

## Compact Paddle Flow Sensor



measuring  
•  
monitoring  
•  
analyzing

DFT



- Measuring Ranges:  
0.05...0.50 to 0.8...15 GPM
- PTFE or Brass Bodies
- Pulse Output Standard
- Optional Analog Outputs, Digital Displays, Totalizer and Batch Controllers
- No Straight Run Requirements
- Can Be Mounted in Any Orientation
- Compact, Economical Design



KOBOLD companies worldwide:

Order from: **C A Briggs Company**

622 Mary Street; Suite 101; Warminster, PA 18974

Phone: 267-673-8117 - Fax: 267-673-8118

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## Compact Paddle Flow Sensor Model DFT

### Description

The DFT compact series of paddle flow sensors embodies the same rugged reliability of the workhorse DF series in a compact, more economical design. The DFT uses an inlet nozzle to re-direct flow onto the paddle thus there are no straight piping requirements as with many other paddle type designs. The DFT series is available in two material combinations to handle a wide variety of liquids. The nickel plated brass version handles water, light chemicals and low viscosity liquids (<10 cSt), while the PTFE version will stand up to aggressive chemicals. An open collector frequency output is standard with optional analog & controller outputs which offer an LCD displays, analog flow transmitters, programmable relays and totalizer & batch controller options.



### Specifications

<b>Flow Range:</b>	0.05...0.30 GPM to 0.5...12 GPM
<b>Accuracy:</b>	±2.5% of Full Scale
<b>Media:</b>	Water and Other Low Viscosity Liquids
<b>Maximum Pressure</b>	
<b>Brass Body:</b>	230 PSIG
<b>PTFE Body:</b>	70 PSIG
<b>Temperature Range:</b>	-4...176°F
<b>Wetted Materials</b>	
<b>Brass Body:</b>	Nickel-plated Brass, POM, NBR, Ceramic or Sapphire
<b>PTFE Body:</b>	PTFE, Ceramic or Sapphire

### Electrical Data

#### Pulse Output - Standard OEM

<b>Output Type:</b>	NPN Open Collector
<b>Frequency Range:</b>	0-100 Hz Approx.
<b>Power Supply:</b>	5-24 V <sub>DC</sub> , 15 mA Max. Sink Current
<b>Electrical Connection:</b>	DIN 43650 Plug, PG 11
<b>Electrical Protection:</b>	IP 65

#### Pulse Output - F400

<b>Output Type:</b>	PNP Open Collector
<b>Frequency Range:</b>	0-100 Hz Approx.
<b>Power Supply:</b>	24 V <sub>DC</sub> ±20%, Max. 20mA
<b>Electrical Connection:</b>	DIN 43650 Plug, PG 11
<b>Electrical Protection:</b>	IP 65

#### Analog Output - L443 & L442

<b>Power Supply:</b>	24 V <sub>DC</sub> ±20%
<b>Output:</b>	4-20 mA 3-wire or 2-wire
<b>Max Load:</b>	500 Ohms
<b>Electrical Connection:</b>	DIN 43650 Plug, PG 11
<b>Electrical Protection:</b>	IP 65

#### Analog Output - MA Electronic

<b>Power Supply:</b>	24 V <sub>DC</sub> , +15% / -10% 110 V <sub>AC</sub> , ±20%
<b>Output:</b>	4-20 mA or 0-10 V <sub>DC</sub>
<b>Max Load:</b>	500 Ohms
<b>Electrical Connection:</b>	1.5 m Cable Connection or Connector
<b>Electrical Protection:</b>	IP 65

#### Switching Output - WM Electronic

<b>Power Supply:</b>	24 V <sub>DC</sub> , +15% / -10% 110 V <sub>AC</sub> , ±20%
<b>Output:</b>	SPDT Contact Max. 250V / 5A
<b>Contact Resistance:</b>	< 100 mOhms
<b>Electrical Connection:</b>	1.5 m Cable Connection or Connector
<b>Electrical Protection:</b>	IP 65

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**Electrical Data (Continued)**

