SERIES UBT | CLAMP-ON ULTRASONIC THERMAL ENERGY METER

FEATURES/BENEFITS

- **Non-invasive energy measurement**
- **Easy installation: simply connect power and enter the pipe inside diameter, adjust the sensors and clamp the meter on the pipe**
- **Compact and lightweight design, featuring an easily installed, all-in-one clamp-on unit intended for homogeneous liquids that contain no air**
- **Screen displays energy rate and totalized energy with pulse output and communication options**

APPLICATIONS

- Building services
- Energy management
- Heat/energy metering for energy management or building services utilizing chilled water circuits

DESCRIPTION

The **Series UBT Clamp-On Ultrasonic Thermal Energy Meter** is an economical clamp-on ultrasonic heat meter. It is an ultrasonic alternative to the traditional inline thermal energy meters. The series uses temperature sensors for energy measurement and ultrasonic waves with time differentials for flow measurement.

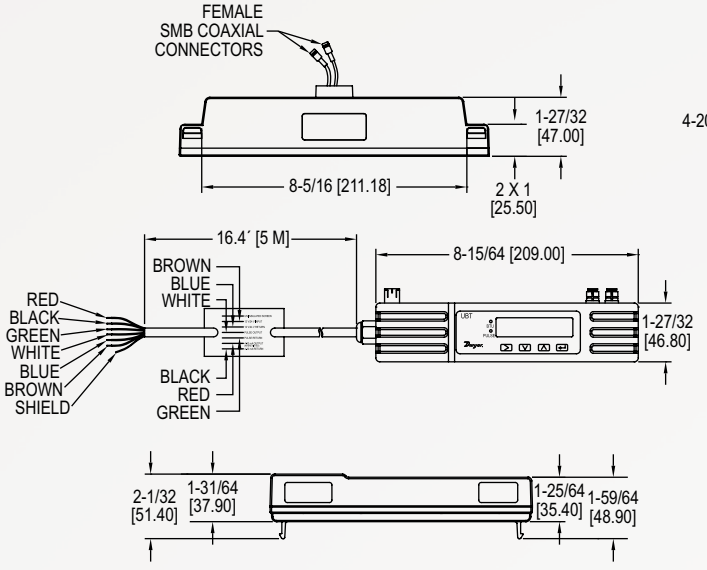
SPECIFICATIONS

Service	Clean water with <3% by volume of particulate content, or up to 30% ethylene glycol.
Range	0.3 ft/s to 32 ft/s (0.1 m/s to 10 m/s).
Display	Backlit: Active area 2.28″ x 0.43″ (58 mm x 11 mm), 2 line x 16 characters.
Accuracy	±3% of flow reading for velocity rate >1 ft/s (0.3 m/s).
Power Requirements	12 V to 24 V ±10% AC/DC at 7 watts per unit. Optional plug-in 12 V power supply.
Power Consumption	7 W (DC) or 7 VA (AC) max.
Temperature Limits	Process: 32 to 185°F (0 to 85°C); Ambient: 32 to 122°F (0 to 50°C).
Outputs	Pulse: 1 optoisolated MOSFET relay, 500 mA max, 166 pps max, 200 Hz max.
Humidity Limit	90% RH at 122°F (50°C) max.
Communication	Pulse, Optional Modbus® communication.
Enclosure Rating	IP54.
Enclosure Material	Plastic polycarbonate.
Repeatability	±0.15% of measured value.
Electrical Connections	16.4´ (5 m) cable.
Flow Direction	Any.
Mounting Orientations	Any.
Weight	1.10 lb (0.5 kg).
Agency Approvals	CE.

