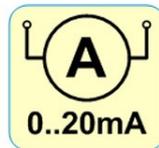# Current Sensor 0 to 20mA

Electrically isolated current sensor for the 1Wire-UNI bus

Sensor for measuring currents in the 0–20mA or 4–20mA range. It is typically used to connect a remote industrial probe (e.g. to measure the fuel level in a tank).
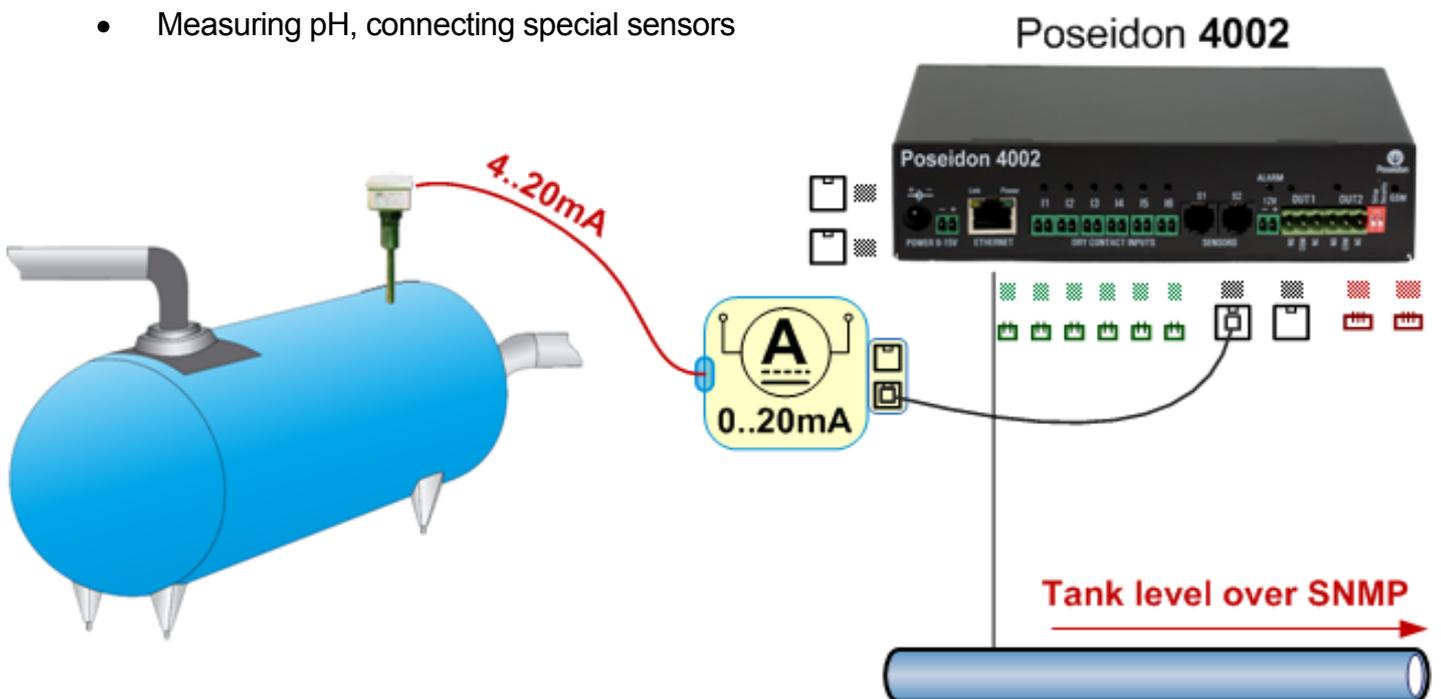
The sensor can be connected to Poseidon and SiteMon units in order to read values over IP (Web, e-mail, SNMP).

- Measured current is electrically isolated from the bus. The sensor can be used in industrial environments. The current loop can be several tens or hundreds of meters long.

- The sensor can be connected to a Poseidon or SiteMon unit using the 1Wire-UNI bus in order to read the values over IP (XML / Modbus/TCP / SNMP).

