TUR TURBINE FLOWMETER

Flow
Pressure
Level
Temperature
measurement
monitoring
control

- **Pulse Output**
- **Accuracy: ±1% of Full Scale**
- **Chemically Resistant PVC or PVDF Construction**
- **High Volume: 440 GPM**
- **Analog Output, Digital Indication on Request**

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Model:
TUR

Features

- Pulse Output
- Accuracy: ±1% of Full Scale
- Chemically Resistant PVC or PVDF Construction
- High Volume: 440 GPM
- Analog Output, Digital Indication on Request

Kobold's TUR turbine flowmeters serve applications involving measurement, control and regulation of flowing liquids. Through use of chemically resistant materials, this device can be applied to tasks involving flows of acids, bases, and other aggressive media commonly used in industrial applications.

Operation

Kobold's TUR may be installed in any desired orientation provided care is taken to keep the meter full of liquid. Motion of the fluid through the housing causes rotation of the turbine. An external proximity sensor detects rotation of the turbine by sensing movement of metal particles inside the plastic turbine wheel. The turbine rotation is linear with respect to flow over a range comprising approximately 90% of the upper range of the meter. the display and control module converts the impulse signal into a displayed number or control output (eg. relay closure or current loop).

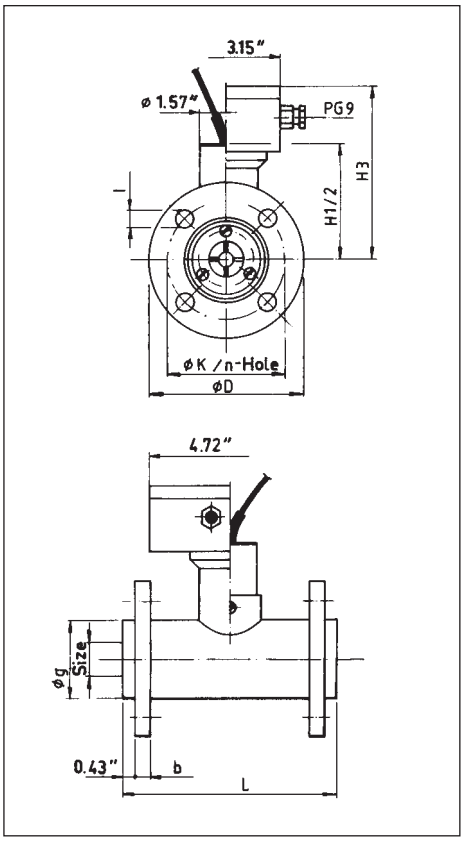
Construction

A complete measurement system consists of:

1) Flowmeter Housing
   Material: PVC or PVDF (Kynar®)
   Fittings: 2″or 4″ ANSI Flange
2) Turbine flow transducer with pulse output. (NPN or PNP open collector)
3) Display and control module (optional accessory).

Specifications

Maximum Pressure: 145 PSIG
Maximum Temperature: PVC: 140°F
PVDF: 160°F
Viscosity Tolerance:
Water-like fluids(≤8 cSt)
Precision: ±1% of Full Scale
Pressure Drop: 1.5 PSI at Max. Flow
Input Power:
24 VDC, ±20% (TUR-3... w/output: N, P)
24 VDC, 24, 110, 230 VAC for TUR-4...
Protection: NEMA 4
Straight Piping Requirements
Upstream: 20 XD
Downstream: 10 XD



Size	b	D	g	H 1	H 2**
2"	0.79"	6.00″	3.46″	n/a	3.94″
4″	0.87″	9.00″	5.71″	n/a	4.92″

Size	H 3	K	L	n	l
2″	5.51″	4.75″	7.87″	4	0.75″
4″	6.50″	7.50″	9.84″	8	0.75″

** with NPN or PNP sensor

Options (Add to Part No.)	Suffix
NPN-Output for TUR-3...	-N
PNP-Output for TUR-3...	-P
0-20 mA- Output for TUR-4..	-A
0-10 V-Output for TUR-4...	-V
110 VAC Supply for TUR-4..	-U
230 VAC Supply for TUR-4..	-S

Materials		
Component	Version PVC	Version PVDF
Housing	PVC	PVDF
Bearing Support	PVC	PVDF
Turbine	PVC	PVDF
Bearing/Axle	Sapphire/ Sapphire	Sapphire/ Sapphire
Fastening Screws	Polyamide	PVDF

Order Numbers Transducer with NPN or PNP pulse output							
Flange	Range (GPM)	Freq. Range (Hz)	Pulses /Gallon	Material PVC	Material PVDF	Material Range Size	Output
2″	5.3 – 88	5–79	54	TUR-30..	TUR-31..	..50	-N
4″	11 – 440	2–82	11	TUR-30..	TUR-31..	..10	-P

Transducer with analog output (4–20 mA, 4-wire output, 24 VAC or 24 VDC power standard)							Options (Add to PartNo.)
Flange	Range (GPM)	Freq. Range (Hz)	Pulses /Gallon	Material PVC	Material PVDF	Material Range Size	-A -V
2″	5.3 – 88	5–79	54	TUR-40..	TUR-41..	..50	-U
4″	11 – 440	2–82	11	TUR-40..	TUR-41..	..10	-S