

## Hydra-Pulse Level Radar Quick Start Guide HYC 215 & HYC 230 SDI-12 Version

Please note that these instructions are specifically for connecting and programming the radar using the Wireless Device Configurator App. For more detailed information on SDI-12 commands please see the manual, however the SDI-12 data points output by the radar are:

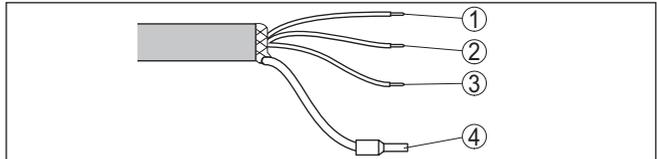
1. Filling Height / Gauge Height
2. Distance
3. Electronics Temperature



Download our easy to use App for your phone or tablet.  
Search for "Wireless Device Configurator" at the App Store  
or on Google Play.



### Wiring plan



Wire assignment in permanently connected connection cable

	Wire colour	Function	Polarity
1	Brown	Voltage supply	Plus (+)
2	Blue	Voltage supply	Minus (-)
3	White	SDI data	Plus (+)
4		Shielding	

### Connecting

#### Connecting

Start the adjustment app and select the function " *Setup*". The smart-phone/tablet searches automatically for Bluetooth-capable instruments in the area.

The message " *Connecting ...*" is displayed.

The devices found are listed and the search is automatically continued.

Select the requested instrument in the device list.

#### Authenticate

When establishing the connection for the first time, the operating tool and the sensor must authenticate each other. After the first correct authentication, each subsequent connection is made without a new authentication query.

S/N: \_\_\_\_\_

Bluetooth Access Code: \_\_\_\_\_

Bluetooth Unlock Code: \_\_\_\_\_

Device Release Code: \_\_\_\_\_

### Enter Bluetooth access code

For authentication, enter the 6-digit Bluetooth access code in the next menu window. You can find the code on the outside of the device housing and on the information sheet.

For the very first connection, the adjustment unit and the sensor must authenticate each other.

Bluetooth access code  OK

Enter the 6 digit Bluetooth access code of your Bluetooth instrument.

*Enter Bluetooth access code*



#### Note:

If an incorrect code is entered, the code can only be entered again after a delay time. This time gets longer after each incorrect entry.

The message " *Waiting for authentication*" is displayed on the smart-phone/tablet.

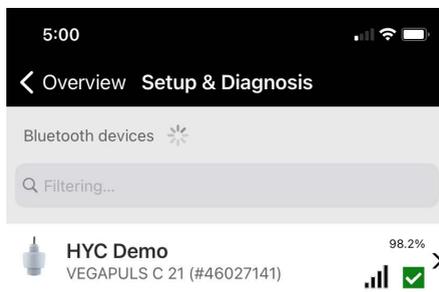
### Connected

After connection, the sensor adjustment menu is displayed on the respective adjustment tool.

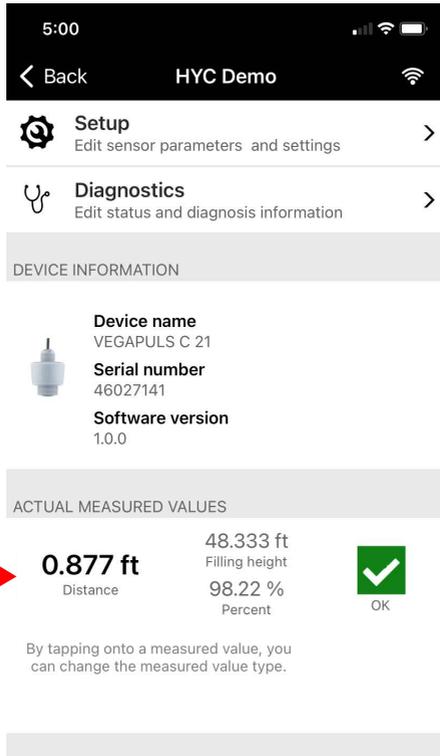
## Measurement setups - Gauge Measurement