**Digital Rate Display - K Electronic**

**Display:** LCD, 8-digit Backlit Rate,  
Unit of Measure Selectable

**Power Supply:** 24 V<sub>DC</sub>, +15% / -10%

**Analog Output:** 4-20 mA or 0-10 V<sub>DC</sub>

**Max Load:** 500 Ohms

**Switching Output:** Min. and Max. SPDT Contact  
Max. 24 V / 2A

**Hysteresis:** 2.5% of Measured Value

**Electrical Connection:** 1.5 m Cable Connection

**Electrical Protection:** IP 65

**Totalizer Display - E Electronic**

**Display:** LCD, 2-line, 8-digit Backlit  
Rate, Total, & Grand Total  
Unit of Measure Selectable

**Analog Output:** 4-20mA  
Load: 0...500 Ohms or 0...10 V<sub>DC</sub>  
Load: > 100k Ohms

**Relay Outputs:** 2x, Max. 30V / 1.5A

**Functions:** Reset, MIN/MAX-memory, Flow  
Rate Switch-point, Total & Grand  
Total Switch-point, Language

**Power Supply:** 24 V<sub>DC</sub> ±20%  
Max. Sink Current 100 mA

**Electrical Connection:** 10-pin Cable or 2x M12 (5,8 Pin)

**Electrical Protection:** IP 65

**Batching Display - G Electronic**

**Display:** LCD, 2-line, 8-digit Backlit  
Rate, Total, & Grand Total  
Unit of Measure Selectable

**Analog Output:** 4-20mA  
Load: 0...500 Ohms or 0...10 V<sub>DC</sub>  
Load: > 100k Ohms

**Relay Outputs:** 2x, max. 30V / 1.5A

**Functions:** Batch (Relay 2), Start, Stop, Reset,  
Fine Batch, Correction Quantity,  
Flow Rate Switch, Flow Total  
Switch, Language

**Power Supply:** 24 V<sub>DC</sub> ±20%  
Max. Sink Current 100 mA

**Electrical Connection:** 10-pin Cable or 2x M12 (5,8 Pin)

**Electrical Protection:** IP 65

**Frequency/Pressure-loss Table**

Measuring Range (gal/min)	Brass Housing			PTFE Housing		
	Orifice (mm)	Frequency at Max. Flow	Pressure Loss at Max. Flow	Orifice (mm)	Frequency at Max. Flow	Pressure Loss at Max. Flow
0.05...0.50	2.0	approx. 70 Hz	11.6 PSI	2.0	approx. 80 Hz	10.15 PSI
0.13...1.8	4.3	approx. 85 Hz	8.7 PSI	4.3	approx. 95 Hz	7.25 PSI
0.26...4.0	5.9	approx. 130 Hz	11.6 PSI	5.9	approx. 140 Hz	10.5 PSI
0.5...9.5	9.0	approx. 130 Hz	11.6 PSI	9.0	approx. 120 Hz	13.0 PSI
0.8...15.0	13.5	approx. 85 Hz	11.6 PSI	13.5	approx. 80 Hz	13.0 PSI

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**Compact Paddle Flow Sensor Model DFT**

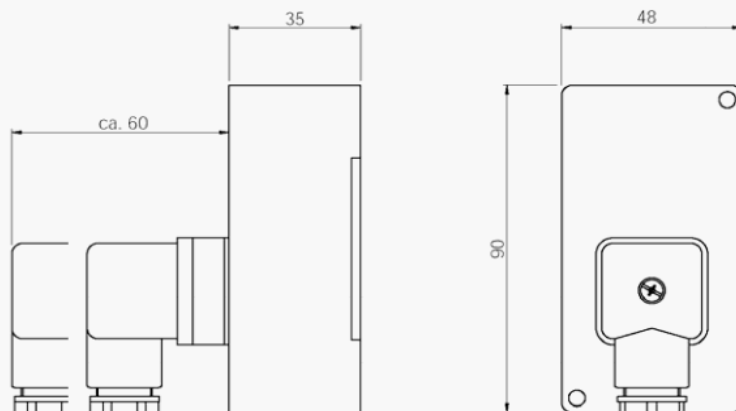
**Order Details** (Example: **DFT-3307N4L443**)

