

# TURBINE FLOWMETERS WITH LOCAL DIGITAL DISPLAY

## FTB790 Series



- ✓ Indicates Both Rate and Total
- ✓ Up to 1% Reading Accuracy
- ✓ 6-Digit Display
- ✓ Signal Output Capabilities
- ✓ GPM or LPM (Field Selectable)
- ✓ Battery Operated (Included)
- ✓ PVDF (FTB890) or PVC (FTB690) Models Also Available

All models shown smaller than actual size.

FTB795



FTB792



FTB794



FTB791



FTB793



FTB790 Series turbine meters with microprocessor-based electronics offers a durable, compact, high-precision fluid measurement device, with total and rate indication. Information is clearly displayed on a large 6-digit liquid crystal display with only 2-point floating decimal for totals from 0.01 to 999,999. All operations are easily performed with only 2 buttons. The basic unit and display are powered by 2 lithium batteries, providing up to 5 years of use. Cumulative total, batch total, and rate of flow are standard. A single-point field calibration curve can be stored in memory.

The turbine meter can also be ordered without display electronics. A special pulse output model (FLSC790-P-ND) must be ordered to obtain an open collector current sinking output operated on 9 to 35 Vdc. The output is a square wave pulse with a 3-wire connection.

### Accessories for Turbine Meters with the Display:

The FLSC790-MA provides a 4 to 20 mA or 0 to 5 Vdc output for rate indication. The output module requires field calibration. The 4 to 20 mA dc is a 2-wire system requiring 8 to 30 Vdc power (24 Vdc recommended).



The FLSC790-P pulse output module provides an unscaled open collector sinking output operating on an applied voltage of 0 to 60 Vdc. The output is a square wave pulse with an amplitude the same as the supplied voltage.

The FLSC790-P-DC external power module for the FLSC790-P, allows for 9 to 30 Vdc external power for the pulse output. Internal batteries in the display can be used as an auxiliary power source.

The FTB790-RK remote kit allows remote mounting of display electronics. This option expands the applications into wider fluid temperature ranges to -40 to 121°C (-40 to 250°F). The LCD display can be mounted up to 90 m (300') from the turbine meter.

The FTB790-RK-FM is an FM approved remote kit. It allows the display electronics to be mounted in a hazardous area up to 30 m (100') from the turbine meter and for fluid temperatures of -40 to 121°C (-40 to 250°F).

The FLSC790-BATT is the replacement battery for the display electronics. Batteries provide 5 years of use.

The FLSC790-90D is a 90° mounting adaptor designed to allow displays to be mounted 90° from the standard position.

## SPECIFICATIONS

### Accuracy:

- FTB-791: ±2% rdg
- FTB-792, FTB-793: ±1.5% rdg
- FTB-794, FTB-795: ±1.0% rdg

### Extended Low Flow Range Accuracy:

±5.0% of reading (display models only)

### Repeatability: ±0.1%

### Pressure Rating: 1500 psig (103 bar)

#### With “-HP” Option:

3000 psig (207 bar)

### Temperature Range:

#### With Remote Electronics Kit:

-40 to 121°C (-40 to 250°F)

#### Without Remote Electronics:

-10 to 60°C (14 to 140°F)

**Viscosity:** Rated accuracy for fluids with viscosity of water (1 cSt); meters with display can be used for fluids up to 100 cSt with field calibration

### Wetted Components:

**Housing:** 316 SS

**Journal Bearings:** Ceramic (96% alumina)

**Shaft:** Tungsten carbide

**Rotor and Supports:** PVDF

**Retaining Rings:** 316 SS

**Display:** 6-Digit LCD indicates flow rate, batch and cumulative total

**Battery Life:** 5 years

**FM Approvals:** Turbine meters with display and no accessories are FM approved for Class 1, Div. 1 hazardous environments

*Note: Outputs and accessories are not designed for hazardous environments.*



FTB790 shown larger than actual size.

## To Order

Model No. w/Display	Model No. w/o Display*	Range GPM (LPM)	Extended Range Low Flow**	FNPT Size	Pressure Drop (psi)	Length mm (in)	Weight kg (lb) includes display	Opt pulse K-factor pulse/gal (nom)
FTB791	FTB791-ND	1 to 10 (3.8 to 37.9)	0.5 (1.9)	½	8.0	107 (4.2)	1.0 (2.3)	2500
FTB792	FTB792-ND	2 to 20 (7.6 to 75.7)	1.0 (3.8)	¾	7.5	109 (4.3)	1.1 (2.5)	1100
FTB793	FTB793-ND	5 to 50 (18.9 to 190)	2.5 (9.5)	1	5.0	114 (4.5)	1.3 (3.0)	565
FTB794	FTB794-ND	10 to 100 (38 to 380)	5.0 (9.0)	1½	4.0	135 (5.3)	2.1 (4.6)	215
FTB795	FTB795-ND	20 to 200 (76 to 760)	10.0 (38)	2	4.0	160 (6.3)	3.1 (6.8)	100

\* Requires signal output module model **FLSC790-P-ND**, ordered separately.

\*\* Extended low flow range and field calibration for viscosity not available on “-ND” (no display) units.

For units with ISO threads add “-ISO” to the model number, for additional cost.

For units with Tri-Grip mounting add “-TRI” to model number, for additional cost.

For high pressure units [207 bar (3000 psig)], add suffix “-HP” to model number, for additional cost.

## Field Installable Options and Accessories

Model Number	Description
FLSC790-MA	4 to 20 mA/0 to 5 Vdc output module†
FLSC790-P	Pulse output module; open collector output†
FLSC790-P-DC	External power module for FLSC790-P (9 to 30 Vdc)
FTB790-RK	Remote display kit module†
FTB790-RK-FM	FM approved remote display kit module†
FLSC790-BATT	Two 3V replacement batteries
FLSC790-P-ND	Pulse output for models without displays (“-ND” suffix); open collector output†
FLSC790-90D	90° display mounting adaptor

Except as noted, options and accessories are for display models only. Only one module can be installed per unit.

Comes complete with two 3V lithium batteries and operator’s manual.

† Comes complete with 3 m (10’) cable, and operator’s manual.

**Ordering Examples:** **FTB793**, 1” turbine meter, with **FLSC790-MA**, field installable 4 to 20 mA dc output.

**FTB795**, 2” turbine meter with **FLSC790-P** pulse output module and **FLSC790-P-DC** power module.