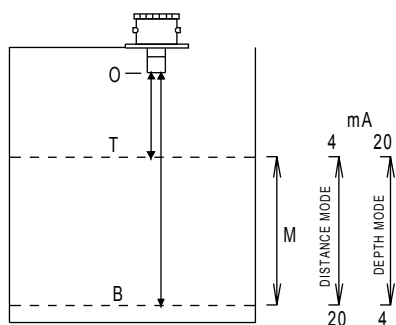


LIQUID LEVEL TRANSMITTER ULTRASONIC 4-20mA

MEASUREMENT :



The unit can be set to read in either Distance or Depth mode.
M : minimum distance between set points must be > 100mm
D : 500mm Dead band O : Start of measurement

Distance Mode :

The 4mA point is required to be closer to 'O' than the 20mA point
ie O-T = 1m = 4mA O-B = 5m = 20mA
At 2m the unit will give an output of 8mA

Depth Mode :

The 20mA point is required to be closer to 'O' than the 4mA point
ie O-T = 1m = 20mA O-B = 5m = 4mA
At 2m the unit will give an output of 16mA

SETTING UP:

Press the following keys in sequence M \square \square . The display now shows 'Ent'

1. Scaling

Choose either Manual or Automatic scaling.

Manual

Achieved by taking measurement from O to target distance for the 4mA & 20mA points.

Press E to display current setting. To change, press E again & use the \square keys to set the distance (m) for the 4mA setting. Press E to confirm setting - unit displays 'donE' & then the new setting. Press \square . Unit now displays current 20mA setting. To change, press E & use the \square keys to set the distance (m) for the 20mA setting. Press E to confirm the setting. The unit displays 'donE' and then the new setting. Press M twice to enter run mode.

Automatic :

Achieved by adjusting physical tank contents to the the 4mA & 20mA points

Press \square . The unit displays 'Auto'. Press E once and the display will show the 4mA distance of media from the sensor. Press E to store the value. Press E to confirm. Unit displays 'donE' and then displays the current setting. Press \square . Unit displays the 20mA distance of media from the sensor. Press E to store the value. Press E to confirm. Unit displays 'donE' and then displays the current setting. Press M twice to enter run mode.

2. Display Selection:

Press keys in sequence M \square \square . Unit displays 'Ent' Press \square . The unit now displays 'disP'. Press E.

To display depth/distance in metres : Use the \square keys to display depth above 4mA point or distance above 20mA point in metres. Press E to confirm the setting. Unit displays 'donE'. Press M twice to enter run mode.

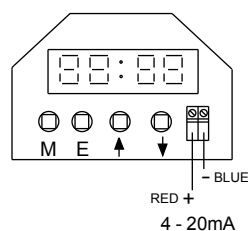
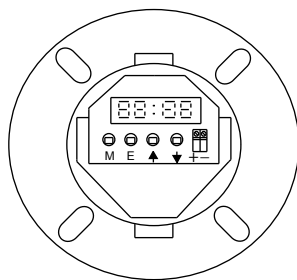
To display depth/distance as % of range. Use the \square keys to display depth above 4mA point or distance above 20mA point in metres. Press \square . The unit now displays 'PerC'. Press E to confirm the setting. The unit displays 'donE' Press M twice to enter run mode.

3. Lost Echo Response:

This occurs if the unit fails to receive 'good' echoes. When normal conditions resume, so do output & display. Press keys in sequence M \square \square \square . Unit displays 'LE'. Press E. then \square keys to select the 'lost echo' output required :- Select '20mA' : drive to 20mA OR '4mA' : drive to 4mA OR '21mA' : drive to 21mA OR 'hold' : holds last 'good' reading. Press E to confirm setting. The unit displays 'donE' Press M twice to enter run mode.

WIRING:

Detail showing keypad and display located under the transmitter cover



Terminals 0.5-1.5mm²

Screened cable is recommended

Keep sensor/control signal wires away from power cables/units which may cause interference.

Sensor / control signal cable size 7/0.2mm

The screen should be earthed at controller end only

Max length 300m

TROUBLE SHOOTING:

- | | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Unit gives 'Lost Echo' reading 'LE' | Target is out of range or media is too dusty/steamy or excessive foam on liquid surface. Check tank conditions and/or re-site transmitter. |
| 2. Reading not changing with level. | Obstruction interfering with echo ie agitator blade or tank wall.
Re-site transmitter away from obstructions. |
| 3. Reading erratic. | Media unsteady or within dead band. Electrical noise interference.
Re-site transmitter ensuring media is 500mm away. Check wiring. |
| 4. Reading occasionally high when tank not full. | Close range echo being detected. Acoustic coupling to mounting bracket.
Re-site transmitter. Fit foam gasket and loosen mounting bolts. |
| 5. No Display / Loop current. | Power failure. Check power supply. |
| 6. Display reads "----" or "-_-_" | Media over or under range ie outside the 4-20mA setpoints. Reset the unit. |
| 7. Display reads "Err" | 4mA & 20mA setpoints are within 100mm of each other. Reset the unit. |