Dynasonics®
Ultrasonic Flow Meters

Transit Time Ultrasonic Flow Meters

TFXL-to-TFX-500w Migration

TRANSDUCER COMPATIBILITY

Transducer with TFXL	Pipe Size	TFX-500w
DTTN, DTTN submersible	2…10 in.	Adjust cable lead lengths. Enter modified calibration settings.
DTTN, DTTN submersible	greater than 10 in.	Not compatible, use TFX Ultra.
DTTR	2…10 in.	Adjust cable lead lengths. Enter modified calibration settings
DTTR	greater than 10 in.	Not compatible, use TFX Ultra.
DTTN I.S. (hazardous location)	2+ in.	Not compatible, use TFX Ultra.
DTTH (high temperature)	2+ in.	Not compatible, use TFX Ultra.
DTTS, DTTC remote mount	1/2…2 in.	Adjust cable lead lengths. Enter modified calibration settings.
DTTS, DTTC integral mount	1/2…2 in.	Replace meter.

DTTN AND DTTR SETTINGS

Have the transducers and the TFX-500w transmitter calibrated at the factory so the meter is accurate.

If it is not feasible to remove the transducers and calibrate them with the transmitter, follow this procedure:

1. Use UltraLink software to record the unadjusted and adjusted flow rates in calibration settings.

2. Calculate the scale factor.
   Scale factor = adjusted flow rate/unadjusted flows.

3. Enter the scale factor in the field calibration settings.

DTTS AND DTTC SETTINGS

Have the transducers and the TFX-500w transmitter calibrated at the factory so the meter is accurate.

If it is not feasible to remove the transducers and calibrate them with the transmitter, follow this procedure:

1. Read the unadjusted and adjusted flow rates on the transducer serial tag *or* calculate the scale factor. If the serial tag is not readable, use UltraLink software to record the unadjusted and adjusted flow rates in calibration settings.
   Scale factor = adjusted flow rate/unadjusted flows.

2. Enter the scale factor in the field calibration settings.

ADJUSTING CABLE LEAD LENGTHS

If the transducer has twinaxial cables:

1. Remove the shields from the cord grip at the transmitter.

2. Strip back the outer jacket and insulation by 8 inches.

3. Terminate the shields on the cord grip and reinstall the cord grip.

4. Terminate the blue and white wire for the transducer on the TFX-500w terminal block.

If the transducer has coax cables:

1. Strip back the outer jacket and insulation by 8 inches.

2. Terminate the transducer wires on the TFX-500w terminal block.

TRANSMITTER SETTINGS

TFXL Output	TFX-500w Output
4-20 mA	Record the output minimum and maximum flow rate from TFXL settings in UltraLink. In TFX-500w, select 4-20 mA and enter the minimum and maximum flow rates.
TTL pulse rate (frequency)	Supply 5V DC to Output #1 or #2. Record the output minimum and maximum flow rate from TFXL settings in UltraLink. In TFX-500w, select the frequency for either Output #1 or #2 and enter the minimum and maximum flow rates.
TTL pulse rate (frequency) turbine simulation	Not compatible.
Totalizer pulse	Record the output minimum and maximum flow rate from TFXL settings in UltraLink. In TFX-500w, select pulse for either Output #1 or #2 and enter the minimum and maximum flow rates.

The TFXL and TFX-500w meters are DC powered. Power supplies used with an existing TFXL meter are typically compatible with the TFX-500w meter.

For wiring instructions, see the *"TFX-500w Clamp-On Meter User Manual"* available at www.badgermeter.com.

Badger Meter

Application Data Sheet

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