HyQuant L+V

All in One, Level & Velocity Radar Sensor

Water Level/Velocity | Hydrology

General Description

HyQuant L+V is KISTERS' state-of-the-art 60 GHz V-band FMCW* water level & Doppler water velocity radar, with top-tier radar electronics and radar-on-chip technology, offering advantages such as:

Simultaneous data acquisition
Simultaneous level & surface velocity data crucial for stream discharge calculation.

Compact design
Weighing merely 1.15 kg (2.54 lb), the HyQuant L+V is **the smallest of its kind.** Its discrete design deters vandalism and enables **flexible and easy installations** in various support structures like bridges and booms, in narrow and wide water bodies, and in urban and remote applications.

Dual antenna setup
Uses carefully designed separate antenna pairs for level and velocity measurements. The required beam inclination for V is realised by design. This simplifies sensor positioning, needing only parallel mounting for optimal placement.

All-in-one solution
Eliminates the need for extra housings for independent sensors.

Optional upgrade to Q
Upgrade to discharge calculation without technical modifications.

Small antennas, short wavelength and optimised beam width provide **high resolution and accuracy across the measurement range.** The user adjustable filter settings allow adaptation to diverse monitoring scenarios.

*FMCW: Frequency Modulated Continuous Wave

HyQuant L+V gives customers access to non-contact technology based on the radar-on-chip technology, without requiring radar expertise or compromising on size, features or performance.

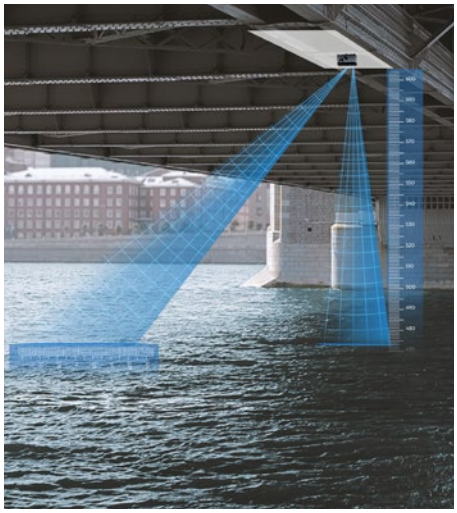
Applications

HyQuant L+V excels in open flow water channels, seamlessly measuring both water level and velocity simultaneously.

- Hydrology: rivers, streams, open channels/canals, inland waterways, tide influenced
- Risk management: flood warning and forecasting, urban flooding
- Irrigation: open channels, irrigation management
- Industrial applications: hydropower, mining, brownfields
- Climate change studies

Features

- L: stage point setting for real water level data.
- Level and surface velocity data in all stage and flow conditions (low, normal, high).
- 20 m max. measurement distance
- Data interfaces: SDI-12 or Modbus
- On-site configuration via Wi-Fi: free HyComm software with automatic firmware updates and wizard.
- Nearly no blanking distance: measures up to the housing cover
- Low power demand
- Effortless maintenance
- Robust housing
- Metric or imperial units
- 10 m cable, torx key, and a 360° adjustable rotation mounting bracket included.
- Simple set-up process via Quick Installation Guide.



KISTERS

Technical Specifications

Radar type/Frequency band	All in one, 60 GHz level & velocity radar sensor based on the FMCW* & Doppler Technologies	
Measurement range	L: 0.10 ... 20 m (0.32 ... 65.61 ft)	V: 0.05 m/s ... 15 m/s
Output rate	1 Hz	
Accuracy	L: <=2 mm (<= 0.07 in)	V: 1% of measured value (in a range from 0.02 m/s ... 4.50 m/s (0.0656 ft/s ... 14.763 ft/s)) V: 2% of measured value (in a range from 4.50 m/s ... 15 m/s (14.763 ft/s ... 49.212 ft/s))
Resolution	L: 1 mm (0.039 in)	V: 1 mm/s (0.003 ft/s)
Min. ripple	2 ... 3 mm (0.07 ... 0.118 in)	
Blanking distance	0.1 m (3.937 in)	
Supply voltage (range)	10 ... 30 VDC	
Power consumption at 12V	Typical ~50 mA; Wi-Fi activated: ~90 mA (including optional upgrade to Q)	
Beam angle	L: 8° x 8° (azimuth by elevation)	V: 8° azimuth; 12° elevation
Ingress protection	IP68	
Communication and interfaces	SDI-12, Modbus, Wi-Fi	
Operating temperature range	-40 ... +80 °C (-40 ... 176 °F)	
Humidity range	0 ... 100 % non-condensing RH	
Dimensions and weight	HyQuant sensor with backplate: L x W x H: 160 x 97 x 91 mm; 1.15 kg (6.29 x 3.81 x 3.58 in, 2.53 lb) Packaged dimensions: LxWxH: 300 x 300 x 187 mm, 2.5 kg (11.81 x 11.81 x 7.36 in, 5.51 lb)	
Signal connector	M12 8-pin	
Materials	Housing: powder-coated aluminium; cover/radome: HDPE	
Compliance	CE, FCC Class B, UL, RoHS, further information available on our website	

Accessories

HyComm configuration software: Sensor configuration via Wi-Fi/SDI-12/Modbus, choice between wizard and direct configuration modes, real-time sensor readings and colour-coded positioning help, automatic sensor firmware updates, etc.
iRIS 270 and UnderCover Pro: KISTERS brand data loggers with SDI-12 interface

Optional pole-mount bracket: for pole diameters ranging from 20 mm (3/4") to 60 mm (2").
Adapters: SDI-12 to USB and Modbus to USB
Tailor-made arm/boom structure(s)

Please ask for details.

Reseller

KISTERS Europe I hydromet.sales@kisters.eu I kisters.eu
KISTERS Australia I sales@kisters.com.au I kisters.com.au
KISTERS Latino América I sales@kisters-latam.com I kisters.es
KISTERS New Zealand I sales@kisters.co.nz I kisters.co.nz
KISTERS North America I kna@kisters.net I kisters.net

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