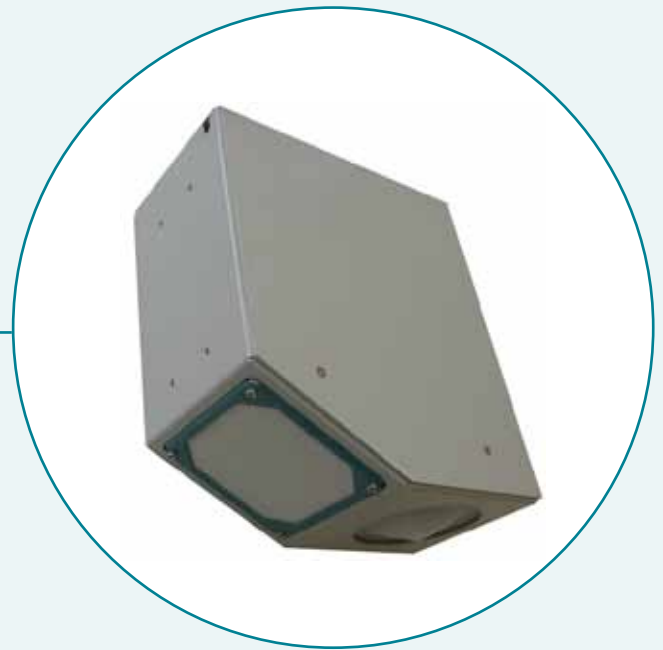


# RQ-30, RQ-30a

## Contactless discharge measurement for discharge channels and open waters

The RQ-30 / RQ-30a non contact flow measurement sensor is the improved and upgraded successor model for the RQ-24.

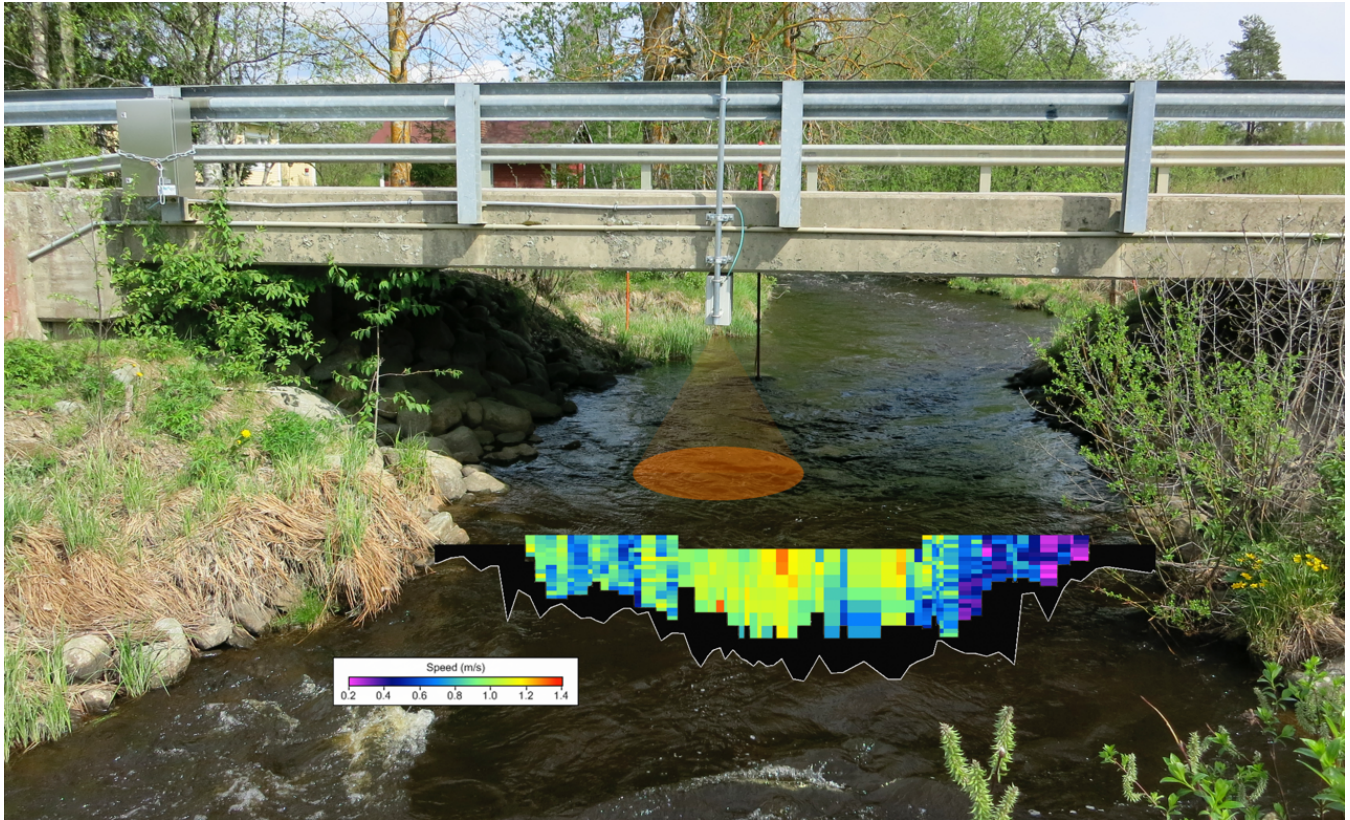
Based on the Doppler radar technology, surface velocity and level are measured and the flow quantity is calculated automatically.



