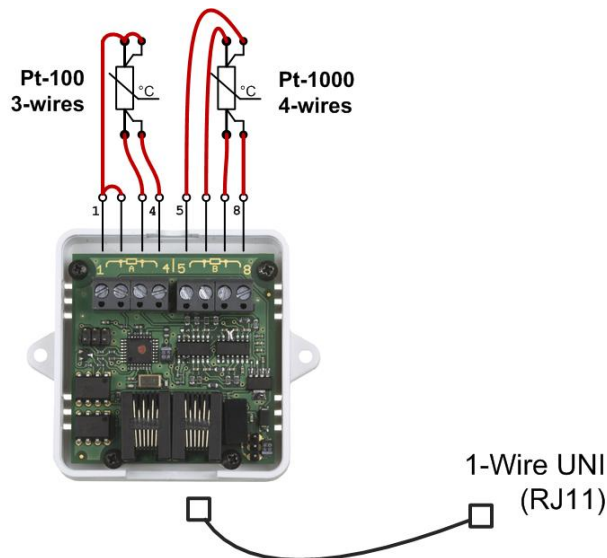The external probe can be connected using 2, 3, or 4 wires.
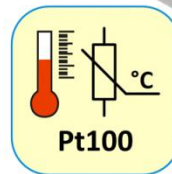
- Up to two external temperature probes (Pt100 or Pt1000) can be connected
- Measured temperature range is -200 to +850 °C (-328 to 1560 °F)
- Supports 2/3/4-wire probe connection
- High temperature measurement accuracy, auto-range
- Sensors can be daisy-chained (two RJ11 connectors)
- Converter can be calibrated at 8 points
- Calibration protocols with a particular temperature sensor can be provided for an extra fee
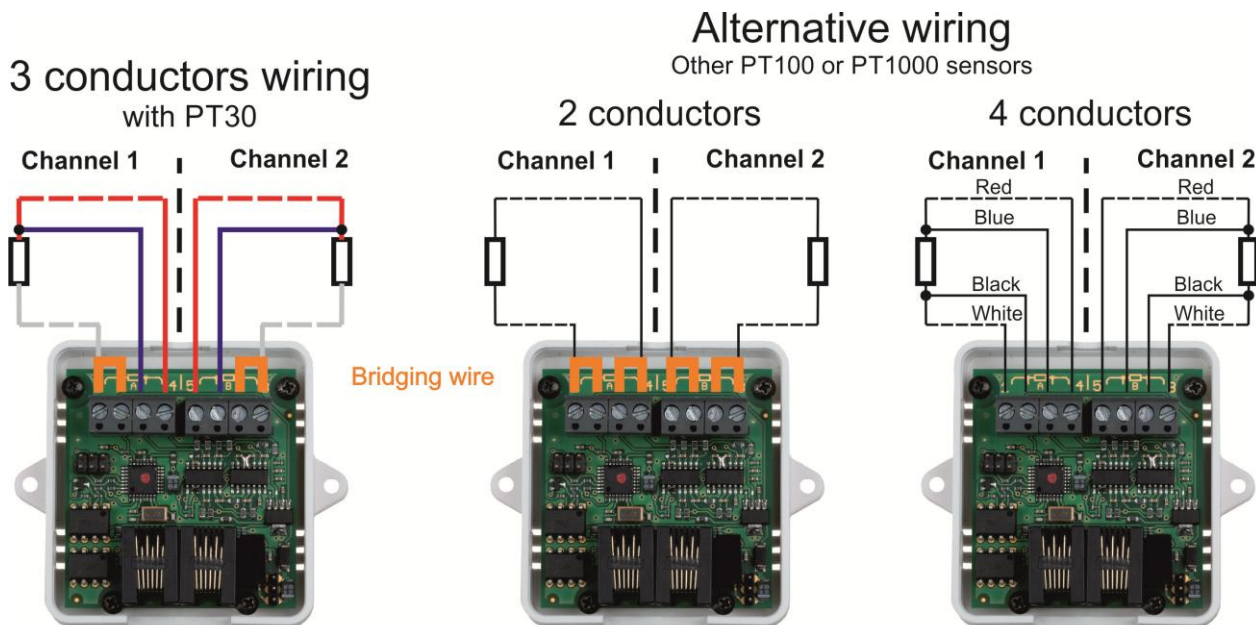- Powered from the 1-Wire UNI bus (RJ11)

