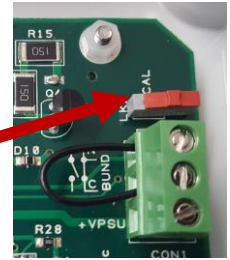


Z2000 / C2020 Tank Gauge Set-Up

1

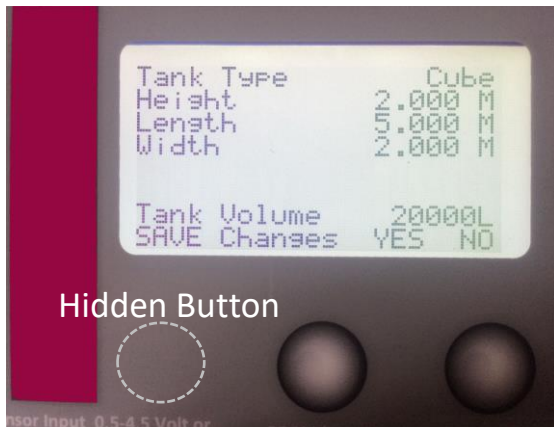
To Calibrate the Gauge, Open the front cover 4 screws, **Connect the Tank Probe, and Power the unit.**

Toggle the calibration switch, top right marked CAL (LK2)



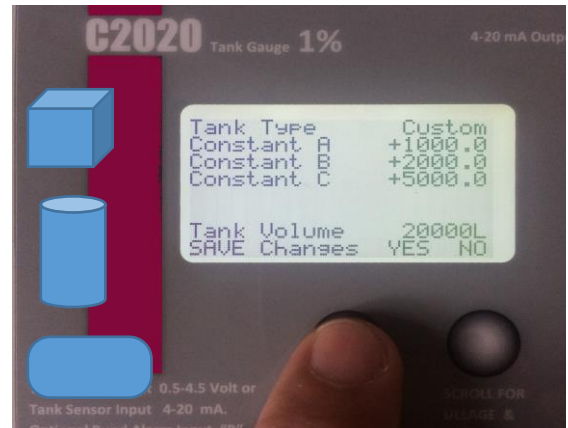
The first screen to show is a "Cube Tank" Middle Button Scrolls through Tank Type Options

2



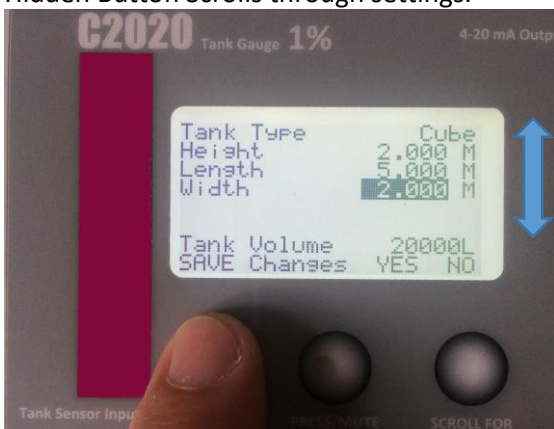
Hidden Button

3



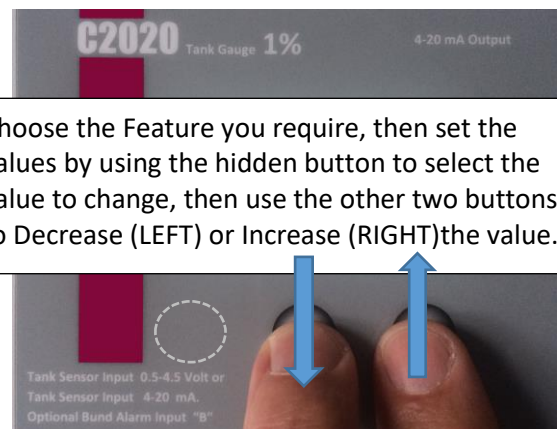
Hidden Button Scrolls through settings.

4



5

Choose the Feature you require, then set the values by using the hidden button to select the value to change, then use the other two buttons to Decrease (LEFT) or Increase (RIGHT) the value.

