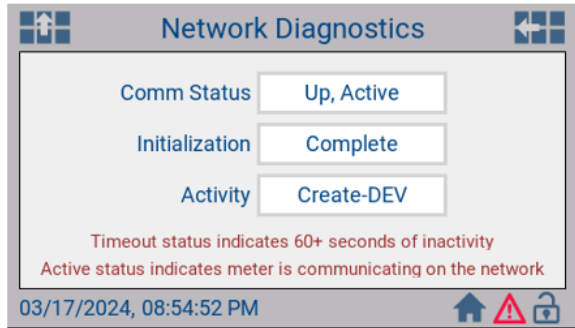# FT-3500 Transmitter Quick Start Guide

CHECKING NETWORK STATUS

Network Diagnostics:
The user can verify their communication status via the Network Diagnostics screen.

Comm Status:

Down: No traffic has been seen in 60 seconds

Up, Active: Traffic has been seen in the last 60 seconds, and the meter is talking to the network.

Up, Inactive: Traffic has been seen in the last 60 seconds, and the meter is not talking to the network.

FLOW SIMULATION

1. To enter a flow simulation mode, select "Diagnostics" from the main menu screen, then "User Test."

2. Set User Test to "Enabled" and then set the simulated Flow Setting to desired percentage of full scale.
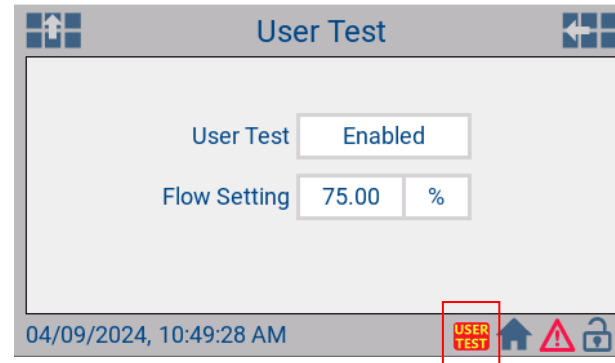
WARNINGS, ALARMS, AND ERRORS

Does the main screen show an alarm message?

Active warnings, alarms, and errors can be found by selecting "Alerts" on the main menu screen. Please reference the FT-3500 user manual for more information on these alerts.
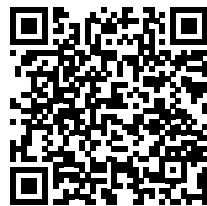

Scan for Manual

Quick Start Guide
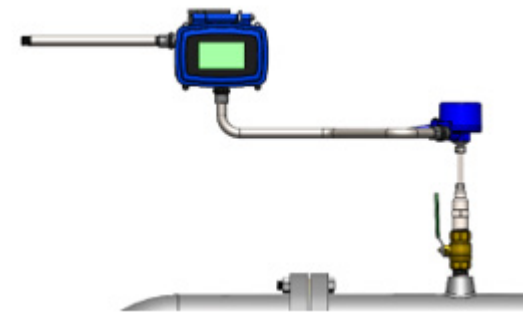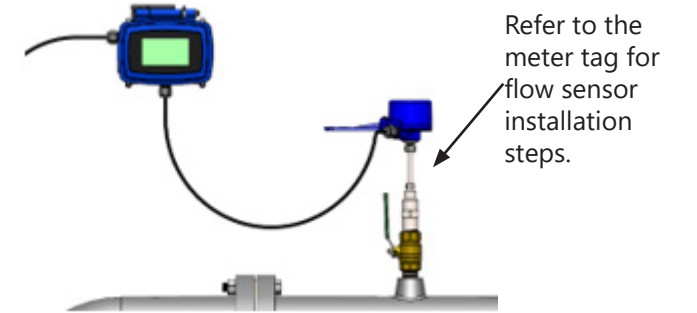## FT-3500 Transmitter

MOUNTING INSTRUCTIONS

The mounting surface must be structurally sound and capable of withstanding a minimum weight of 40lbs (18kg). Use the following screws for mounting: (4) Machine screws - HHMS .25-20 x 1.5"; (4) Wood screws - FHLS .25 x 1.5"; (4) Concrete screws - HHCS .25 x 1.5"

Mounting Hole — Mounting Hole — Mounting Hole — Mounting Hole
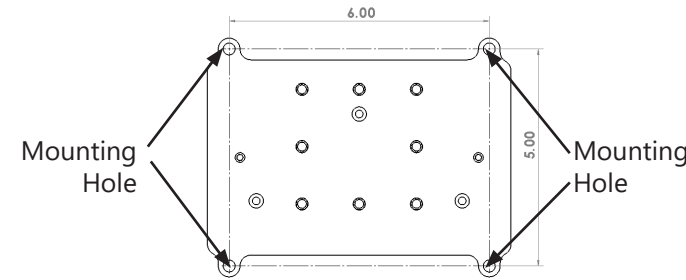
1/2" NPT Weathertight Conduit Adapters

Strain Relief Cable Grips

Refer to the meter tag for flow sensor installation steps.

