

TRANSMITTER LEDs DO NOT SWITCH ON.

- 1 Check that the polarity of supply is correct, RED wire for positive and BLUE wire for negative.
- 2 Confirm the voltage directly across the transmitter is higher than 17 VDC and less than 30 VDC.
- 3 Check that the circuit is complete. If necessary insert an ammeter in the loop to confirm a current is flowing
- 4 A direct lightning hit on the unit can damage the transmitter and cause the LEDs to stop flashing and the transmitter to fail.

TRANSMITTER SWITCHES ON BUT DOES NOT PULSE

- 1 Ensure that the supply voltage is above 17 VDC and below 30 VDC.
- 2 Ensure that the power supply has enough wattage output to drive the transmitter (i.e.. Even though the voltage is correct at 24 VDC, the current capacity of the power supply may be too small.)
- 3 When using an Ultrix 100-IS transmitter and a barrier in the loop, a significant voltage may be dropped across the barrier, reducing the voltage available to the transmitter. Ensure that the LOOP IMPEDANCE and POWER SUPPLY are sized properly. Contegra recommends using an active barrier.

TRANSMITTER SWITCHES ON BUT LED2 TURNS RED

Target may be out of the calibrated level range. Ensure that the transmitter is mounted vertical to the surface of the liquid to ensure a return echo. Ensure that the transmitter has been calibrated correctly for Z (zero - 4 mA) and S (span - 20 mA), DO NOT set S and Z to the same distance. Ensure that the transmitter is "clicking" audibly to confirm that the unit is pulsing. The unit should click between 2 and 4 times per second.

THE TRANSMITTER OUTPUT MOVES THE "WRONG" WAY (i.e. THE mA OUTPUT DECREASES WITH A RISING LEVEL.

The Z (zero - 4 mA) and S (span - 20 mA) settings may be opposite of their desired setting.

TRANSMITTER IS INDICATING A WRONG LEVEL

GENERAL - Ensure that the:

- media is within the range of the sensor.
- transmitter is pointed perpendicular to the surface of the liquid/solid.
- transmitter has been calibrated correctly for Z (zero) and S (span). DO NOT set Z and S to the same distance.
- transmitter is "clicking" audibly, confirming that the unit is pulsing. The unit should click between 2 and 4 "clicks" per second.
- voltage across the transmitter is above 17 VDC and below 30 VDC.
- A direct lightning hit on the unit can damage the transmitter and cause the LEDs to stop flashing and the mA to lock at the last level measured before the lightning hit.

RING DOWN - RING-DOWN is a common ultrasonic installation problem. Ring down causes the output to rise to 20 mA and indicates the level as 100% full even when the level is not 100% full. Confirm that the transmitter is not:

- overtightened in its mounting
- cross-threaded
- mounted directly into a massive steel flange (try to use PVC)
- To determine if ring down is the fault, unscrew the sensor and temporarily suspend by its signal cable.
- If the transmitter is configured for 17 ft. per minute (moving average) response rate, even when ringing-down the transmitter may only "spike" the level up or indicate a brief climb in level. This is because the transmitter is released from ring-down, and starts measuring the true level again, before the mA output has climbed to the full 20 mA.

MOUNTING LOCATION

- Confirm that the transmitter echo is not obstructed by pipes, ladders, etc. Objects within the "beam angle" (reference the sensor's specifications) may cause incorrect level measurements.
- In closed tanks, the transmitter should be mounted off-center.
- In flow sensing application, the transmitter should be mounted in the center of the channel.
- Avoid excessive vibration on the transmitter mountings. These can interfere with the return echo.
- If using a "stand-pipe" ensure that the internal walls of the stand-pipe are clean. Excessive and large solid deposits on the inside of the pipe will return an echo which will be interpreted as a level.
- It is not recommended to operate more than one transmitter in the same tank.

WHY DOES THE ULTRIX GO INTO A DEFAULT CONDITION AND WHAT IS THE EFFECT?

The measuring span on the Ultrix 100 has been calibrated from empty level to full level using the Z (zero) and S (span) targets. This is defined as the "level window" If the level moves above the maximum or below the minimum levels the level transmitter will interpret this as a "lost level" fault condition, LED2 turns on RED and after two minutes the mA output will default to its pre-selected value. If the media's level returns into the calibration range within two minutes the transmitter will simply go back to measuring the level and not default. the output mA.