## Properties and Benefits

- » Contactless, fast measurements
- » Wide range of flow conditions
- » Also at flood
- » Internal vertical inclination sensor
- » Integrated level measurement
- » Flow velocity measurement with direction recognition
- » High accuracy
- » Elimination of environmental disturbing influences
- » Also for low and high velocities
- » Interfaces: SDi-12, RS-485
- » RQ-30a: additionally analog outputs
- » Low power consumption
- » User-friendly operation
- » Small, compact design enables also the use in drain channels
- » IP 68
- » External input for additional sensors e.g. water temperature
- » Digital output for alarm systems

## Technical Data



Level Measurement	
Depth range	<ul style="list-style-type: none"> <li>0 ... 15 m - standard version</li> <li>0 ... 35 m - extended version</li> </ul>
Resolution	1 mm
accuracy	+/- 2 mm <ul style="list-style-type: none"> <li>equivalent to (standard version) +/- 0.013 % f S (15 m)</li> <li>equivalent to (version with extended measure range) +/- 0.006 % f S (35 m)</li> </ul> (accuracy is complied over a minimum distance of 0.5 m)
Radar frequency	26 GHz (K-Band)
Radar opening angle	10°

MAIN male connector (12 pins)	
interfaces	1x RS-485 1x SDi-12
analog outputs (only available with RQ-30a)	4 analog outputs (each 4 ... 20 mA, max. resistance within the data logger 470 Ω): <ul style="list-style-type: none"> <li>Water level</li> <li>Velocity</li> <li>Discharge</li> <li>analog output of the measure signal at the au X input</li> </ul>
Digital output	1 x switching output (max. 1.5 a)
Digital input	1 x trigger input (low: 0 ... 0,6 V high: 2 ... 30 V)

General	
Total weight	5.4 kg
Protection	IP 68
Power supply	5.5 V ... 30 V
Power consumption (at 12 V)	<ul style="list-style-type: none"> <li>stand by ca. 1 mA</li> <li>active measurement ca. 180 mA</li> </ul>
operating temperature	- 35° to 60° C
Storage temperature	- 40° to 60° C
Lightning protection	integrated lightning protection

Velocity Measurement	
Range	0.15 to 15 m/s
accuracy	+/- 0.02 m/s; +/- 1 %
Resolution	1 mm/s
Direction recognition	+/-
measurement duration	5 ... 240 s
measurement interval	8 s ... 5 h
measurement frequency	24 GHz (K-Band)
Radar opening angle	12°
Distance to water surface	0.5 ... 35 m

Other connectors	
LEVEL male (4 pins)	1. Level 4 ... 20 ma 2. Power supply for level sensor 18 V 3. GND
auX female (4 pins)	1. Ext. analog input 0 ... 2.5 V (e.g. for iR-thermometer) 2. Power supply for sensor (u power - 1 V) 3. GND