



Truflow® TKM Series Paddle Wheel Liquid Flow Meters

Part No. [TKM-25-P](#)

Overview

The Truflow® TKM Series digital in-line flow meter sensors are easy to install with exceptional guaranteed long-life performance. They are highly repeatable, extremely rugged sensors that offer outstanding value and require no scheduled maintenance.

The TKM Series has a process-ready output signal with a wide dynamic flow range of 1 to 32 GPM up to 10.5 to 357 GPM. The sensor measures liquid flow rates in full pipes.

TKM Series flow meters are available from 1/2" to 2" pipe sizes. PVC body construction makes the TKM series highly adaptable and chemically resistant to many corrosive liquid process applications.

The TKM Series flow meter bodies are true-union designed up to 2" just as any true-union ball valve is designed. They come completely pre-programmed with a bright LED Display that rotates 360°.

Features

- Highly adaptable and chemically resistant to many corrosive liquid process applications.
- No Programming and quick installation
- Accuracy: $\pm 0.5\%$
- Switch, Pulse and 4-20mA outputs
- Flow and total flow indication
- ShearPro® paddle wheel design
- Low pressure drop
- Password protection security
- 1/2 to 2 inch true union sizes
- M12 quick-disconnect (8-pole M12 cable included)
- Tefzel® paddle wheel material offers superior chemical and wear resistance
- Zirconium ceramic rotor and bushings
- ShearPro® through-pin design: eliminates finger spread, reduces lost paddles, increases temp. rating, 360° housing protects rotor
- NEMA 4X and IP 66 protection



Tefzel Paddle Wheel

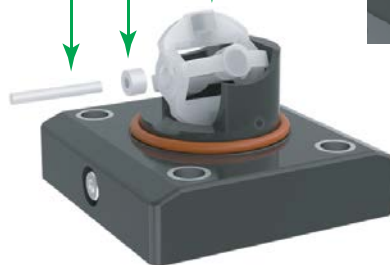
- Superior chemical and wear resistance vs PVDF (Polyvinylidene fluoride)

Zirconium Ceramic Rotor | Bushings

- Up to 15x the wear resistance vs regular ceramic
- Integral rotor bushings reduce wear and fatigue stress

ShearPro Through-Pin Design

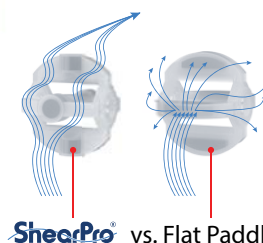
- Eliminates finger spread
- No lost paddles
- Increased temp. range
- 360° housing protects rotor



Finger Spread = LOST
Unprotected Rotor



ShearPro® vs. Competitor



ShearPro® vs. Flat Paddle

Truflow Paddle Wheel Liquid Flow Meter Selection

Part No.	Price	Connection	Flow Range	Output 1	Output 2	Output 3	Quantity	Weight (lbs)	Drawing Link	Manufacturer Quick Start Guide
TKM-15-P	\$-06ivq:	1/2" schedule 80 PVC socket	1 to 32 GPM	Switch NPN	Switch or Pulse NPN	Analog 4-20 mA	1	1.4	PDF	PDF
TKM-20-P	\$-06ivs:	3/4" schedule 80 PVC socket	1.5 to 45 GPM				1	1.4	PDF	
TKM-25-P	\$;-006ivt:	1" schedule 80 PVC socket	2.5 to 79 GPM				1	1.5	PDF	
TKM-40-P	\$;-006ivu:	1-1/2" schedule 80 PVC socket	6.5 to 225 GPM				1	2.3	PDF	
TKM-50-P	\$;-006ivv:	2" schedule 80 PVC socket	10.5 to 357 GPM				1	2.4	PDF	



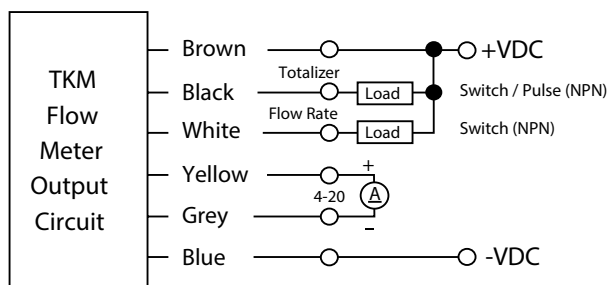
Truflo® TKM Series Paddle Wheel Liquid Flow Meters

Truflo Paddle Wheel Liquid Flow Meter Specifications	
General	
Operating Range	1 to 357 GPM
Pipe Size Range	1/2" to 2"
Linearity	±0.5% of F.S @ 25°C 77°F
Repeatability	±0.5% of F.S @ 25°C 77°F
Wetted Materials	
Sensor Body	PVC
O-Rings	FKM (Fluoro Rubber Material)
Rotor Pin / Bushings	Zirconium Ceramic / ZrO2
Paddle and Rotor	ETFE Tefzel®
Operating Temperature	
PVC	32°F to 140°F (0°C to 60°C)
Max. Pressure Rating Non-Shock	
PVC	180 PSI @ 68°F 40 Psi @ 140°F (12.5 Bar @ 20°C 2.7 Bar @ 60°C); Refer to pressure/temperature graph
Electrical	
Supply Voltage	10-30 VDC
Outputs	
Frequency	49 Hz per m/s (15 Hz per ft/s) nominal
TKM Series	2 x NPN 4-20 mA
Approvals	
CE RoHS Compliant	



Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

Wiring Diagram



Wire Color	Description
Brown	+ 10 - 30 VDC
Black	Totalizer Pulse/Limit Output (OP2)
White	Flow Rate Limit Output (OP1)
Yellow	4-20 mA out: +
Grey	4-20 mA out: -
Blue	-VDC

Note: M12 quick-disconnect (8-pole M12 cable included)

K-Factor Charts

K-Factors for TK Series	
Size	K-Factor
1/2"	127.6
3/4"	81.8
1"	55.1
1-1/2"	18.8
2"	10.2

Note: K-Factor is Pre-Programmed



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Min/Max Flow Rates		
Pipe Size (O.D.)	GPM (LPM)	GPM (LPM)
	0.3 m/s min.	10 m/s max.
1/2" DN15	1.0 (3.5)	32 (120)
3/4" DN20	1.5 (5.0)	45 (170)
1" DN25	2.5 (9.0)	79 (300)
1-1/2" DN40	6.5 (25.0)	225 (850)
2" DN50	10.5 (40.0)	357 (1350)

Note: The Pressure/Temperature graph is specifically for the Truflo® Flow Meter Sensors.

During system design the specifications of all components must be considered.

Pressure/Temperature Graph