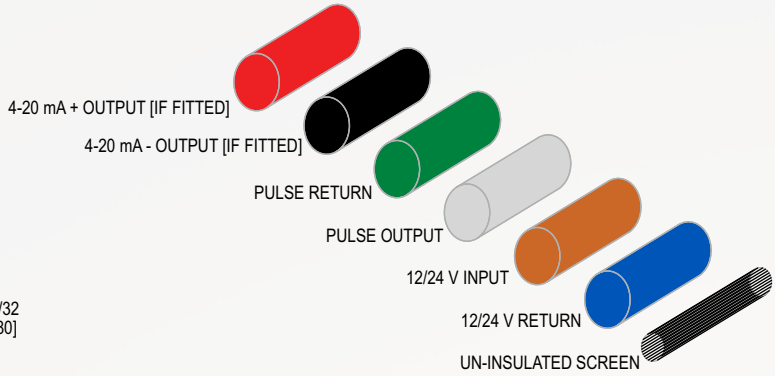
ADDITIONAL SPECIFICATIONS

Applicable Pipe Material	Steel, SS, copper, or plastic.
Pipe Outside Diameter	3/4 to 4″ (25 to 115 mm); 5 to 7″ (125 to 180 mm).*
Applicable Pipe Lining	None.
Pipe Wall Thickness	0.02 to 0.36″ (0.5 to 10 mm).
*Pipe size is dependent on pipe material and internal diameter.	

DIMENSIONS

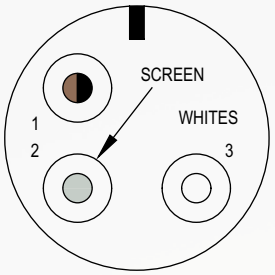


WIRING DIAGRAM

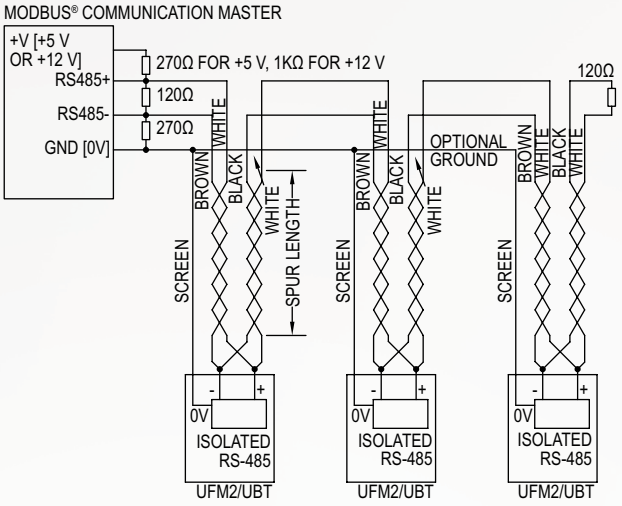


6-core main interface cable wiring

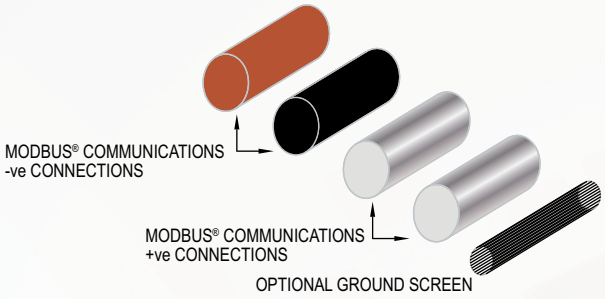
Pin	Function	Color
1	Modbus® communication -ve	Black and brown
2	Optional GND	Screen
3	Modbus® communication +ve	Both whites
4	-	-



Modbus® communication connector cable



Recommended Modbus® communication wiring



Modbus® communication cable wiring

HOW TO ORDER

Use the **bold** characters from the chart below to construct a product code.

UBT **-1** **4**

SERIES
UBT: Clamp-on ultrasonic thermal energy meter

OUTPUT TYPE
-1: Pulse output only
-2: Pulse and Modbus® communication

PIPE SIZE
4: 3/4 to 4″ (25 to 115 mm)
6: 5 to 7″ (125 to 180 mm)

ORDER ONLINE TODAY!

dwyer-inst.com/Product/SeriesUBT

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DS-UBT