- Thanks to two RJ12 jacks, sensors can be daisy-chained.
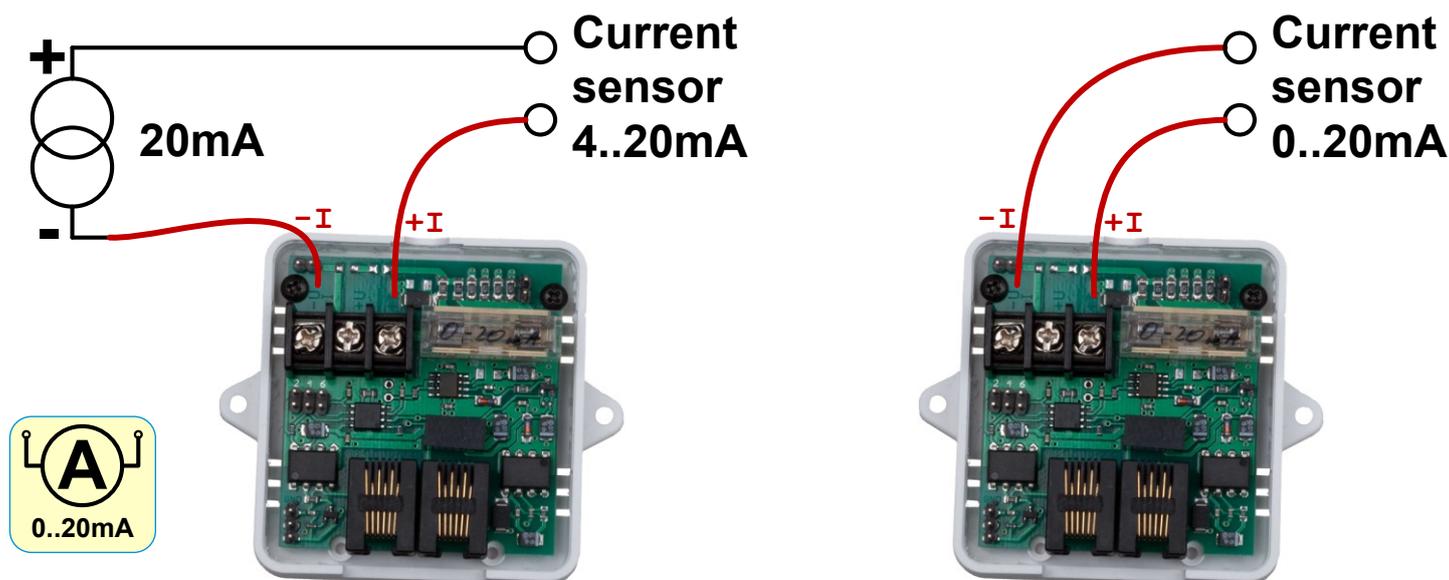
Typical applications

- Measuring fuel level in a tank

- Measuring current through a current transformer

- Measuring the concentration and pressure of CO_2 or other gases

- Measuring pH, connecting special sensors

Basic features

BUS	
Type	1-Wire UNI
Supported by	Poseidon 2250, Poseidon 4001, 4002, SiteMon5
Connector	2 pieces of RJ11 (bus input & bus output for the next sensor in the chain)
Topology	1) One sensor only, connected directly to the RJ11 connector on a Poseidon (SiteMon) unit 2) Daisy-chained sensors, max. 2 electrically isolated probes powered from one RJ11
Power	Sensor powered by 5V from the main unit (Poseidon or SiteMon)
Max distance	10m (total cable length from the Poseidon (SiteMon) unit to the sensor

SENSOR INPUT	
Input connector	2 pins of a 3-pin terminal block (I+ , I-)
Input range	0 to 20mA (Max. voltage 30VDC)
Input protection	Safety fuse (fast blow)
Isolation	Electrically isolated (opto-coupled) from the bus
Accuracy	2% of the full scale (4..20mA)
Max distance	Limited by current loop wiring and implementation
Installed fuse	63 mA

SENSOR OUTPUT	
Resolution	10 bits = 1024 ticks on the scale
Displayed units	[mA]
Reading period	Once per second

Physical parameters	
Operating conditions	0 to 65°C / 5 to 70% relative humidity
Dimensions / Weight	65 x 80 x 30 [mm] / 250 g

Product ordering numbers		
600 414	**Sensor 20mA 1W-uni**	0–20mA sensor, 1Wire UNI bus. Poseidon 2250, 4xxx and SiteMon
600 412	Sensor 15V 1W-uni	0–15V sensor, 1Wire UNI bus. Poseidon 2250, Poseidon 4xxx and SiteMon
600 413	Sensor 60V 1W-uni	0–60V (–48V) sensor, 1Wire UNI bus. Poseidon 2250, 4xxx and SiteMon
600 437	30A Current probe 1W-UNI	0-30A AC (110/230V) probe for 1Wire UNI. Poseidon 2250, 4xxx a SiteMon