CONNECTING SENSOR CABLE TO THE FT-3500 TRANSMITTER
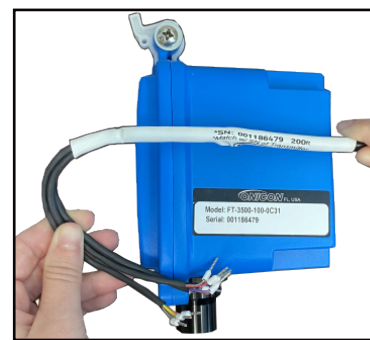
Before getting started, ensure that the serial numbers located on the transmitter, remote electronics enclosure, and cable all match.

When connecting the cable to the transmitter, feed one sensor cable (out of the three) through the conduit adapter/ strain relief at a time. Once all three cables are through the connector, tighten the internal/ strain relief cable grip.

WIRING CONNECTIONS
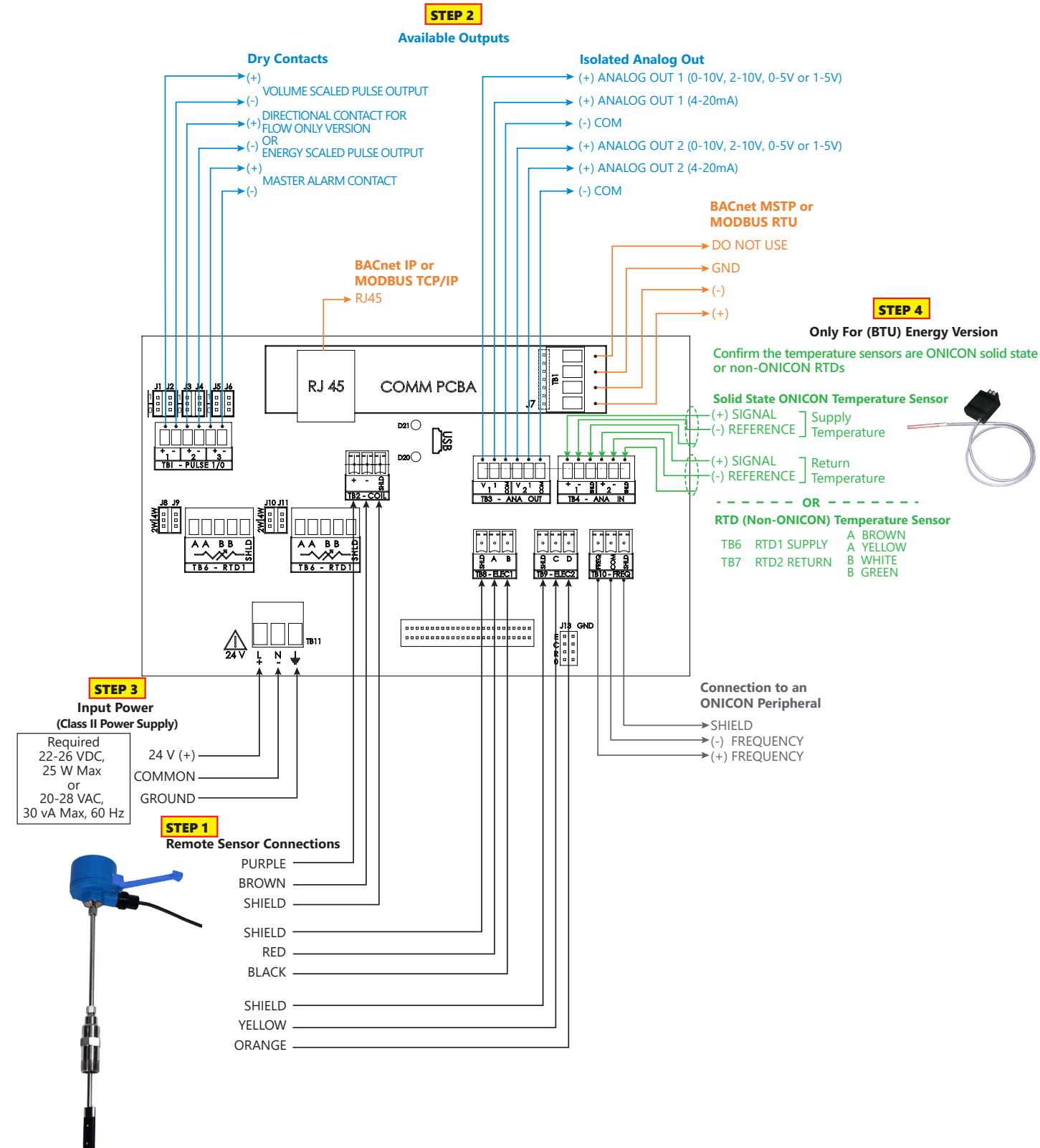
STEP 2
Available Outputs