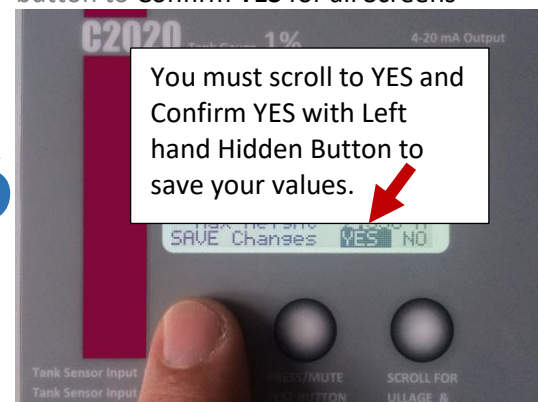


You Must Scroll to YES and use the **Hidden** button to **Confirm YES** for all Screens

Now Use the **Right Button** to Scroll across to **Alarm** Trigger points and **SG** setting

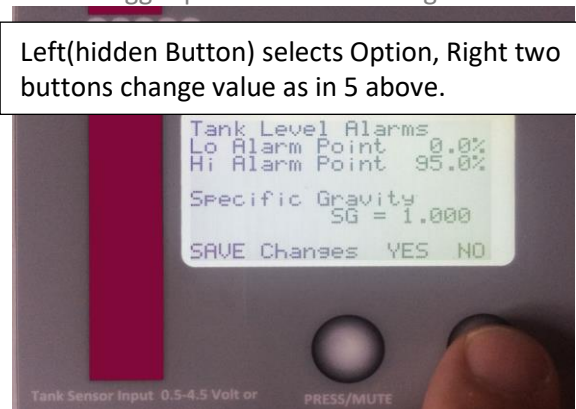
6

You must scroll to YES and Confirm YES with Left hand Hidden Button to save your values.



7

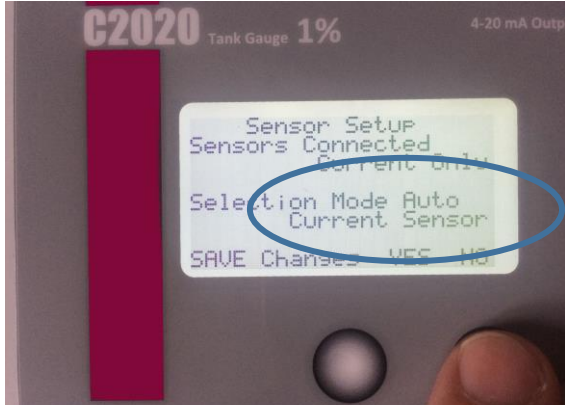
Left(hidden Button) selects Option, Right two buttons change value as in 5 above.



Z2000 / C2020

Now Use the **Right Button** to Scroll across to Sensor Selection. **The sensor should be connected at this point.** This should be Automatic and read either Voltage or Current

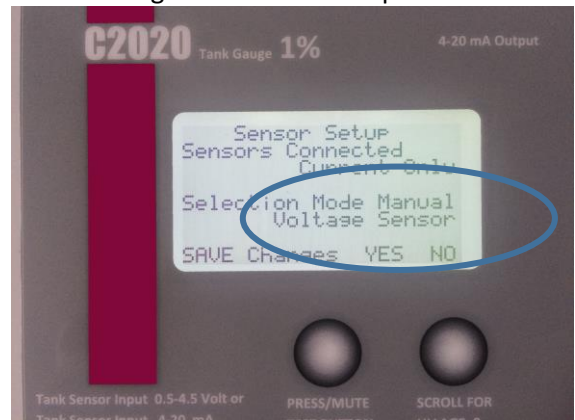
8



Tank Gauge Set-Up Stage 2

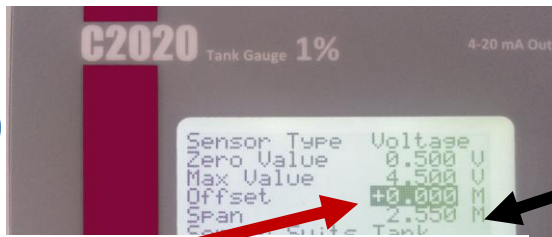
If it needs to be changed, Use the Right Button to Set Voltage or Current as required.

9



Now use Right Button to Sensor Type screen

10



Sensor Offset.

How far from the bottom of the tank is the sensor positioned. Enter this here.

As standard we would recommend 50 mm which is 0.05 M Curser Confirm **YES**

The Gauge will now read the litres value for this offset level. **It will not be Zero**

11

Sensor "Span".

