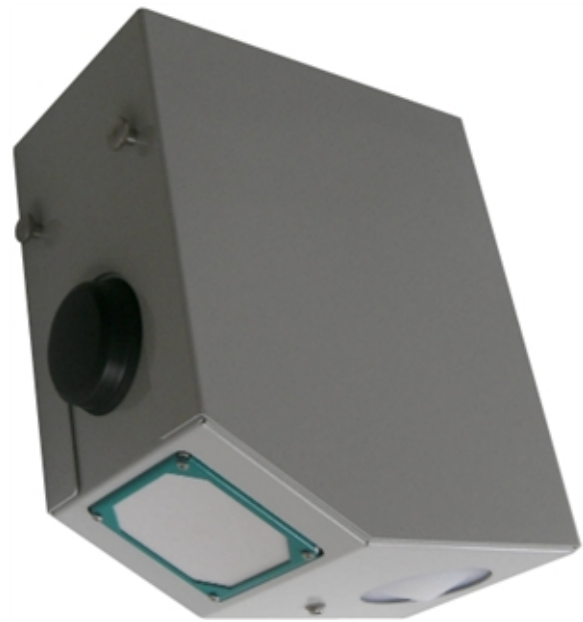


RQ-30 ADMS

Discharge Measurement System




The RQ-30 ADMS is an all-in-one discharge measurement system, suitable for spot-measurements, temporary applications or stationary long-term installations. It contains the contact-free flow velocity and water level sensors of the RQ-30 and applies the same algorithms to compute the water discharge.


The rechargeable batteries allow autonomous operation for several weeks and the integrated charge controller provides for the connection of a solar panel. The data logger of the RQ-30 ADMS offers wireless data transmission to FTP and HTTP servers, and notifications by E-mail and SMS.


In that way the user can retrieve the latest data online and therefore has an overview of the potential danger spots at any time.

Additionally, a notification service can be configured, which informs people in charge about any violation of limit values, e.g. if there is a risk of flooding.


The RQ-30 ADMS provides a complete and immediately available discharge measurement system. It is suitable for longterm measurements with solar power supply as well as autonomous temporary measurement campaigns.


 Automatic discharge calculation based on hydraulic model with multiple k-factors.

 Sensor self check with status and error output.

 AI-based machine learning for compensation of environmental influences and early detection of errors.

 3-point velocity calibration certificate.

 Discharge calculation inside the RQ-30 ADMS.

 Water level and velocity sensor combined in one weather and vandalism proof housing.

Versions

Art	Version
21599-CL	SQ-R non-contact flowmeter for sewage and wastewater flow monitoring, with radar level and velocity sensors

Art	Version
20786	RQ-30 Automatic discharge measurement system, 15m
20787	RQ-30 Automatic discharge measurement system, 35m

Scope of delivery

Qty	Art	Item
1	-	RQ-30 ADMS in the required version including MRL-7 data logger with 3G modem and planar antenna
1	-	Manual and Commander Software on USB stick
1	20181	RS-232 to USB converter cable with push-pull connector, 1.8 m
1	20629	RQ-30 ADMS/SQ-mobile charger

Accessories

Art	Accessory
10085*	Lead-acid battery LC-RA1212P, 12 VDC/12 Ah
20989	Solar panel 50W with 60-mm tube mount and 5-m cable
20595	Digital time laps camera
20629	RQ-30 ADMS/SQ-mobile charger

* The RQ-30 ADMS requires two batteries

Specifications

Physical and environmental

Power supply	9...28 VDC; Reverse voltage protection, overvoltage protection Battery capacity 24 Ah/12 V; 20-W solar panel recommended for mid latitudes
Power consumption at 12 VDC	Standby approx. 3 mA Active measurement approx. 120 mA
Outputs	RS-485 ASCII / Modbus RTU SDI-12
Operating temperature	-40...75 °C (-40...167 °F)
Operating temperature	-40...60 °C (-40...140 °F)
Storage temperature	-40...60 °C (-40...140 °F)
Relative humidity	0...100 %
Protection rating	IP66
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	430 x 202 x 419 mm (16.93 x 7.95 x 16.50 in)
Weight	15.5 kg (34.17 lb) plus 7.4 kg (16.31 lb) lead acid batteries

Data logger and communication

Memory	4 MB internal flash memory (equivalent to approx. 500'000 measurement values) 32 GB SD-card (write only)
Mobile modem	2G, 3G (optionally 4G) 3 FTP/HTTP servers Functions: IP call, fixed IP, time-synchronization via NTP, e-Mail and SMS messages

Velocity

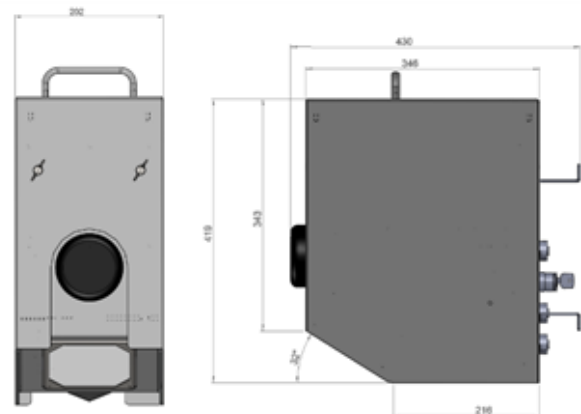
Detectable measurement range	0.08...16 m/s (depending on waves)
Detectable measurement range	0.08...18 m/s (depending on waves)
Accuracy	± 0.01 m/s
Resolution	1 mm/s
Direction recognition	+/-

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	0.50...35 m 0.05...130 m (0.16...426.51 ft)
Vertical inclination	Measured internally

Automatic vertical angle compensation

Accuracy	± 1 °
Resolution	± 0.1 °

Water level measurement	15 m	35 m	75 m
Measurement range (distance between level sensor and water surface)	0...15 m (0...49.21 ft.)	0...35 m (0...114.83 ft.)	0...75 m (0...246.06 ft.)
Measurement frequency	80 GHz	26 GHz	80 GHz
Resolution	2 mm		
Accuracy	± 0.025 % FS		
Level sensor opening angle	8°	10°	8°



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