

Advanced instrumentation solutions crafted with highest precision





Working Principle

The Transit Time Flowmeter utilises two transducers that function as both ultrasonic transmitters and receivers. The transducers are clamped on the outside of a closed pipe or inserted in the pipeline by use of isolating ball valve assembly at a specific distance from each other. Transit Time Flowmeters measure the time it takes for an ultrasonic signal transmitted from one sensor, to cross a pipe and be received by a second sensor. Upstream and downstream time measurements are compared. With no flow, the transit time would be equal in both directions.

With flow, sound will travel faster in the direction of flow and slower against the flow. The liquid velocity (V) inside the pipe can be related to the difference in time of flight (Δt) through the following equation:

$$V = K \times D \times \Delta t$$

where V : Liquid velocity

K : Constant

D : Distance between the two transducers

Δt : Difference in time of flight



UFM 6710



UFM 6720



UFM 6730

Ultrasonic Flowmeter Series 6700

Technical Specifications : Series 6700

Parameters	UFM 6710	UFM 6720	UFM 6730
Transmitter			
Power supply	24 V DC $\pm 20\%$ 110 V AC $\pm 15\%$ 240 V AC $\pm 15\%$	3 AAA NiMH built-in battery (12 hours of operation) & 100-240 V AC for the charger	24 V DC $\pm 20\%$ 110 V AC $\pm 15\%$ 240 V AC $\pm 15\%$
Velocity	± 12 m/sec. Bidirectional	± 12 m/sec. Bidirectional	± 2 m/sec. Bidirectional
Display	2 lines, 16 characters, LCD with back light, flow rate, velocity, totaliser	4 lines, 16 characters, LCD with back light, flow rate, velocity, totaliser	2 lines, 16 characters, LCD with back light, flow rate, velocity, totaliser
Units	User configurable English/Metric	User configurable English/Metric	User configurable English/Metric
Totaliser	FWD, NET, REV, BATCH (Gallons, ft ³ , Barrels, lbs, m ³)	FWD, NET, REV, BATCH (Gallons, ft ³ , Barrels, lbs, m ³)	FWD, NET, REV, BATCH (Gallons, ft ³ , Barrels, lbs, m ³)
Output	4-20 mA DC Std.*	RS 232	4-20 mA DC Std.*
Accuracy	$\pm 1\%$ of reading @ rate > 0.5 m/sec.	$\pm 1\%$ of reading @ rate > 0.5 m/sec.	$\pm 1\%$ of reading @ rate > 0.5 m/sec.
Repeatability	0.2% of Span	0.2% of Span	0.2% of Span
Dimensions	251x190x96 mm	204x90x30 mm	251x190x96 mm
Weight	<2.5 kg	<0.5 kg	<2.5 kg
Security	Keypad lockout, access code enabled	Keypad lockout, access code enabled	Keypad lockout, access code enabled

Transducer			
Suited temp. - Std.	-40°C to 120°C	-40°C to 120°C	-40°C to 120°C
Suited temp. - High	-40°C to 250°C	-40°C to 250°C	-40°C to 250°C
Pipe size	S Transducer	15-80 mm	>65 mm (Note : Long sensors available on request for thick pipelines)
	M Transducer	50-700 mm	
	L Transducer	400-4570 mm	
Dimensions	S Transducer	45x30x30 mm	
	M Transducer	60x45x45 mm	186 mm with 20 mm bore size
	L Transducer	80x70x55 mm	
Weight	S Transducer	< 0.3 kg	
	M Transducer	< 0.5 kg	< 1.5 kg
	L Transducer	< 1.0 kg	
Cable length	6 m Std. Can be extended up to 300 m	6 m Std. Can be extended up to 25 m	6 m Std. Can be extended up to 300 m
Flexible belts	SS belt according to pipe size	SS belt according to pipe size	NA
Portable case	NA	Size - 463x383x103 mm	NA

* Please refer to order code for options.



Ordering Code : UFM 6710/6730

M1 - UFM 6710
M2 - UFM 6730

Power supply

P1 - 24 V DC

P2 - 110 AC

P3 - 240 VAC

P4 - Solar powered

P5 - Any other (Pl. Specify)

View Software

Y - Required
(select communication interface)

For UFM 6710

Sensor (Standard)

S - Small 15 - 80 mm

M - Medium 50 - 700 mm

L - Large 400 - 4570 mm

Sensor (High Temp.)

HS - Small 15 - 80 mm

HM - Medium 50 - 700 mm

HL - Large 400 - 4570 mm

For UFM 6730

Sensor

R - Regular pipelines

E - Extended

1 - Required (Pl. specify)

2 - Not required

10 - 10 m

Sensor Cable

6 - 6 m (Std.)

Communication Interface

G1 - Not required

G2 - GSM

G3 - GPRS

G4 - HART

Output

OP1 - 4 - 20 mA DC

OP2 - Pulse

OP3 - Relay

OP4 - RS 232 (Modbus RTU)

OP5 - RS 485 (Modbus RTU)

OP6 - Combinations of above (Pl. specify)

Ordering Code : UFM 6720

Sensor (Standard)

S - Small 15 - 80 mm

M - Medium 50 - 700 mm

L - Large 400 - 4570 mm

OR

Sensor (High Temp.)

