

Order Form Instructions

To finalize an order, please complete the *Order Information* section below, and select your Model code on page 2. Options and accessories are available on page 3.

Submit this document to greylineorders@greyline.com, and Greyline will provide an order confirmation.

Application Optimization

Greyline now offers custom engineered transit-time flow meters. If the optional *Application Information* section below is completed, Greyline will provide a TTFM 6.1 which has been optimized for this application.

ORDER INFORMATION

Name:		Order Date:	
Company:		Purchase Order #:	
Project Name:		Needed by (date):	
Project Location:		Shipping Method:	
Specifying Engineer:			

APPLICATION INFORMATION (OPTIONAL)

Display Engineering Units (English, SI)		Display Language (English, Spanish, French)	
Application			
Fluid			
Fluid Temperature			
Pipe Material			
Nominal Pipe Size		Pipe OD (If no pipe chart available)	
Pipe Schedule		Pipe Wall Thickness (If no pipe chart available)	
Pipe Liner Material		Pipe Liner Thickness (If lined)	
Max Flow Rate			

TTFM 6.1 Ultrasonic Transit Time Flow Meter

Model

TTFM 6.1 -

Approximate shipping weight: 12 lbs / 5.5 kg

STANDARD FEATURES:

- Pair of SE16B ultrasonic transducers - clamp-on for 2" to 48" (50 mm to 1200 mm) pipes
- Sensor cables - pair 25 ft / 7.6 m triaxial with BNC connectors
- Flow rate range - ± 0.07 to 40 ft/sec (± 0.02 to 12 m/sec)
- Accuracy - $\pm 1.0\%$ of flow rate from 1.5 to 40 ft/sec (0.46 to 12 m/sec) ± 0.015 ft/sec (± 0.0046 m/s) below 1.5 ft/sec (0.46 m/s)
- Installation – TMK-B1 kit; Stainless steel transducer brackets, mounting clamps, alignment bar and silicone coupling compound
- Enclosure - watertight, NEMA4X (IP66) polyester and polycarbonate
- Display - white, backlit matrix
- Totalizer - 14 digit
- Calibration - built-in 5-key programmer
- Output - isolated 4-20mA (1000 ohm)
- 2 control relays - 5 amp, SPDT - programmable for flow proportional pulse output, and/or flow alarm
- Datalogger – 128 Megabyte storage capacity
- Power input - 100-240VAC 50/60Hz, 10 VA maximum
- CE
- Application optimization available – see order form

POWER INPUT

Standard – 100-240VAC 50/60Hz, 10VA Maximum	A
9-32VDC, 10W Maximum	B

ENCLOSURE & ELECTRONICS PROTECTION

Standard – NEMA4X (IP66) polycarbonate enclosure	1
NEMA4X polycarbonate enclosure with conformally coated electronics	2
CXJ8106 – Explosion Proof NEMA7 (non-returnable & non-refundable) ¹	3

¹Lead Time for a TTFM 6.1 with this option is 2 weeks

ENCLOSURE TEMPERATURE RATING

Standard – (-5° to 140°F / -20° to 60°C)	A
Heater and Thermostat, 115VAC, 15 VA additional to Power Input (25 VA total)	B
Heater and Thermostat, 230VAC, 15 VA additional to Power Input (25 VA total)	C

INTRINSIC SAFETY

Standard – SE16B Transducers, No Hazardous Area Rating	1
QTY 2 ISB Intrinsic Safety Barriers for SE16B Transducer installation in Class I,II,III, Div. I,II, Groups C,D,E,F,G	2

TRANSDUCERS

Standard – SE16B pair, clamp-on for 2" to 48" (50 mm to 1200 mm) pipes	B
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TRANSDUCER MOUNTING HARDWARE

Standard – TMK-B1; Includes stainless brackets, mounting clamps, alignment bar and silicone coupling compound	1
TMK-B21 – Includes conduit-ready & heavy-duty stainless brackets, mounting clamps, alignment ruler for 2-6" pipes, and silicone coupling compound	2
TMK-B22 – Includes conduit-ready & heavy-duty stainless brackets, mounting clamps, alignment ruler for pipes $\geq 8"$, and silicone coupling compound	3

TRANSDUCER CABLES & CONNECTIONS

Standard – 25 ft / 7.6 m pair triaxial with BNC connectors and seal jackets	A
50 ft / 15 m pair triaxial with BNC connectors and seal jackets	B
100 ft / 30 m pair triaxial with BNC connectors and seal jackets	C

SERIAL COMMUNICATIONS

Standard – None	1
MODBUS RTU via RS-485	2

CONTROL RELAYS

Standard – 2 relays, rated 5 amp SPDT, programmable	A
4 Extra Relays (6 total), rated 5 amp SPDT, programmable	B

OPTIONS AND ACCESSORIES

QTY	CODE	DESCRIPTION	
	TXC	Transducer cable extension up to 500 ft / 150 m (Triaxial pair)	
	JB4X	Transducer cable Junction Box, NEMA4X/IP66	
	TMK-B1	Transducer Mounting Kit with pair of stainless mounting brackets, pair of pipe clamps for OD up to 30" (750 mm), alignment bar, and 0.5 oz. SuperLube® coupling compound	
	TMK-B21	Transducer Mounting Kit with pair of stainless heavy-duty & conduit-ready mounting brackets, pair of pipe clamps, alignment ruler for 2-6" pipes, and 0.5 oz. SuperLube® coupling compound	
	TMK-B22	Transducer Mounting Kit with pair of stainless heavy-duty & conduit-ready mounting brackets, pair of pipe clamps, alignment ruler for 8" and larger pipes, and 0.5 oz. SuperLube® coupling compound	
	PC16-MB1	Replacement Stainless Transducer Mounting Bracket (from TMK-B1 kit)	
	PC16-MB2-S	Replacement Stainless Transducer Mounting Bracket (from TMK-B2 kit) – Stationary Side (Ruler screws into this bracket)	
	PC16-MB2-D	Replacement Stainless Transducer Mounting Bracket (from TMK-B2 kit) – Dynamic Side (Ruler slides along tris bracket)	
	PC9	Replacement SS pipe clamp for pipe OD up to 9" (225 mm)	
	PC22	Replacement SS pipe clamp for pipe OD up to 22" (550 mm)	
	CC-SL30	Coupling Compound - Super Lube® Silicone Compound, 3.0 oz tube	
	CC-SL30HT	Coupling Compound for Fluid Temp. > 120°C (250°F) – Super Lube® Dielectric Grease 3.0 oz tube	
	PM	Panel Mount Flange assembly	
	SCR	Enclosure Sunscreen (iridite aluminum)	
	CHS	Spare set Electronics with Mounting Chassis (Standard features)	
	MNL	Additional Manuals (One supplied with each unit)	

REPLACEMENT PARTS

	SE16B*	Spare/Replacement single Transducer for 2" to 48" (50 mm to 1200 mm) ID pipes (two transducers are used with each flowmeter)	
	TTT25	Replacement pair 25 ft (7.6 m) transducer triaxial cables with BNC connectors and seal jackets	
	TTT50	Replacement pair 50 ft (15 m) transducer triaxial cables with BNC connectors and seal jackets	
	TTT100	Replacement pair 100 ft (30 m) transducer triaxial cables with BNC connectors and seal jackets	

* Provide Instrument Serial number when ordering replacements