As Standard this comes set for 2.55 M. Change this to suit the sensor range you have

C22 = 2.55 M C23 = 3.0 M
C25 = 5.0 M C27 = 10.0 M

Curser (Hidden button) **YES**

12

END Toggle the switch
Gauge returns to
Standard Readings



High Accuracy Calibration Adjustments (Advanced settings)

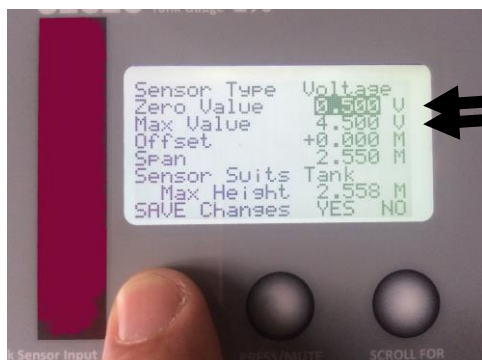
For fine tune Calibration, the Sensor Settings can be adjusted to suit the individual sensor.

For Voltage sensor, the Zero Value and the Max Value can be adjusted up or down to suit.

(Both must be adjusted the same amount)

If Gauge reads LOW, increase these values. (max +0.05)

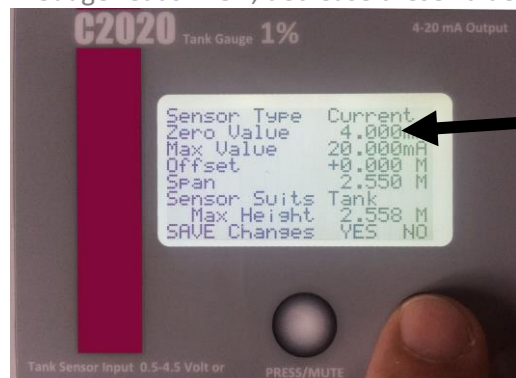
If Gauge reads HIGH, decrease these values (max -0.05)



For Current sensor, the Zero Value can be adjusted up or down to suit. (Max self adjusts)

If Gauge reads LOW, increase these values.

If Gauge reads HIGH, decrease these values



1. Standard Kit = Sensor, Display & Tank connector.

AC Mains power supplies are available for 100 vac to 250 vac.
Power supply to the standard unit is 12 to 28 vdc.

Options include:

"TANK-KIT" which includes an IP67 junction box assembly, multiple entry, a 1" BSPT tank connection, and a 30 mm expanding tank connection. (See 4 below)

"C2020-M1" mounting kit, (See section 3)

"C2020-B8" bund alarm probe.

Tank connection may be one of two methods.

1/ Top entry by way of an existing free connection.
The minimum size we need is 1" BSPT or NPT.

2/ Where no free access is available, the OLE 30 mm expanding seal is ideal.
Cold Bore tank top with a hole cutter 30 mm clearance hole. (zone 2 / safe area only) Insert the expanding fitting and tighten, ensuring the O-ring makes a suitable seal on the tank surface. (This fitting is suitable for Tank Testing up to 10psi / 0.7bar)



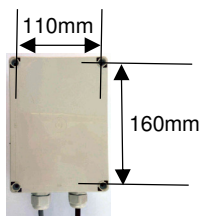
3. Display mounting.

The displays may be mounted on walls or panels by utilising the displays own mount holes. These will retain the IP66 integrity. Allen Cap or Cross Head M4 is ideal for this. (Hole positions are shown on back moulding)

The universal mount bracket available from OLE allows for wall mounting as well as 2" pipe mounting, and 3" pipe mounting. The design allows for either Single display mount, or power box and single display mount. or Single display and T3100 remote monitor, or a Dual display. (Code C2020-M1)



4 mount holes external to case seals. M4 Bolt set included



2. Probe installation. Top of Tank.

** Make sure the probe you have is right for the tank.

Measure the depth of the tank, **Caution, If it is more than 3 meters, the standard C22 probe will not be suitable.** Install the probe onto the bottom of the tank in water based products, or suspended 50 mm above the bottom in Fuel oils and lubricants, to avoid the possible water interface areas. (This may avoid possible water / sludge affects on the probe sensor).

