

DPT TARGET TYPE FLOWMETERS



Flow
Pressure
Level
Temperature
measurement
monitoring
control



- Patented Target/Leaf-Spring Design
- Minimal Wear Components
- 1.5-8 to 225-500 GPM Water
- Line Sizes 3/8 to 3"
- Wide Variety of Wetted Materials
- Accuracy +/- 3% of Full Scale

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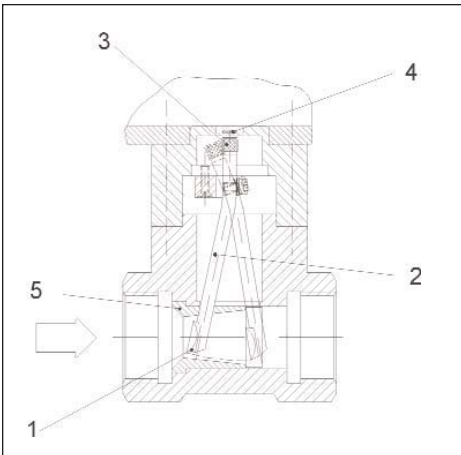
Model:
DPT



Features

- Patented Target/Leaf-Spring
- Minimal Wear Components
- 1.5-8 to 225-500 GPM Water
- Accuracy ±3% of Full Scale
- Line Sizes 3/8" to 3"
- Wide Variety of Wetted Materials

The DPT series uses a unique, patented target system to measure the flows of liquids. This design uses a single leaf-spring to both suspend the target and to provide the target resetting force. The use of a single leaf-spring is a simple, reliable design which allows for operation with virtually no wear.



DPT Series Measuring Principle

The mechanism consists of a target plate (1) and lever arm (2). Fluid flow causes the target plate and lever arm to deflect against the leaf-spring. A permanent magnet (3) attached to the lever arm and Hall effect sensor (4) mounted inside the display unit translate the angular motion of the target to an electrical signal. The signal from the Hall effect sensor is used by the electronic indicators to provide a flowrate display, adjustable setpoint switches or an analog flow signal.

The DPT series is available in bronze or stainless steel bodies from 3/8 inch through 3 inches. The target plate measuring system offers a very low head loss and is immune to problems caused by fluids with high solids content.



DPT Series Target Type Flowmeter

Specifications

Flow Range:
Liquids: 1.5-8 GPM through 225-500 GPM water

Accuracy: ±3% of full scale
Repeatability: ±1% of full scale

Straight Piping Requirements

Inlet: 10 X Diameter
Outlet: 5 X Diameter

Operating Temperature: -10 to 176°F

Maximum Pressure: 580 PSIG @ 70°F

Custom Calibrations: Can be calibrated for liquid density and viscosity

Wetted Materials

Bronze Versions: Bronze, 316-Ti stainless steel, buna-N, ceramic

Stainless Steel Versions: 316-Ti stainless steel, viton, ceramic

Displays and Controllers:

DPT-C: Compact LED display with switch and 4-20 mA flow transmitter

DPT-K: LED digital and bargraph display with 2 adjustable SPDT setpoint relays and 4-20mA flow transmitter



DPT-C Compact Electronics

Specifications DPT-C

- Programmable Functions:** Lockout code, switch logic, switch setpoint and hysteresis, dampening
- Input Power:** 24 VDC \pm 20%, 80 mA Max.
- Display:** 3 digit LED
- Switch Type:** PNP open collector
- Switch Rating:** 300 mA Max. short circuit protected
- Analog Output:** 4-20 mA, 3-wire $R_L=500$ Ohms Max.
- Housing:** 304 SS, NEMA 4X
- Electrical Connection:** Micro-DC, male, 5-pin plug

Specifications DPT-K

- Input Power:** 115 VAC
- Display:** 3-1/2 digit LED and bargraph 270°
- Relays:** 2 SPDT 5 amps @ 230 VAC
- Analog Output:** 4-20 mA, 4-wire, $R_L=500$ Ohms Max.
- Housing:** Epoxy coated aluminum, polycarbonate, NEMA 4X/IP 65
- Electrical Connection:** Cable gland, PG-13.5



DPT-K Display/Controller

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Ordering Codes For Liquid Flowmeters

