

# Water Level Radar Sensor

Water Level/Stage | Hydrology

## General Description

HyQuant L, KISTERS' state-of-the-art non-contact water level radar sensor, operates on a 60 GHz V-Band FMCW\* radar technology. It offers superior resolution and accuracy, with reduced power consumption, all at an appealing price point.

### Compact design

The sensor's exceptional compactness enables effortless and swift installations. Its discrete design further deters vandalism and enables flexible and easy installations in various support structures such as bridges and booms located in narrow and wide water bodies, urban and remote applications.

### Measurement ranges

Designed for hydrological applications, the sensor is available in two ranges:

— **HyQuant L20:**

0.10 ... 20 m

— **HyQuant L50:**

0.15 ... 50 m

### Optional upgradability to L+V or Q

Upgrade to the level and velocity radar HyQuant L+V or to the discharge radar sensor HyQuant Q, without uninstalling or returning the instrument, purchasing additional sensors and/or adapting the housing.

This radar system seamlessly adapts to varied monitoring environments, thanks to adjustable filter settings easily customizable via an intuitive wizard-driven interface.

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

## Applications

- 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

- Convenient configuration with stage point setting for real water level data
- Data interfaces: SDI-12 or Modbus
- Configuration via Wi-Fi: using KISTERS' free HyComm software with automatic firmware updates or SDI-12 or Modbus with a PC adapter or data logger
- Nearly no blanking distance: measures up to the housing cover
- Low power operation
- Effortless maintenance
- Readings in either metric or imperial units
- 10 m (32.80 ft) cable, torx key, and a 360° adjustable rotation mounting bracket included
- Simple set-up process via Quick Installation Guide



\*FMCW: Frequency Modulated Continuous Wave

## Technical Specifications

|                                     |                                                                                                                              |                            |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Radar type/Frequency band</b>    | FMCW* 60 GHz V-Band radar level sensor                                                                                       |                            |
| <b>Measurement range</b>            | HyQuant L20: 0.1 ... 20 m                                                                                                    | HyQuant L50: 0.15 ... 50 m |
| <b>Output rate</b>                  | 1 Hz (1 measurement/second)                                                                                                  |                            |
| <b>Accuracy</b>                     | <=2 mm – meets USGS HIF requirements                                                                                         |                            |
| <b>Resolution</b>                   | 1 mm                                                                                                                         |                            |
| <b>Supply voltage (range)</b>       | 10 ... 30 VDC                                                                                                                |                            |
| <b>Power consumption at 12V</b>     | Typical ~15 mA; Wi-Fi activated: ~90 mA (incl. optional upgrade to HyQuant Q)                                                |                            |
| <b>Beam angle</b>                   | 8° x 8° (azimuth by elevation)                                                                                               |                            |
| <b>Ingress protection</b>           | IP68                                                                                                                         |                            |
| <b>Communication and interfaces</b> | SDI-12, Modbus, Wi-Fi                                                                                                        |                            |
| <b>Operating temperature range</b>  | -40 ... +80 °C                                                                                                               |                            |
| <b>Humidity range</b>               | 0 ... 100 % non-condensing RH                                                                                                |                            |
| <b>Dimensions and weight</b>        | HyQuant sensor with backplate:<br>LxWxH: 160 x 97 x 91 mm, 1.15 kg<br>Packaged dimensions: LxWxH: 300 x 300 x 187 mm, 2.5 kg |                            |
| <b>Signal connector</b>             | M12 8-pin                                                                                                                    |                            |
| <b>Materials</b>                    | Housing: powder-coated aluminium; cover/radome: HDPE                                                                         |                            |
| <b>Compliance</b>                   | 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 to 60 mm.

**Adapters:** SDI-12 to USB and Modbus to USB  
**Tailor-made arm/boom structure(s)**

[Please ask for details.](#)



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