

# NRV radar sensor for sanitation

## Applications:

Sensors dedicated to the measurement of water levels in lifting stations and stormwater weir, the NRV-03, NRV-08 and NRV-12 radars are small, economical, reliable, easy to install and in particular very low energy use.

## Simple and powerful:

NRV is based on pulse radar technology, without immersion or contact with the effluent.

The ultra-low energy consumption of the NRV allows its use on sites without energy supplies. The heating time of the NRV is only 2 seconds which makes it possible to greatly increase the autonomy of the data loggers or autonomous acquisition systems.

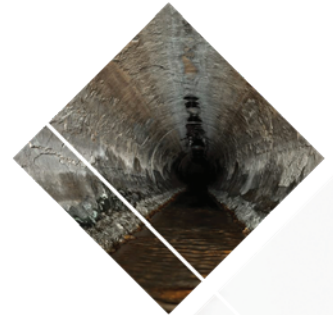
Ultra thin (4.3 cm), the NRV can be easily installed in cramped structures. Its extremely small measuring cone ( $\pm 4^\circ$  by  $\pm 6^\circ$ ) and its reduced blind zone allow for the use of the NRV in congested spaces.

The IP 68 level of the NRV is guaranteed thanks to its completely waterproof housing.

The NRV withstands extreme temperatures ( $-20^\circ$  to  $+60^\circ$ ) and is guaranteed for 2 years including risks of lightning.

## Available:

- Large stock of all models.
- Fast delivery
- Constant technical availability to answer your questions



C124A-0220	NRV420-3 NRV 420-8 NRV 420-12	NRV-485/3 NRV-485/8 NRV-485/12
Technology	Pulses	Pulses
Frequency of emission	24.05 GHz to 26.5 GHz	24.05 GHz to 26.5 GHz
Power supply	10 to 33 V =	9 to 20 V =
Consumption	4 to 22mA loop current	Standby mode: 100 µA Permanent mode: 15 mA
Measurement range	3m, 8m or 12m depending on model	3m, 8m or 12m depending on model
Radiation angle	+/- 4° by +/- 6°	+/- 4° by +/- 6°
Minimum heating time	2 seconds	2 seconds
Output signal	4-20mA over 2 wires 20-4mA over 2 wires	Jbus slave on RS485 including measurement and signal quality.
Resolution	1 mm	1 mm
Accuracy	Air draft of 30 cm to 50 cm: +/-20 mm Air draft of 50 cm to 12 m: +/- 5 mm	Air draft of 30 cm to 50 cm: +/-20 mm Air draft of 50 cm to 12 m: +/- 5 mm
Operating temperature	-20°C / +60°C	-20°C / +50°C
Storage temperature	-20°C / +60°C	-20°C / +60°C
Surge immunity for 8/20 1.2/50 waves	2 kV	1 kV
Immunity to fast transients	Level 4	Level 4
Electromagnetic compatibility	EN 302729-1/2 (2011-05) - EN 60950-1 (2006-09) + Av A1, A2, A11, A12 EN 61326-1 (2013-05) - EN 62479 (2010-11) - EN 50581 (2013-01)	EN 302729-1/2 (2011-05) - EN 60950-1 (2006-09) + Av A1, A2, A11, A12 EN 61326-1 (2013-05) - EN 62479 (2010-11) - EN 50581 (2013-01)
Standard ISO	ISO 4373	ISO 4373
Installation and fixing	Integrated adjustment hanger	Integrated adjustment hanger
Optional accessories	Bracket	Bracket
Protection	IP 68 (100 days under a metre of water)	IP 68 (100 days under a metre of water)
Cable	Shielded, 2 wires, cross-section 0.5mm <sup>2</sup> , Ø 5.5mm, 50Ω/Km - Length 2m	4 wires, cross-section 0.5mm <sup>2</sup> , Ø 6mm, Length 2m
Max length cable	Maximum distance according to line resistance and supply voltage	1 km.
Case material	ABS	ABS
Dimension	L 121 mm, l 121 mm, h 43 mm without hanger	L 121 mm, l 121 mm, h 43 mm without hanger
Dead zone	300 mm	300 mm
Guarantee	2 years including lightning risks (1)	2 years including lightning risks (1)

(1) Protecting the RS485 link with a PRO SA224 and the 4/20 link with a PRO TAS30 is imperative.

## NRV radar sensor for sanitation