HS - Small 15 - 80 mm

HM - Medium 50 - 700 mm

HL - Large 400 - 4570 mm

Output

N - None

C - RS 232

Data Logging

0 - Not required

1 - Required (Pl. specify)

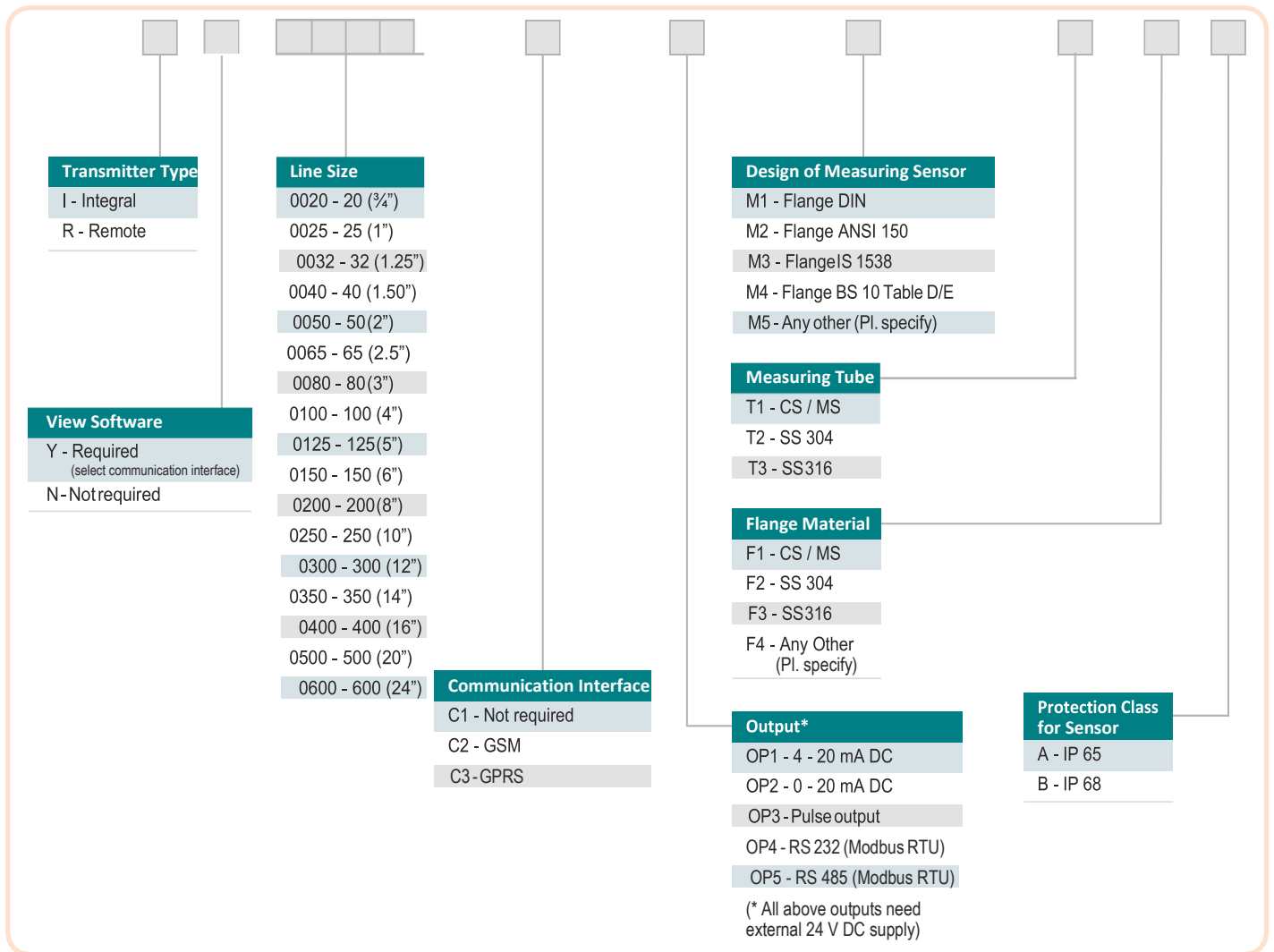
Sensor Cable

6 - 6 m (Std.)

10 - 10 m

M - Any other length (Pl. specify)

Ordering Code : UFM 6740



Services for you



Calibration

We provide Flowmeter Calibration Facility at our works. The facility uses the primary method of measuring the water flow by gravimetric principle or comparison method. The facility is designed for calibration of Flowmeters under controlled and stable flow conditions. The lab is as per ISO 4185. It has a capacity from 10 mm up to 450 mm.

NABL accreditation is awaited.

Rent a Flowmeter

Adept has a ready range of Ultrasonic Flowmeters available for rent for any line size. All rentals are calibrated, quality checked and backed by our experienced manpower. With experience of more than 15 years, we will help you in calibrating your line flow for any liquid.

JAYCEE TECHNOLOGIES PVT. LTD.

An ISO 9001-2008 and C E Certified Co.

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