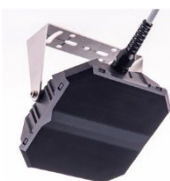


Hydrology
Water Networks
DHW networks

IloT Sensors (v2026)

Sensors for **ISURLOG** dataloggers

Water quality
Air (AWS) and Soil

HIDROLOGY – WATER NETWORKS – DHW NETWORKS		
Picture	Description	Order code
	<u>Radar sensor for level measurement with 4/20 mA analogue output</u> with 2 m cable, Paratronic brand. - Order code: NRVRR-4/20-CC - Type: Radar, Contactless. - Power supply: 10 ~ 33 Vdc. - Latency time: ≥ 2 s. - Máx. consumption: 22 mA. - Available ranges: RR = 03: range 0.00 to 3.00 m. RR = 08: range 0.00 to 8.00 m. RR = 12: range 0.00 to 12.00 m. - Cable length: CC = 02: 2 m cable by default. CC = XX m of cable on request. - Accuracy: - Air gap 30 cm ~ 50 cm: +/- 20 mm - Air gap 50 cm ~ 12 m: +/- 5 mm - Resolution: ± 1 mm - Operating temperature: -20°C ~ +60°C - Overvoltages immunity according to 8/20 μS wave: 2 kV. - Immunity to rapid transients: Level 4. - Protection degree: IP68 (100 days under 1 m of water).	NRV RR -4/20- CC
1	<u>Radar sensor for level measurement with RS485 Modbus output</u> and 2 m of cable, Paratronic brand. Analogous features to the 4/20 mA model, except: Order code: NRVRR-485-CC	NRV RR -485- CC

	• Power supply: 9 ~ 20 Vcc. • Consumption (sleep mode / run mode): 100 µA / 15 mA. • Available ranges: ○ RR = 03: range 0.00 to 3.00 m. ○ RR = 08: range 0.00 to 8.00 m. ○ RR = 12: range 0.00 to 12.00 m. • Cable length: ○ CC = 02: 2 m cable by default. ○ CC = XX m of cable on request. • Operating temperature: -20°C ~ +50°C	
	<u>Submersible Level Sensor:</u> • Type: submersible. • Measuring range: 0.00 to 5.00 meters (m.w.c.). • Accuracy: ±0.25% F.S. • Temperature zero drift: ±0.03%F.S/°C. • Long term stability: ≤0.2%F.S./año. • Response time: 5ms (≤ 90% F.S.) • Output: RS-485 Modbus RTU. • Power supply: 11 ~ 30 Vcc. • Process temperature: -40 ~ +80 °C. • Máx. overpressure: 200% F.S. • Case material: AISI316L. • Weight: 670 g.	SNS-485
	<u>Flood detector, for wet floors.</u> • Protection degree: IP66. • 5V, 10 mA @ stand-by operation, 1 switch contact. • 2 m of cable.	DIN-5V
	<u>Gauge pressure transmitter (gPT),</u> • Order code: PT-RR-CC • Available ranges: ○ RR = 06: 0-6 bar. ○ RR = 10: 0-10 bar. ○ RR = 16: 0-16 bar. ○ RR = 25: 0-25 bar. ○ RR = 40: 0-40 bar. • Output signal: 4/20 mA, 2 wires.	PT-RR-CC

	• Power supply: 8~30Vdc. • Case material: AISI316L. • Protection degree: IP67 • Process connection: ¼" M. • Electrical connection: M12 connector, 4 poles. • Includes a 0.6 m cable for direct and waterproof connection with ISURLOG datalogger (other lengths available: specify in the CC characters of the order code). • Non linearity: $\leq 0.5\%$ f.e. • Maximum overpressure: 2 x Pn.	
	Vortex flowmeter for <u>flow and temperature measurement</u> in pressurized pipes. • Order code: QVT-DD-CC • Liquids: water, cooler, glycol. • Available diameters/Flow ranges: ○ DD = 10: G½"A (DN10 interior) / 0,9...15 l/min. ○ DD = 15: G¾"A (DN15 interior) / 3,5...50 l/min. ○ DD = 20: G1"A (DN20 interior) / 5...85 l/min. ○ DD = 25: G1 ¼"A (DN25 interior) / 9...150 l/min. ○ DD = 32: G1 ½"A (DN32 interior) / 14...240 l/min. • Temperature measurement range: -25 ~ +125 °C. • 2 x 4/20 mA, flow and temperature. • Power supply: 10 ~ 33 Vdc. • Materials in contact with the fluid: EPDM/ETFE/PA 6T • Maximum permissible pressure: 12 bar (up to 40 °C) • Process connection: G male thread with flat o-ring. • Electrical connection: M12 connector, 3 poles. • Cable lengths available for connection to ISURLOG ○ CC = 02: 2 m. ○ CC = 05: 5 m. • Measured flow rate repeatability: $\pm 0.2\%$ PEM • Response Time: 0.5 s.	QVT- DD-CC
	<u>Temperature sensor:</u> • x (1,2) ○ x = 1: Pt100 sensor, 8x8x35mm, -50...200°C, 2 m cable. ○ x = 2: same as above on x = 1 but with a 5 m cable.	- SPI x