In general, the following must be observed while mounting the sensor:

- Mounting on solid bracket or mounting bracket
- High or low water for mounting position
- Measurement on water surface as flat as possible in calm area
- Minimum distance to the max. water level

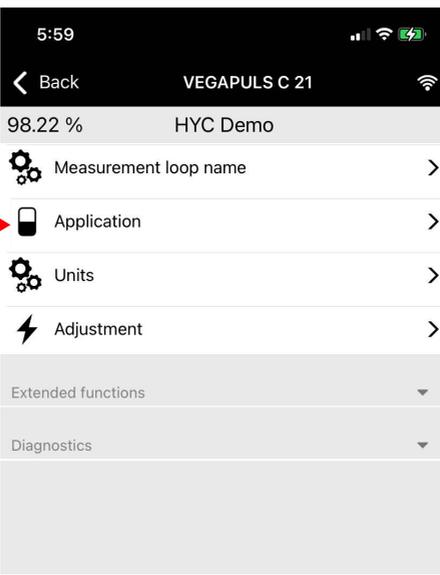


 Select your radar



Configure your radar here

Tap the measured values to see all the different measured values available. Distance, percent, Filling height, etc.



Rename the radar loop with your site name, location, etc.

Choose your type of medium (*Liquids*) and Application (*Gauge measurement in waters*)

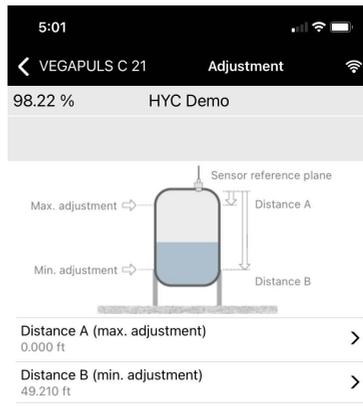
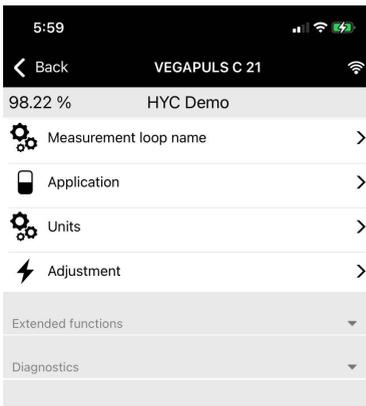


Set units in Feet or Meters and degrees Celsius or degrees Fahrenheit.

# Setting the Level / Gauge Height

The full set of features of our new HYC Series, 80 GHz level radars have not been fully implemented yet, including a "set level" feature in the App or through SDI-12 commands. Currently the level or the gauge height can be set using the App and the Adjustment tab. Once your radar is installed you will need to record the measured distance to the water surface (this can be found in the home screen on the App under "Actual Measured Values" next to the green check mark). You will add this measurement to the current water level / gauge height and this will give you the value of Distance B (min. adjustment) on the App. Distance A can be left at 0.000 ft, but you will need to adjust Distance B for the radar to output the proper gauge height.

$$\text{Measured Distance} + \text{Current Gauge Height} = \text{Distance B}$$



Set Distance B here



## Please Note

If your gauge height is beyond the maximum range of the radar (**HYC 215 = 49 feet & HYC 230 = 98 feet**) then you will need to apply an offset in your logger to record the correct gauge height. In this situation, after your radar is installed, you will need to set Distance B to the maximum range of the radar (either 49 ft or 98 ft). Once this is done go back to the home screen and record what value is output for Filling height.

$$\text{Current Gauge Height} - \text{Filling Height} = \text{Logger offset}$$

For example, if you are using an HYC 215 radar and your current gauge height is 100 feet above sea level, set Distance B to 49 feet. Record the value for Filling height (48.334 ft) and subtract that from your gauge height (100 ft) to find your logger offset. So you would apply an offset of 51.666 feet to your logger to log your correct gauge height of 100 feet above sea level.

