TTDSS TYPE TURBINE FLOW METERS

CE

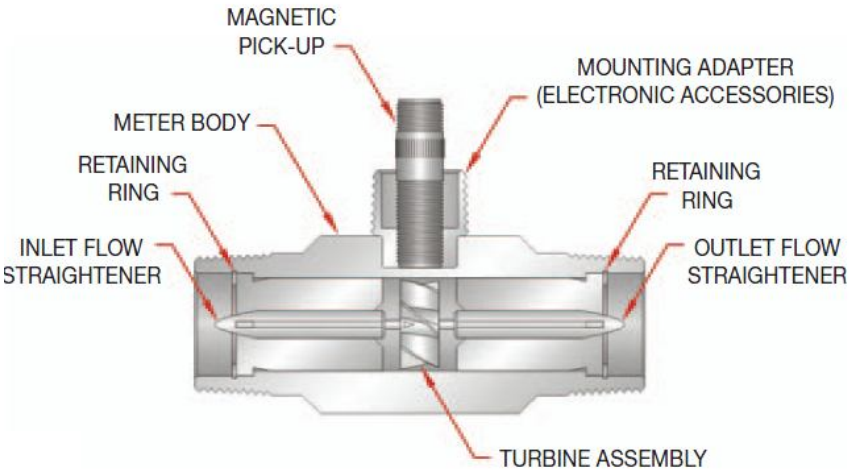
Description

The Model TTDSS Turbine Flow Meter is designed to withstand the demands of the most rigorous flow measurement applications. The meter features a rugged 316 stainless steel housing and rotor support assembly, CD4MCU stainless steel rotor, and abrasion-resistant tungsten carbide rotor shaft and journal bearings. The Model TTDSS maintains measurement accuracy and mechanical integrity in the corrosive and abrasive fluids commonly found in a variety of industrial applications.

The Model TTDSS is standard with a magnetic pick-up which produces a frequency output that is proportional to its volumetric flow rate. When paired with the LCD Flow Monitor,this compact system offers local indication of both flow rate and total flow. For further flexibility, Trodeks Instruments offers electronic options which convert the frequency output to an analog signal for easy electronic integration with most instruments, PLCs, and computers.

Operating Principle

Fluid entering the meter passes through the inlet flow straightener which reduces its turbulent flow pattern and improves the fluid's velocity profile. Fluid then passes through the turbine,causing it to rotate at a speed proportional to fluid velocity. As each turbine blade passes through the magnetic field at the base of the transducer, an AC voltage pulse is generated in the pick-up coil. These pulses produce an output frequency proportional to the volumetric flow through the meter.



Features

- Flow ranges from 0,6 to 13.500 LPM
- Rugged stainless steel construction
- Meter bore sizes from 1/8" to 8"
- NPT, BSP or flange end connections from 1/2" to 8"
- Accuracy of ±1% of reading or ±0,5 % and ±0,2% on request
- Electronic integration available with LCD Flow Monitor,F to I Intelligent Converter or the K-Factor Scaler
- Standart Manufacturer Calibration Certificate
- Optional RS-485 communication
- Optional Battery Powered Display

Pulse Output

Analog Output

LCD Display

Specifications

Materials of Construction	
Body	AISI 304 Stainless steel
Rotor	CD4MCU Stainless steel
Rotor Support	AISI 316 Stainless steel
Rotor Shaft	Tungsten carbide
Turndown Ratio	10 : 1 standart , 20 : 1 on request
Accuracy	±1% of reading, ±0,5 and ±0,2% on request
Repeatability	±0,1%
Calibration	Standart Manufacturer Calibration Certificate
Pressure Rating	63 bar max. (100 bar max. ops.)
Temperature	-40°C...120°C (-40°C...150°C ops.)
End Connection	Thread G,NPT or Flange DIN,ANSI,JIS
Power Supply	12...24 VDC for pulse 24VDC for analog and LCD 3 VDC lithium battery for battery powerd LCD
Protection	IP65
Hazardous Area	Ex d II B T6 on request

Type and Flow Rate Tables

Type	Bore Size [mm]	End Connection	Flow Range[l/min]	Extended Flow Range[l/min]	Recommended Strainer [Mesh]
TTDSS.004...	4	G 1/2"or DN15	0,6...4,5	0,6...6	60
TTDSS.006...	6	G 1/2" or DN15	1,5...10	1...10	60
TTDSS.010...	10	G 1/2" or DN15	3...20	2,5...25	60
TTDSS.015...	15	G 1" or DN25	10...100	6...133	60
TTDSS.020...	20	G 1" or DN25	13...133	7,5...150	60
TTDSS.025...	25	G 1 1/2" or DN40	16...165	8...165	40
TTDSS.032...	32	G 2" or DN40	25...250	13...250	20
TTDSS.040...	40	G 2" or DN50	33...335	16...335	20
			Flow Range[m3/h]	**Extended Flow Range[m3/h]**	
TTDSS.050...	50	DN50	4...40	2...40	20
TTDSS.065...	65	DN65	7...70	4...70	20
TTDSS.080...	80	DN80	10...100	5...100	10
TTDSS.100...	100	DN100	20...200	10...200	10
TTDSS.125...	125	DN125	25...250	13...250	4
TTDSS.150...	150	DN150	30...300	15...300	4
TTDSS.200...	200	DN200	80...800	40...800	4

Installation

The Model TTDSS Turbine Meter is simple to install and service. It operates in any orientation (horizontal to vertical) as long as the "flow direction" arrow is aligned in the same direction as the actual line flow. For optimum performance, the flow meter should be installed with a minimum of 10 diameters upstream straight pipe length and 5 diameters downstream straight pipe length.

Ordering

TTDSS.									Description
Bore Sizes	XXX								Please see "Type and Flow Rate Tables"
Line Size		015							DN15
		025							DN25
		040							DN40
		050							DN50
		065							DN65
		080							DN80
		100							DN100
		125							DN125
		150							DN150
		200							DN200
Connection			D						Thread (please specify NPT,G or BSP)
			F						Flanged (please specify DIN,ANSI,JIS)
Converter Type				P					Pulse output
				A					4-20 mA output
				B					Lithium battery powered,with display,without output
				L					4-20 mA output,with display
				C					RS-485 communication,with display,24V DC
				H					4...20 mA+HART protocol, with display,24V DC display
Accuracy Level					10				±1% of reading
					05				±0,5% of reading
					02				±0,2% of reading
Range Type						S			Standart Flow Range
						E			Extended Flow Range
Body Material							S		AISI 304 SS
							L		AISI 316 L
Enclosure								N	IP65
								E	Ex d II B T6 flameproof
Temperature Range									N -40°C...120°C
									H -40°C...150°C