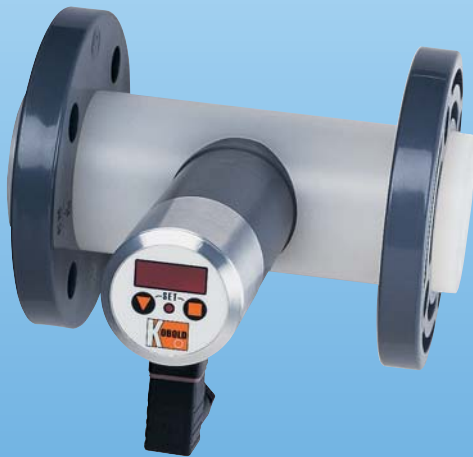


TUR TURBINE FLOWMETER



Flow
Pressure
Level
Temperature
measurement
monitoring
control



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

S4



USA

KOBOLD Instruments Inc.
1801 Parkway View Drive
USA-Pittsburgh, PA 15205
☎ +1 412-788-2830
Fax +1 412-788-4890
E-mail: info@koboldusa.com



CANADA

KOBOLD Instruments Canada Inc.
9A Aviation
Pointe-Claire, QC H9R 4Z2
☎ +1 514-428-8090
Fax +1 514-428-8899
E-mail: kobold@kobold.ca

Visit KOBOLD Online at
www.kobold.com

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

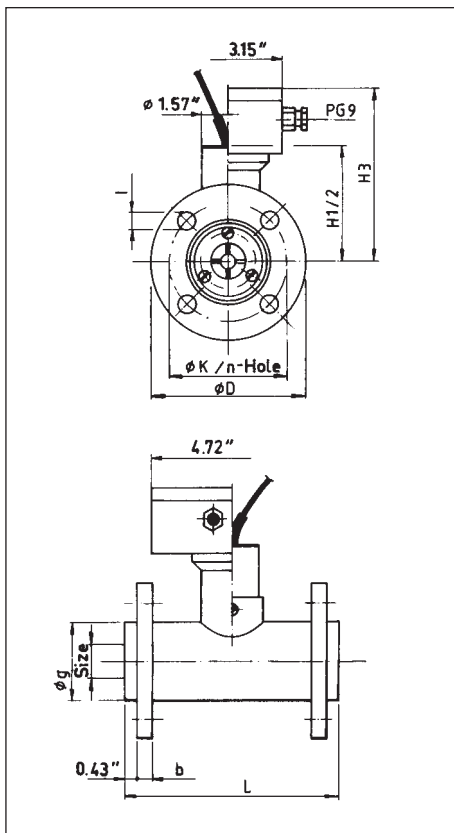
Pressure Drop: 1.5 PSI at Max. Flow

Input Power: 7.7-9 VDC NAMUR, 2 wire (Standard),
24 VDC, 3 wire (Option N, P),
110 VAC, 230 VAC for TUR 4000

Protection: NEMA 4

Straight Piping Requirements

- Upstream:** 20 XD
- Downstream:** 10 XD



Size	b	D	g	H 1*	H 2**
2"	"	6.50"	3.46"	2.56"	3.94"
4"	0.87"	8.66"	5.71"	3.54"	4.92"

Size	H 3	K	L	n	l
2"	5.51"	4.92"	7.87"	4	0.71"
4"	6.50"	7.09"	9.84"	8	0.71"

* with NAMUR sensor
** with NPN or PNP sensor

Options (Add to Part No.)	Suffix	Materials		
		Component	Version PVC	Version PVDF
NPN-Output for TUR-3...	-N	Housing	PVC	PVDF
PNP-Output for TUR-3...	-P	Bearing Support	PVC	PVDF
0-20 mA- Output for TUR-4..	-A	Turbine	PVC	PVDF
0-10 V-Output for TUR-4...	-V	Bearing	Sapphire/ Tungsten-Carbide	Sapphire/ Tungsten-Carbide
110 VAC Supply for TUR-4..	-U	Fastening Screws	Polymide	PVDF
230 VAC Supply for TUR-4..	-S			

Order Numbers							
Transducer with pulse output (Sensor acc. to Namur, supply 7.7-9 VDC, 2 wire)							
Flange	Range (GPM)	Freq. Range (Hz)	Pulses /Gallon	Material		Range Size	Options (Add to Part No.)
				PVC	PVDF		
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, supply 24 VAC or 24 VDC)							Options (Add to PartNo.)
Flange	Range (GPM)	Freq. Range (Hz)	Pulses /Gallon	Material		Range Size	
				PVC	PVDF		
2"	5.3 - 88	5-79	54	TUR-40..	TUR-41..	..50	-A -V
4"	11 - 440	2-82	11	TUR-40..	TUR-41..	..10	-U -S