Dry Contacts
(+)
(-) VOLUME SCALED PULSE OUTPUT
(+) DIRECTIONAL CONTACT FOR FLOW ONLY VERSION
OR
(-) ENERGY SCALED PULSE OUTPUT
(+)
(-) MASTER ALARM CONTACT

Isolated Analog Out
(+) ANALOG OUT 1 (0-10V, 2-10V, 0-5V or 1-5V)
(+) ANALOG OUT 1 (4-20mA)
(-) COM
(+) ANALOG OUT 2 (0-10V, 2-10V, 0-5V or 1-5V)
(+) ANALOG OUT 2 (4-20mA)
(-) COM

BACnet MSTP or MODBUS RTU
DO NOT USE
GND
(-)
(+)

BACnet IP or MODBUS TCP/IP
RJ45

STEP 4
Only For (BTU) Energy Version
Confirm the temperature sensors are ONICON solid state or non-ONICON RTDs

Solid State ONICON Temperature Sensor
(+) SIGNAL
(-) REFERENCE Supply Temperature
(+) SIGNAL
(-) REFERENCE Return Temperature

— — — — — OR — — — — —

RTD (Non-ONICON) Temperature Sensor
TB6 RTD1 SUPPLY   A BROWN / A YELLOW
TB7 RTD2 RETURN   B WHITE / B GREEN

RJ 45   COMM PCBA

J1 J2 J3 J4 J5 J6
TB1 – PULSE I/O
J8 J9   J10 J11
TB6 – RTD1   TB6 – RTD1
24V L N TB11
TB2 – COIL
TB3 – ANA OUT   TB4 – ANA IN
D21 D20 USB
J13 GND

Connection to an ONICON Peripheral
SHIELD
(-) FREQUENCY
(+) FREQUENCY

STEP 3
Input Power
(Class II Power Supply)
Required
22-26 VDC, 25 W Max
or
20-28 VAC, 30 vA Max, 60 Hz

24 V (+)
COMMON
GROUND

STEP 1
Remote Sensor Connections
PURPLE
BROWN
SHIELD
SHIELD
RED
BLACK
SHIELD
YELLOW
ORANGE

NETWORK CONFIGURATION

Connecting via BACnet MS/TP	Connecting via BACnet UDP/IP
1. Power on unit to verify is it functioning properly. Once verified, power unit down.	1. Power on unit to verify is it functioning properly. Once verified, power unit down.
2. Wire MS/TP cables to unit. • The RS485 network cable connections are polarity sensitive and must be connected the same way on every device (i.e. + to + and - to -). • Shield drain connections should be daisy chained in the same manner as the signal cables for RS485. The shield drain wire should be left unterminated at the end of the cable and connected to shield only at the network master controller. **Shield wires must not be connected to the RS485 connector on the FT-3500.** • The maximum number of devices allowed on an RS485 network segment without a repeater is 32. Adding more than 32 devices to a single segment may reduce the transceiver output voltage to a level that is too low to be distinguished from background noise on the cable.	2. Connect ethernet cable to unit.
3. Connect power to unit.	3. Connect power to unit.
4. Navigate to the systems network configuration. From the main menu select: → User Configurations → Network → BACnet MS/TP or MODBUS RTU	4. Navigate to the systems network configuration. From the main menu select: → User Configurations → Network → BACnet MS/TP or MODBUS RTU
5. Configure device as needed. Default values are listed below.	5. Configure device as needed. Default values are listed below.

Baud Rates	38400
Device Address	17 (Default)
Device Instance	57017
Max Master	127

Default Address	192.168.1.24
Instance Number	57017
Subnet Mask	255.255.255.0
Gateway Address	Programmable
UDP port (BACnet)	47808
TCP port (MODBUS only)	502