Tighten the Cable gland to suspend the sensor. Either run the remaining cable direct to the Gauge unit or **If using a junction box assembly**, (TANK-KIT) ensure this is mounted to avoid water ingress.

If cutting the sensor cable, strip back 200 mm of outer sheath to ensure free and easy termination without pulling on the cables.



Cut the vent tube to around 30 mm long, and cut the conductors to 200 mm long. If the cable is to be extended. This should be twisted screened pairs, back to the display. (Max cable length with Voltage sensor is 100 meters) The junction boxes need a small vent hole drilled (0.5mm). This allows atmospheric pressure equalisation if you are not joining with OLE Vented cable (Available per meter) Silica gel packs to be fitted to absorb any moisture. C code Sensor wiring = **BROWN** = Volt Sensor 5vdc **GREEN** = Volt sensor SIG **WHITE** = Volt sensor 0v A code Sensor wiring = **BROWN** = mA Sensor +V **GREEN** = mA Sensor SIG (**WHITE** = NOT USED)

C2020 is for Zone 2 and Safe area applications only

CAUTION: Do not damage the outer sheath of the sensor. This may cause liquid to enter the cable and damage the transmitter circuit.

To test the **Voltage Sensor Output**. Measure with a multi-meter set to 20 volt DC range, across the **GREEN** and **WHITE** sensor connections. The sensor should read between 0.45V and 0.55V when out of the tank, and between 0.45 and 4.6V when in the tank with product present. If the gauge can not see the sensor, the display will say so.

To test the **Milliamp sensor**, Open the Green wire from the board and measure milliamps in series with this green wire. Never test across the two terminals

Sensors should exceed tank height and product. Specific gravity must be considered here.

STD Sensors & Cable L

Voltage sensor
C22 = 0-2.55 Meter
(Cable is 6 M long)
C23 = 0-3 Meter 7M
C25 = 0-5 Meter 10M
C27 = 0-10 Meter 15M

Optional Milliamp Sensors
Model Range Cable L
A12 = 0-3.0 Meter 10M
A14 = 0-5.0 Meter 10M
A16 = 0-10 Meter 10M
A18 = 0-20 Meter 20M
A20 = 0-30 Meter 30M



4. Features The C2020 comes in 2 forms.

C2020-O is a standard Gauge with no Alarms

C2020-A = Gauge with **High and Low Alarm**

The Alarm is set between 0 and 100% (one contact)

Additional Options

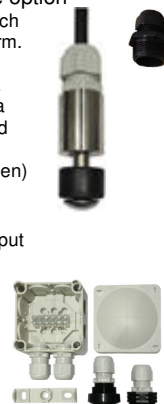
C2020-B8 = Bund Alarm Probe option

The Bund Alarm is a mechanical Switch Float. This is fail safe, opening to Alarm. The Bund alarm comes with 6 meters cable and a 1" BSPT Tank connector. The standard gauge is supplied with a Link wire where the Bund Alarm would be connected. Remove this link and connect the 2 wire sensor. (Red / Green) (This is not polarity sensitive)

C2020-4-20OUT = Milliamp Output

This is proportional to 0 litres = 4 mA and 100% litres = 20 mA

TANK-KIT, Junction Box and Extra fittings.




5. Operation

The C2020 is very simple to operate. There is a Scroll button, which shows Tank Capacity and Ullage space.

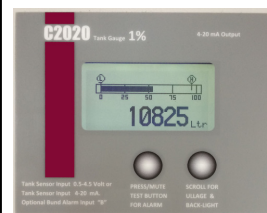
This will show for 5 seconds before reverting to the standard display.

There is an Alarm / Test-Mute button. Press to test the alarm (If fitted). This self resets in 5 seconds.

If an alarm has been 'Muted' the Alarm symbol shows a crossed out image. If a Bund Alarm is incorporated, this shows as a 'B' on screen

 If the TEST feature is X Cycle Gauge Power = Reset

H = High Alarm, L = Low Alarm
B = Bund Alarm



Calibration: See the separate sheet for calibration set-up.

A Jumper needs to be installed in the "CAL" position and then the various settings screens can be adjusted.

Note: The sensor settings screens are factory set and should not need changing, but can be adjusted to improve accuracy

C2020 wiring Diagram. This shows all connections for Standard Tank Gauge set-up.

Revision 07, new wiring colours for use with C2020-Cxx type probes

