

RG-30+

Flow velocity Measurement System



The RG-30+ radar sensor is a measurement device for the contact-free determination of the flow velocity of open rivers and channels. The sensor detects the surface flow velocity by the principle of the Doppler frequency shift.

Due to the contact-free measurement method, the RG-30+ can be installed on extension arms or cable ways without costly structural measures under or inside the water. This also has the advantage that the sensor is located outside the danger area of flood events and that it requires no maintenance over many years.



FEATURES

- Contact-free method prevents soiling and damage, no sensor maintenance
- Sensor self check with status and error output.
- 3-point velocity calibration certificate.
- Advanced velocity diagnostics with spectrum display
- Sommer Messtechnik ANR: advanced noise reduction system

Versions

Art	Version
17192	RG-30a System for contact-free flow velocity measurement

Scope of delivery

Qty	Art	Item
1	-	RG-30+ in the required version
1	-	Manual and Q-Commander Software on USB stick

Accessories

Art	Accessory
15543	Data cable for configuration and testing of RQ-30 / RG-30 / SQ
15833	Data cable for RQ-30 / RG-30 / SQ, 12x0,25 mm ² , up to 60m
18711	Data cable for RQ-30 / RG-30, LiYCY 12x0,25mm ² , 10 m
18712	Data cable for RQ-30 / RG-30, LiYCY 12x0,25mm ² , 20 m
20074	RG / RQ standart mouniting set, 2x U-bolt max. Ø60 mm
20572	RQ-30 lightning protection for cable length >50 m
22524	Universal extension box for cable extension
-	Radar velocity verifier

Specifications

Physical and environmental	
Power supply	9...30 VDC; Reverse voltage protection, overvoltage protection
Power consumption at 12 VDC	Standby approx. 1- Active measurement approx. 110 mA (default 30 sec)
Outputs	RS-485 ASCII or Modbus RTU SDI-12 Analog output 4...20 mA (14 bit, max. load 250 Ω)
Operating temperature	-40...85 °C (-40...185 °F)
Storage temperature	-40...85 °C (-40...185 °F)
Relative humidity	0...100 %
Protection rating	IP 67 (IP 68 on request)

Physical and environmental	
Lightning protection	Integrated protection against indirect lightning with a discharge capacity of 0,6 kW Ppp
Housing material	Powder coated aluminum, vandalism-proof
Mounting bracket	Ø34...48 mm
Size L x W x H	241 x 154 x 246 mm (9.49 x 6.06 x 9.69 in)
Weight	2.7 kg (5.95 lb)

Velocity	
Detectable measurement range	0.08...16 m/s practical range (depending on surface water waves) 0.01...20 m/s technical range
Accuracy	± 0.01 m/s (certified by METAS)
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	0.05...130 m (0.16...426.51 ft)
Noise reduction	Sommer Messtechnik ANR (advanced noise reduction) based on velocity spectrum analysis

Automatic vertical angle compensation	
Vertical inclination	Measured internally
Accuracy	± 1 °
Resolution	± 0.1 °

Features	
AI Machine learning	Internal Machine learning for velocity, outputted with each measurement.
Data quality	Internal measurement quality value output with each measurement

