



FT4X Thermal Mass Flow Meter

MODEL CODES

399 Reservation Road
Marina, CA 93933
831-384-4300
www.foxthermal.com
sales@foxthermal.com

MODEL FT4X INSERTION METER

	Code	Description
Parent Model No.*	FT4X	Insertion Mass Flow Meter; includes two 4-20mA outputs, pulse output, contact input, display and configuration panel, USB connection, Gas SelectX®, and datalogger
Feature 1a: Probe*	06I	Insertion meter with 6-inch probe
	09I	Insertion meter with 9-inch probe
See "Calculating Probe Lengths" Below	12I	Insertion meter with 12-inch probe
	15I	Insertion meter with 15-inch probe
	18I	Insertion meter with 18-inch probe
1" MNPT compression fitting included standard	24I	Insertion meter with 24-inch probe
	30I	Insertion meter with 30-inch probe
	36I	Insertion meter with 36-inch probe
	15R	15" probe w/ 150-psi retractor & full port valve, 1" MNPT (or 3/4" MNPT for S2), 316 SS wetted parts
	18R	18" probe w/ 150-psi retractor & full port valve, 1" MNPT (or 3/4" MNPT for S2), 316 SS wetted parts
	24R	24" probe w/ 150-psi retractor & full port valve, 1" MNPT (or 3/4" MNPT for S2), 316 SS wetted parts
	30R	30" probe w/ 150-psi retractor & full port valve, 1" MNPT (or 3/4" MNPT for S2), 316 SS wetted parts
	36R	36" probe w/ 150-psi retractor & full port valve, 1" MNPT (or 3/4" MNPT for S2), 316 SS wetted parts
	24C1A1	24" probe w/ high pressure crank retractor, 1-1/2" 150# flange, 316 SS wetted parts, no valve**
	24C1A2	24" probe w/ high pressure crank retractor, 1-1/2" 300# flange, 316 SS wetted parts, no valve**
	36C2A1	36" probe w/ high pressure crank retractor, 2" 150# flange, 316 SS wetted parts, no valve**
	36C2A2	36" probe w/ high pressure crank retractor, 2" 300# flange, 316 SS wetted parts, no valve**
Feature 1b: Probe Diameter (Optional)*	[blank]	Standard 3/4" diameter probe with 1" MNPT compression fitting included
	S2	Optional 1/2" diameter probe with 3/4" MNPT compression fitting included
Feature 2: Enclosure*	E1	Local explosion-proof enclosure, 24VDC powered
	E2	Local explosion-proof enclosure, 85-264VAC powered
	E3	Remote explosion-proof J-box, 24VDC powered, includes remote mounting kit, cable sold separately
	E4	Remote explosion-proof J-box, 85-264VAC powered, includes remote mounting kit, cable sold separately
Feature 3: Communications Options*	B0	No communications option
	RS	RS485 Modbus RTU (required for Remote Connectivity Software)
	BH	HART enabled on primary 4-20mA output

OPTIONS

Part #	Description
106796	Extra FT4X Instruction Manual
100657	Stainless Steel Tags
999992	Certificate of Conformance
999995	Certificate of Origin
999986	Material Certificates for Wetted Parts
107698	USB Cable, A-male/micro USB-B male, 6' length
106415	Teflon Ferrule Kit for 3/4" probe, 60 psi max. pressure
102878	Teflon Ferrule Kit for 1/2" probe, 60 psi max. pressure

OPTIONS

Part#	Description
106958	8-conductor, 18 AWG PVC shielded cable for remote (E3 or E4), 100' max. length
101331	3/4" MNPT compression fitting for probe process connection with 3/4" probe dia.
106728	AC to 24VDC power converter with DIN mounting rail
890000	Flow meter cleaned and bagged for Oxygen service
106658(2)	M20x1.5 Wiring Connection Adapters (Qty. 2 per meter)
109040	Sun Shade accessory
999004	ModbusView Software License for Remote Connectivity (requires RS in Feature 3 above)
114144	USB Remote Connectivity Kit (ModbusView RS485-to-USB Converter)
114143	RJ45 Remote Connectivity Kit (ModbusView RS485-to-RJ45 Converter)

Notes: * The Parent Model Number and one of each Feature must be specified (Feature 1b is optional, leave blank for standard 3/4" probe diameter).
Example: FT4X-15R-E3-RS
Example: FT4X-15R-S2-E3-RS

Insertion flow meters can be installed in 1.5" pipes or larger. Select Inline flow meters for pipes smaller than 1.5" (40mm).

Calculating Probe Length - To position the Fox sensor in the center of the pipe, use the following calculation for probe length:

Probe Length = 1/2 the Pipe Diameter + Fitting Height [3" (76mm) default assumption] + Insulation Thickness + Retractor [10" (254mm) for codes 15R-36R].

Round up to next probe size.

Example 1: Pipe ID = 10" (254mm), no insulation, no retractor: 5" (127mm) + 3" (76mm) + 0" (0mm) + 0" (0mm) = 8" (203mm). Round up to use 09I probe option.

Example 2: Pipe ID = 10" (254mm), no insulation, with retractor: 5" (127mm) + 3" (76mm) + 0" (0mm) + 10" (254mm) = 18" (457mm). Use 18R probe option.