Applications

- Industrial systems involving accurate temperature measurement
- Cooling plants with built-in temperature sensors at fixed locations
- Accurate measurement of temperature in a wide range
- Large-scale measurement systems with many measuring points
- Measuring HVAC and environment conditions in smart buildings
- Independent measurements in food and crop storages
- Food plants and warehouses, difficult measurement conditions
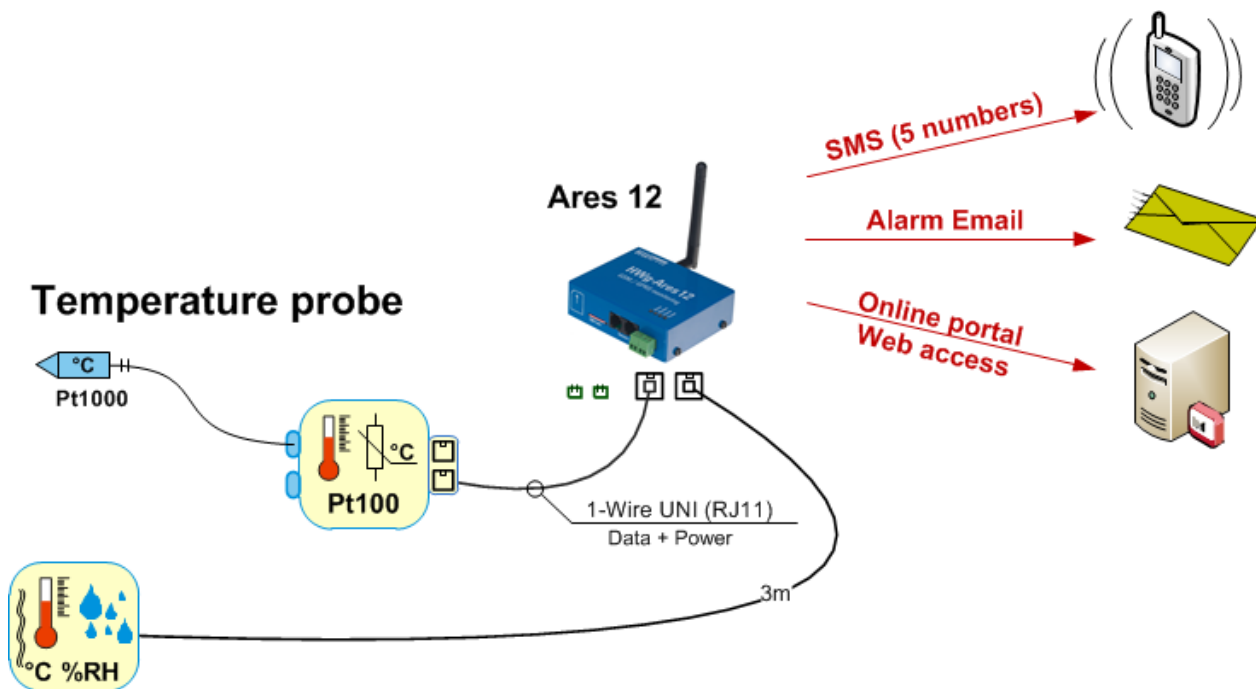- Temperature monitoring in pharmaceutical storages

Basic features

Bus

Type	1Wire-UNI (RJ11)
Connects to	Poseidon2 xxxx, Ares xx, Poseidon 2250, Poseidon 4002, SiteMon5
Connector	2x RJ11 (sensors can be daisy-chained)
Maximum distance	60m (total line length from the active port)
Electrical isolation	1Wire-UNI bus is NOT electrically isolated from the temperature probes

Power

Power supply	1Wire-UNI bus
Power limits	One active RJ11 port can power at most two converters. To boost the power, use our "1-Wire hub Power".

Converter input

Connector	2x 4-pin terminal blocks (1,2,3,4 + 5,6,7,8)
Supported sensors	2x Pt100 or Pt1000 temperature probe (autodetected)
Probe connection	2-wire, 3-wire or 4-wire connection
Input range / accuracy	Pt-100: -200°C to +650°C (± 0.3°C at +25°C converter temperature) Pt-100: -200°C to +850°C (± 0.6°C at +25°C converter temperature) Pt-1000: -120°C to +650°C (± 0.3°C at +25°C converter temperature) Pt-1000: -120°C to +850°C (± 0.6°C at +25°C converter temperature)
Measurement system accuracy	The total precision is the converter precision + Pt-100 probe precision. For example, for Pt100/A: $\Delta t = \pm(0.15 + 0.002 \times |t|)$ [°C] Overall accuracy = $\pm(0.3 + 0.1 + 0.15 + 0.002 \times |t|)$ [°C] (at +25°C converter temperature) Overall accuracy = ±0.55 °C when measuring 0 °C (converter +25°C) Overall accuracy = ±0.75 °C when measuring 100 °C (converter +25°C) Overall accuracy = ±2.25 °C when measuring 700 °C (converter +25°C)

Sensor output

Resolution	1 decimal place
Displayed units	Default [°C] For conversion / recalculation to other units, please contact your distributor.
Measuring period	Once per second

Miscellaneous

Operating conditions	-40 to +85 °C (-40 to +185 °F) / 5 to 70% RH
Dimensions / mass	65 x 80 x 30 [mm] / 200 g

Connecting external temperature probes

3 conductors wiring with PT30

Alternative wiring Other PT100 or PT1000 sensors

**2 conductors**

4 conductors

Remote GSM monitoring of a Pt1000 probe temperature

- The Ares GSM/GPRS unit powers two temperature sensors and reads data.
- The lower sensor is a native 1-Wire temperature sensor with a RJ11 connector.
- The upper temperature sensor is a Pt1000 probe connected to the "Converter 2xPt100 1W-UNI". The converter is connected to the Ares unit over the 1-Wire UNI interface (RJ11).
- The internal Ares battery provides back-up power to both temperature sensors.