WATER QUALITY / ONLINE ANALYSIS		
Picture	Description	Code
	<u>Turbidity sensor:</u> • Type: Submersible • Range: 0 to 1000.0 NTU. • Accuracy: $\pm 5\%$ F.S, $\pm 0.3^{\circ}\text{C}$. • Resolution: 0.1 NTU/0.1$^{\circ}\text{C}$. • Output: RS-485 Modbus RTU. • Power supply: 12 ~ 24 Vdc. • Automatic temperature compensation with Pt1000 sensor. • Operating temperature: 0 ~ 50 $^{\circ}\text{C}$. • Process connection: male thread $\frac{3}{4}$ ". • Equipped with 10 meters of cable. • Factory calibrated. • Calibration using standard liquids (not included).	TUR-485
	<u>Conductivity sensor.</u> Same features as previous position sensor, except: • Range: 0 to 20000 $\mu\text{S}/\text{cm}$. • Accuracy: 0~10000us/cm, $\pm 3\%$; 10000~20000us/cm, $\pm 5\%$. • Resolution: 0~10000us/cm, 10us/cm; 10000~20000 us/cm, 50us/cm. • Power supply: 3.9 ~ 30.0 Vdc. • Operating temperature: -40 ~ +85 $^{\circ}\text{C}$. • Process connection: male $\frac{1}{2}$" thread.	CON-485
	<u>pH sensor.</u> Features equal to previous position sensor, except: • Type: Submersible • Range: 0 to 14 pH units. • Accuracy: ± 0.1 pH. • Resolution: 0.01 pH. • Process connection: male $\frac{3}{4}$" thread. • Equipped with 5 meters of cable.	PH-485

Picture	Description	Order code
	<u>Soil moisture, temperature and conductivity sensor:</u> • Type: electrodes for inserting into the ground • Soil temperature measurement: ◦ Range: -40 °C to +80 °C ◦ Accuracy: ± 0.5 °C. ◦ Resolution: 0.1 °C. • Soil moisture measurement: ◦ Range: 0 to 100%. ◦ Accuracy: $\pm 2\%$ (0~50%) and $\pm 3\%$ (50~100%). ◦ Resolution: 0.03% (0~50%) and 1% (50~100%). • Soil conductivity measurement: ◦ Range: 0 ~ 10000 $\mu\text{S}/\text{cm}$. ◦ Accuracy: $\pm 3\%$. ◦ Resolution: 10 $\mu\text{S}/\text{cm}$. ◦ Temperature compensation: 0 ~ 50 °C. • Output: RS-485 Modbus RTU. • Power supply: 3.6 ~ 30.0 Vdc. • Consumption: 6 mA @ 24 Vdc. • Operating temperature: -40 ~ +85 °C. • Protection degree: IP68. • Equipped with 5 meters of cable.	HRS-485
	<u>Compact Automatic Weather Station (AWS) for 5-parameter measurement:</u> • Type: Compact station to be mounted at the top end of a pole (not included). • Air temperature measurement : ◦ Range: -40 °C to +85 °C ◦ Accuracy: ± 0.1 °C. ◦ Resolution: 0.01 °C. • Air humidity measurement : ◦ Range: 0 to 100% RH. ◦ Accuracy: $\pm 1.5\%$ RH. ◦ Resolution: 0.01% RH. • Measurement of barometric air pressure: ◦ Range: 300 ~ 1250 hPa.	AWS-5

	○ Accuracy: ± 50 Pa. ○ Resolution: 10 Pa. • Air velocity measurement (ultrasonic anemometer): ○ Standard Range: 0 to 60 m/s. ○ Extended range: 0 to 75 m/s. ○ Maximum instantaneous: up to 80 m/s. ○ Accuracy: ± 0.3 m/s (≤ 10 m/s); $\pm 3\%$ (10 m/s ~ 50 m/s); $\pm 5\%$ (> 50 m/s). ○ Resolution: 0.1% m/s. • Wind Direction Measurement (Ultrasonic Sensor): ○ Range: 0 ~ 360 °. ○ Accuracy: $\pm 3.0^\circ$. ○ Resolution: 0.1°. • Output: RS-485 Modbus RTU / SDI12. • Power supply: ○ Sensors: 12 ~ 24 Vdc / 0.42W. ○ Heater: 24 Vdc / 21 W • Working temperature: -40 ~ +85 °C • Working Relative Humidity: 0 ~ 100%, non-condensing. • Protection degree: IP66. • Equipped with 3 meters of cable.	
	<u>Compact Automatic Weather Station (AWS) for measuring 8 parameters.</u> Same features as the AWS-5 5-parameter model to which are added: • Measurement of temperature, relative humidity, atmospheric pressure, air velocity (ultrasonic anemometer), wind direction (ultrasonic sensor): according to specifications of model AWS-5. • Air Quality Measurement (PM2.5): ○ Range: 0~1000μg/m³. ○ Accuracy: $\pm 10\%$ (100~1000μg/m³); $\pm 10\mu$g/m³ (0~100μg/m³). ○ Resolution: 1 μg/m³. • Air Quality Measurement (PM10): ○ Range: 0~1000μg/m³. ○ Accuracy: $\pm 15\%$ (100~1000μg/m³); $\pm 15\mu$g/m³ (0~100μg/m³).	AWS-8

	○ Resolution: 1 $\mu\text{g}/\text{m}^3$. • Measurement of ambient noise: ○ Range: 35~100dB. ○ Accuracy: $\pm 1.5\text{dB}$. ○ Resolution: 0.1 dB.	
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TECHNICAL SUPPORT



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As a result of our determined desire to meet the most demanding requirements of our customers and incorporate the latest technological advances, ISURLOG is a product in constant evolution, so the content of this document is merely informative and may be subject to change without prior notice.



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