See separate model code document for FC20 Flow Conditioners for use with insertion style flow meters.

** Crank retractor probe length calculations: Minimum pipe size is 2" (50mm). For model code R2 and R3 maximum pipe sizes, half the pipe diameter plus the valve's face-to-face dimension cannot exceed 19.5" (495mm). For model code R8 and R9 maximum pipe sizes, half the pipe diameter plus the valve dimension cannot exceed 31.5" (800mm).

Example 1: Pipe ID = 24" (610mm), valve dimension = 6" (152mm): 12" (305mm) + 6" (152mm) = 18" (457mm) < 19.5 (495mm). Use R2 or R3.

Example 2: Pipe ID = 24" (610mm), valve dimension = 8" (203mm): 12" (305mm) + 8" (203mm) = 18" (508mm) > 19.5 (495mm). Use R8 or R9.



FT4X Thermal Mass Flow Meter

MODEL CODES

399 Reservation Road
Marina, CA 93933
831-384-4300
www.foxthermal.com
sales@foxthermal.com

MODEL FT4X INLINE METER

	Code	Description
Parent Model No.*	FT4X	Inline Mass Flow Meter; includes two 4-20mA outputs, pulse output, contact input, display & configuration panel, USB connection, Gas SelectX®, and datalogger
Feature 1: Flow Body Size*		316 Stainless Steel Flow Body
	05PS2	1/2 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	075P	3/4 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	10P	1 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	125P	1-1/4 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	15P	1-1/2 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	20P	2 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	25P	2-1/2 inch flow body (schedule 40), male NPT ends, 18" face-to-face length
	30P	3 inch flow body (schedule 40), male NPT ends, 18" face-to-face length
	05FS2	1/2 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	075F	3/4 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	10F	1 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	125F	1-1/4 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	15F	1-1/2 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	20F	2 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	25F	2-1/2 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length
	30F	3 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length
	40F	4 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length**
	60F	6 inch flow body (schedule 40), 150# RF flange ends, 24" face-to-face length**
	15G	1-1/2 inch flow body (schedule 40), 300# RF flange ends, 12" face-to-face length
	20G	2 inch flow body (schedule 40), 300# RF flange ends, 12" face-to-face length
	25G	2-1/2 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length
	30G	3 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length
	40G	4 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length**
	60G	6 inch flow body (schedule 40), 300# RF flange ends, 24" face-to-face length**
		A106 Grade B Carbon Steel Flow Body (w/ A105 flanges if ordered)***
	20PC	2 inch flow body (schedule 40), male NPT ends, 12" face-to-face length
	25PC	2-1/2 inch flow body (schedule 40), male NPT ends, 18" face-to-face length
	30PC	3 inch flow body (schedule 40), male NPT ends, 18" face-to-face length
	20FC	2 inch flow body (schedule 40), 150# RF flange ends, 12" face-to-face length
	25FC	2-1/2 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length
	30FC	3 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length
	40FC	4 inch flow body (schedule 40), 150# RF flange ends, 18" face-to-face length**
	60FC	6 inch flow body (schedule 40), 150# RF flange ends, 24" face-to-face length**
	20GC	2 inch flow body (schedule 40), 300# RF flange ends, 12" face-to-face length
	25GC	2-1/2 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length
	30GC	3 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length
	40GC	4 inch flow body (schedule 40), 300# RF flange ends, 18" face-to-face length**
	60GC	6 inch flow body (schedule 40), 300# RF flange ends, 24" face-to-face length**
Feature 2: Enclosure and Power*	E1	Local explosion-proof enclosure, 24VDC powered
	E2	Local explosion-proof enclosure, 85-264VAC powered
	E3	Remote explosion-proof J-box, 24VDC powered, includes remote mounting kit, cable sold separately
	E4	Remote explosion-proof J-box, 85-264VAC powered, includes remote mounting kit, cable sold separately
Feature 3: Communications options*	B0	No communications option
	RS	RS485 Modbus RTU (required for Remote Connectivity Software)
	BH	HART enabled on primary 4-20mA output

OPTIONS

Part#	Description	Part#	Description
106796	Extra FT4X Instruction Manual	107698	USB Cable, A-male/micro USB-B male, 6' length
100657	Stainless Steel Tags	106958	8-conductor, 18 AWG PVC shielded cable for remote (E3 or E4), 100' max. length
999992	Certificate of Conformance	106728	AC to 24VDC power converter with DIN mounting rail
999995	Certificate of Origin	106658(2)	M20x1.5 Wiring Connection Adapters (Qty. 2 per meter)
999986	Material Certificates for Wetted Parts	990099	Canadian Registration Number (CRN) engraved on flow body***
109040	Sun Shade accessory	999004	ModbusView Software License for Remote Connectivity (requires RS in Feature 3 above)
890000	Flow meter cleaned and bagged for Oxygen service	114144	USB Remote Connectivity Kit (ModbusView RS485-to-USB Converter)
		114143	RJ45 Remote Connectivity Kit (ModbusView RS485-to-RJ45 Converter)

Notes: * The Parent Model Number and one of each Feature must be specified.
Example: FT4X-20P-E3-BH

** If max. flow rate above 2,500 SCFM (4,250 NM3H), consult factory for application review

*** Canadian Registration Number (CRN), P/N 990099, is not available on carbon steel flow bodies