

RJ11 – 1-Wire bus

Digital bus used by Dallas Semiconductors. Each sensor has a unique ID.

We recommend to keep the total wiring length under **60 m**, although functionality has been achieved over tens to hundreds of meters in experimental settings.

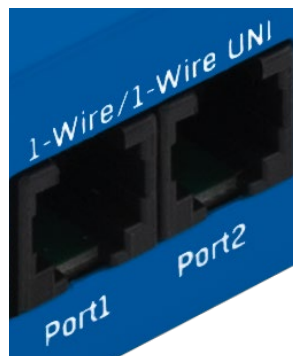
If the wiring connected to one connector of the Poseidon2 unit is longer than approximately 60 m, we **cannot guarantee error-free operation**, as it greatly depends on the actual wiring implementation, topology and environment.

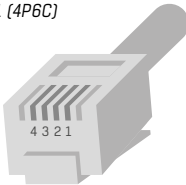
Active / Passive 1W port

An **active port** is the RJ11 jack at the Poseidon2 unit. It supports the full maximum cable length and provides power for all 1-Wire UNI/1-Wire sensors.

When a sensor connected to one active port is moved to another one, it will appear disconnected. It is necessary to run the sensor auto-detection again.

A **passive port** is a RJ11 jack at a T-Hub or a RJ11 jack at a sensor (when daisy chaining). It cannot guarantee full cable length support and power for subsequent sensors. Sufficient power can be ensured with a 1-Wire hub Power unit.



RJ11		
RJ11 (4P6C)		
		
1	-	Not used
2	Data	Transmit Data
3	GND	Ground
4	+5V	Power

1-Wire UNI (RJ11)

1-Wire **UNI** is a software extension of the 1-Wire bus.

1-Wire UNI sensors:

- Illumination sensor
- 4–20 mA current sensor
- 0–60 V (–48 V DC) voltage sensor
- 0–30 A AC current sensor
- Various other sensors – http://www.hw-group.com/products/sensors/index_en.html

- **Maximum wiring length:** 60 m total length per active RJ11 port.

Note: The maximum length can be reduced when certain 1-Wire UNI sensors or multiple RJ11 male-female connectors are used.

- **Power to sensors:** 5 V / 20 mA from the RJ11 jack (can be boosted by a “1-Wire hub Power”).

Other parameters are identical to 1-Wire.