TURBINE ROTOR

(VELOCITY FLOW METER)

TURBINE FLOW METER USE THE MECHANICAL ENERGY OF FLOWING FLUID, CAUSING A ROTOR TO ROTATE AT AN ANGULAR VELOCITY PROPORTIONAL TO THE FLUID FLOW RATE OR VELOCITY WITHIN THE FLOW PATH AND PICKUP COILS CAPTURE THIS ANGULAR VELOCITY AND GENERATING AN ELECTRICAL SIGNAL WHICH IS DIRECTLY PROPORTIONAL TO FLOW RATE.



PERFORMANCE DATA

0.65 L/min to 15,500 L/min and can withstand pressures up to 300 Bar. It supports various connection types, including BSP, NPT, Flanged, Hygienic, Autoclave, and Nova Swiss connections, Offer pulse & analogue O/P and Complies with ATEX standards.

MARKETS & AREAS OF APPLICATION

In order of magnitude from largest to smallest, these are used in oil, water and chemical. In Industries like aerospace, food & beverage, metals & mining, pharmaceutical, power, pulp & paper.

ADVANTAGES

A cost-effective solution for flow measuring, this system ensures a long service life even in severe operating environments. It boasts high accuracy, repeatability, and range ability tailored for specific viscosities and measuring ranges. Designed for nonconductive liquids, it also has the capability of heating the measuring device. Additionally, it proves suitable for very low flow rates, making it a versatile and reliable choice for a range of applications.

GENERAL SPECIFICATION

Flow Tube	: SS - 304 / SS - 316 / on request
Rotor	: Cd4mCu / SS410 with Teflon coating
Shaft & Bush	: Hard Carbon
Repeatability	: 0.2%
Accuracy (standard position)	: ±1% RS / ± 0.75% FSD
Maximum Working Pressure	: 60 Bar / 300 Bar
Fluid & Ambient Temperature	: -20° to 120° C
Connection	: Thread (M) / Sandwich Flange / Tc End

OUTPUT SENSOR

Power Voltage	: 5 / 12 / 24 V DC
Output Signal	: NPN/PNP
High Electric Level	: Higher Than 8 V DC (Input 12 Vdc)
Low Electric Level	: Lower Than 0.8 V DC (Input 12 Vdc)

DISPLAY WITH VARIOUS OUTPUT

Power Voltage : 24 V DC

Output Signal

Retransmit : (4 ~ 20) mA / Pulse (programmable)

Communication : RS - 485 / HART Protocol

Relay : High & Low Flow

Battery Operated Meter

Power Voltage : 3.6 V DC Lithium Batteries

Display Mode : Double row LCD as below

Q X.XXXXX Six Digit Instantaneous Flow (m^3/h, L/h, L/M, m^3/M, m^3/h, L/h, kg/M, GPM, T/h, kg/h)

XXXX.XXXX Eight Digit Cumulative Flow

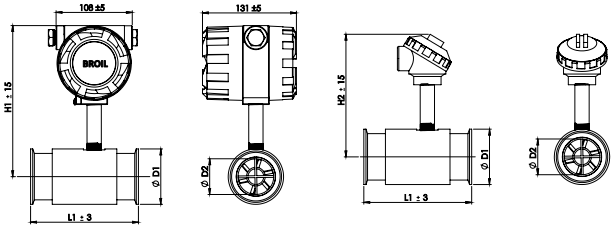
Cumulative flow : Automatically expand the display precision.

The cumulative flow values can be reset.

Power - fail protection : The instrument coefficient ensures that total flow values for the past ten years are retained even in the event of a power supply drop.