Range GPM	Material		Fitting	Housing Styles	
	Bronze	Stainless Steel		Indication	Flow Direction
1.5-8 3-12.5	DPT-1107H DPT-1112H	DPT-1207H DPT-1212H	N3 = 3/8" NPT	C34P = Compact Electronic K442 = Digital & Bargraph	LT = Flow from left to right RT = Flow from right of left
1.5-8 3-18	DPT-1114H DPT-1122H	DPT-1214H DPT-1222H	N4 = 1/2" NPT		
1.7-15 5-25	DPT-1124H DPT-1132H	DPT-1224H DPT-1232H	N5 = 3/4" NPT		
5-20 20-35	DPT-1134H DPT-1142H	DPT-1234H DPT-1242H	N6 = 1" NPT		
15-45 25-60	DPT-1144H DPT-1152H	DPT-1244H DPT-1252H	N8 = 1-1/2" NPT		
25-120 40-200	DPT-1154H DPT-1162H	DPT-1254H DPT-1262H	N9 = 2" NPT		
175-400 225-500	DPT-1164H DPT-1172H	DPT-1264H DPT-1272H	NB = 3" NPT		
				Accessories: Mating Micro-DC connector with 6 ft. cable for indicator C34P - Part # 807.007	

Example: DPT-1164HNBC34PLT

Range GPM	Material Bronze	Material Stainless Steel	Fitting	Indication	Flow Direction

DIMENSIONS

**Compact Electronics
DPT...C**

Fitting	B	C	D
3/8" NPT	3.07"	27mm	5.43"
1/2" NPT	3.07"	27mm	5.43"
3/4" NPT	3.07"	41mm	5.43"
1" NPT	3.07"	41mm	5.43"
1-1/2" NPT	3.07"	55mm	6.10"
2" NPT	3.20"	70mm	6.18"
3" NPT	4.17"	100mm	6.85"

DPT...C Compact Electronics

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DIMENSIONS

Electronic Display/Controller DPT...K			
Fitting	A	B	C
3/8" NPT	7.32"	3.07"	27mm
1/2" NPT	7.32"	3.07"	27mm
3/4" NPT	7.32"	3.07"	41mm
1" NPT	7.32"	3.07"	41mm
1-1/2" NPT	8.0"	3.07"	55mm
2" NPT	8.0"	3.20"	70mm
3" NPT	8.74"	4.17"	100mm



<p>DPT Series Flowmeters Application Guide Form # DPT-001 Rev. 01/13</p> <p style="text-align: right;">FAX to: KOBOLD Instruments Inc. 412-788-4890 (USA) 514-428-8899 (Canada)</p>	<p>Customer Name: _____</p> <p>Company Name: _____</p> <p>Phone: _____</p> <p>Fax: _____</p>
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Quote #: _____ Date: _____ Price: _____ Each

Part Number: _____

* To ensure fast order processing, please retain the completed quote form and send it along with your purchase order.

Calibrated Measuring Range: _____

Design Conditions

Accurate design pressure and temperature are essential to ensure the flowmeter will be built to operate without damage. Please fill out accurately and completely.

List Design Conditions

- 1. **Pressure:** Maximum _____ PSIG
- 2. **Temperature:** Maximum _____ °F

Calibration Conditions: Accurate calibration conditions are required to ensure that the flowmeter will be factory calibrated to give accurate readings at the user's **normal operating conditions**. Please fill out accurately and completely.

Calibration Conditions for Liquid Flow Applications

- 1. **Type of Liquid:** _____
- 2. **Normal Operating Temperature:** _____ °F
- 3. **Viscosity at Normal Operating Temp:** _____
- 4. **Specific Gravity at Normal Operating Temp:** _____
- 5. **Desired Measuring Range and Units:** _____

Note: Items 3 & 4 not required for water flow

Flowmeter Options

- 1. **Body Material:** Bronze w/ Buna-N Seal 316 SS w/ Viton seal
- 2. **Desired Fitting Size:** 1/2" NPT 3/4" NPT 1" NPT 1-1/2" NPT 2" NPT 3" NPT
- 3. **Flow Direction:** Left to Right Right to Left

Indicator Options:

- 1. **Compact Electronics (DPT-C)**
 - 2 PNP switches 2 NPN switches
 - 4-20 mA + 1 PNP 4-20 mA + 1 NPN

2. **Digital & Bargraph Display/Controller (DPT-K)**

- Input Power (specify):** _____
- Output:** None 4-20 mA
- Relays:** None 2 SPDT relays