Several sensors on a single bus
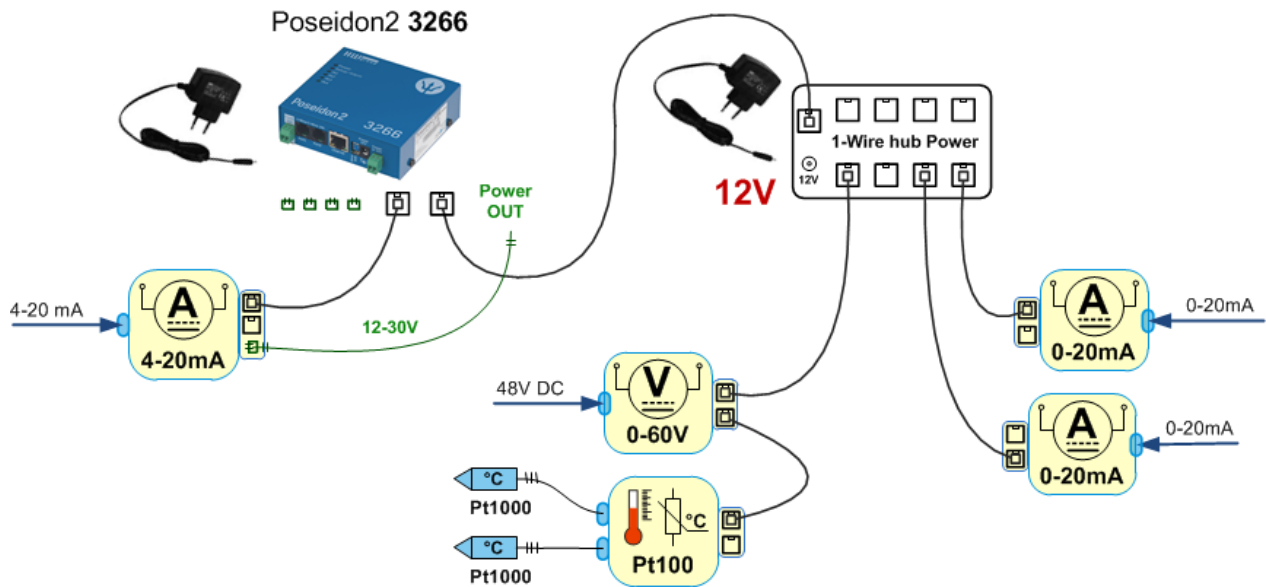
- To branch the 1-Wire UNI bus and boost the power over RJ11, we recommend our "**1-Wire hub Power**".

- The "**1-Wire hub Power**" requires a power source.

Conversion and calibration settings

- Calibration tool for MS Windows
- Sensor can be calibrated on a curve at 8 different points.

- The program can set a conversion from the input voltage [V] to an output unit, e.g. [mm], [hPa], [m] or [ppm].
- Conversion directly in the sensor gives the advantage of displaying the correct value in e-mails, text messages or the WEB interface.
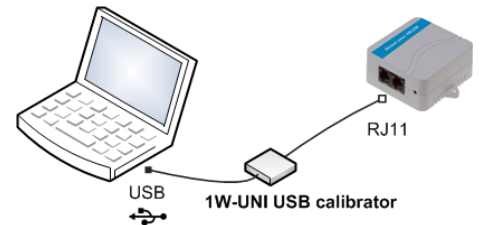
Please contact your distributor for more information.

Related products	
Sensor 4-20mA 1W-UNI	4-20mA current loop sensor, powers an external "4-20mA sink" sensor.
Sensor 0-20mA 1W-UNI	0-20mA sensor for the 1Wire UNI bus.
Sensor 60V 1W-UNI v2	0-60VDC (–48V) voltage sensor, 1Wire UNI bus.
Converter 2xPt100 1W-UNI	Converter to connect one or two external Pt-100/1000 probes to the 1-Wire UNI bus.
30A Current probe 1W-UNI	0-30AAC sensor, 1Wire UNI bus, with a clamp-on transformer.
1W-UNI USB calibrator	USB–RJ11 cable + software to calibrate and configure 1-Wire UNI sensors.
1-Wire hub Power	Hub for 1 to 8 sensors (8x RJ11), power-boosted from an external adapter.