MODEL RANGE

Model Number	Line Size	Range	Liter / Pulse
BT-DTFS - 006	6 mm	40 ~ 400 L/H	0.000095
BT-DTFS - 009	9 mm	200 ~ 2000 L/H	0.000571
BT-DTFS - 012	12 mm	400 ~ 4000 L/H	0.001219
BT-DTFS - 020	20 mm	800 ~ 8000 L/H	0.002544
BT-DTFS - 025	25 mm	1000 ~ 10000 L/H	0.004629
BT-DTFS - 032	32 mm	1500 ~ 15000 L/H	0.00740
BT-DTFS - 040	40 mm	2000 ~ 20000 L/H	0.01250
BT-DTFS - 050	50 mm	4000 ~ 40000 L/H	0.03571
BT-DTFS - 080	80 mm	10000 ~ 100000 L/H	0.10752
BT-DTFS - 100	100 mm	20000 ~ 200000 L/H	0.23809
BT-DTFS - 150	150 mm	30000 ~ 300000 L/H	0.33222
BT-DTFS - 200	200 mm	40000 ~ 400000 L/H	0.45454



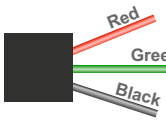
T/C END DIMENSION

Model Number	L 1	D 1	D 2	H 1	H 2
BT-DTFS - 012	75	50.5	14	187	154
BT-DTFS - 020	91	50.5	20	190	157
BT-DTFS - 025	108	50.5	25	193	160
BT-DTFS - 032	126	65.0	40	200	167
BT-DTFS - 040	140	65.0	50	205	172

ALL THE DIMENSION IN MILIMETERS

ELECTRIC CONNECTION

PULSE OUTPUT



5-24 V DC

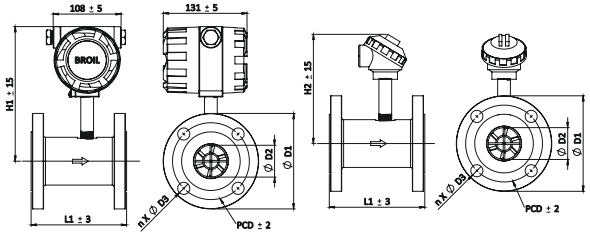
O/p signal NPN/PNP

0 V

DISPLAY OUTPUT

✶ Please Check Display Manual

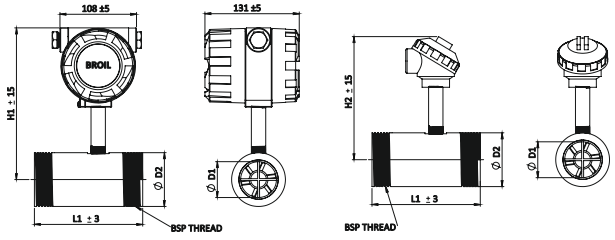
calculate pulse/liter at : 25%, 50%, 75% and 100% flow rate with pure water at room temperature



FLANGE END DIMENSION

Model Number	L 1	H 1	H 2	D 1	D 2	n x D 3	PCD
BT-DTFS - 009	350	185	152	90	10	4 X 16	60.3
BT-DTFS - 012	75	187	154	90	14	4 X 16	60.3
BT-DTFS - 020	91	190	157	100	20	4 X 16	69.9
BT-DTFS - 025	130	193	160	110	25	4 X 16	79.4
BT-DTFS - 032	126	196	163	115	32	4 X 16	88.9
BT-DTFS - 040	170	200	167	125	40	4 X 16	98.4
BT-DTFS - 050	170	205	172	150	50	4 X 19	120.7
BT-DTFS - 080	200	220	187	190	79	4 X 19	152.4
BT-DTFS - 100	220	230	197	230	100	8 X 19	190.5
BT-DTFS - 150	270	255	222	280	150	8 X 22.3	241.3
BT-DTFS - 200	310	280	247	345	200	8 X 22.3	298.5

ALL THE DIMENSION IN MILIMETERS



THREAD END DIMENSION

Model Number	THREAD CONNECTION	L 1	H 1	H 2	D 1	D 2
BT-DTFS - 006	½" BSP	225	183	150	06	34
BT-DTFS - 009	½" BSP	350	185	152	10	34
BT-DTFS - 012	¾" BSP	75	187	154	14	38
BT-DTFS - 020	1" BSP	91	190	157	20	38
BT-DTFS - 025	1 ¼" BSP	108	193	160	25	46
BT-DTFS - 032	1 ½" BSP	126	196	163	32	55
BT-DTFS - 040	2" BSP	140	200	168	40	62

ALL THE DIMENSION IN MILIMETERS