Measuring Range (GPM)	Model				Connection Female Thread
	Brass Housing Ceramic Axle	PTFE Housing Ceramic Axle	Brass Housing Sapphire Axle	PTFE Housing Sapphire Axle	
0.05...0.50	DFT-3103..	DFT-3303..	DFT-3603..	DFT-3803..	..N2.. = 1/4" NPT
0.13...1.8	DFT-3107..	DFT-3307..	DFT-3607..	DFT-3807..	..N4.. = 1/2" NPT
0.26...4.0	DFT-3116..	DFT-3316..	DFT-3616..	DFT-3816..	..G2.. = G 1/4 ..G4.. = G 1/2
0.5...9.5	DFT-3136..	DFT-3336..	DFT-3636..	DFT-3836..	..N4.. = 1/2" NPT ..N5.. = 3/4" NPT ..G4.. = G 1/2 ..G5.. = G 3/4
0.8...15.0	DFT-3160..	DFT-3360..	DFT-3660..	DFT-3860..	..N5.. = 3/4" NPT ..G5.. = G 3/4
<b>Output/Electronic Option</b>					
<b>OEM Frequency Output</b>					
...0000 = NPN, Connector DIN 43650					
<b>Frequency Output</b>					
...F400 = PNP, Connector DIN 43650					
<b>Analog Output</b>					
...L443 = Connector DIN 43650, 4-20 mA, 3-wire ...L442 = Connector DIN 43650, 4-20 mA, 2-wire					
<b>MA Electronic with Analog Output Option</b>					
..MK.. = 1.5 m Cable Connection		..1.. = 110 VAC		..4 = 4-20 mA	
..MG.. = Connector and Mating Connector		..3.. = 24 VDC		..1 = 0-10 V	
<b>WM Electronic with 1 Contact</b>					
..WK.. = 1.5 m Cable Connection		..1X = 110 VAC			
..WG.. = Connector and Mating Connector		..3X = 24 VDC			
<b>K Electronic (Display, MIN/MAX-Contact, Analog Output)</b>					
..KK.. = 1.5 m Cable Connection		..3.. = 24 VDC		..4 = 4-20 mA ..1 = 0-10 V	
<b>Totalizer Electronic/Batching Electronic</b>					
..E.. = Totalizer Electronic (2x SPDT)		..3.. = Plug 2x M12 / 24 VDC		..4R = 4-20 mA	
..G.. = Batching Electronic (2x SPDT)		..1.. = 1.5 m Cable / 24 VDC		..1R = 0-10 V	
<b>Accessories:</b> P/N 807.007 = 5-pin Micro-DC Connector with 6-foot Cable for Output Types E34R & G34R P/N 807.087 = 8-pin Micro-DC Connector with 6-foot Cable for Output Types E34R & G34R					

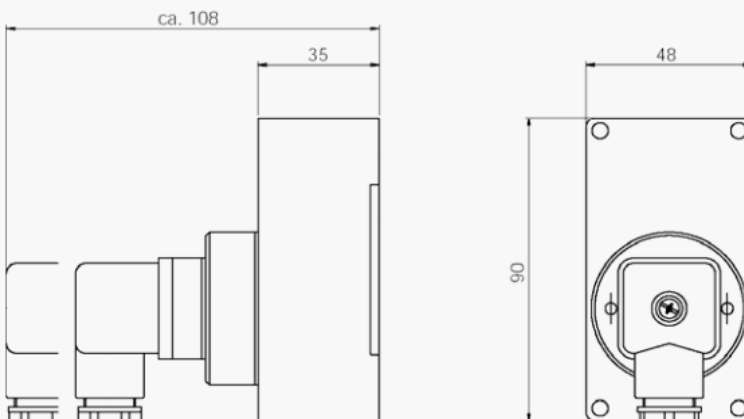
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Dimensions Brass (mm)

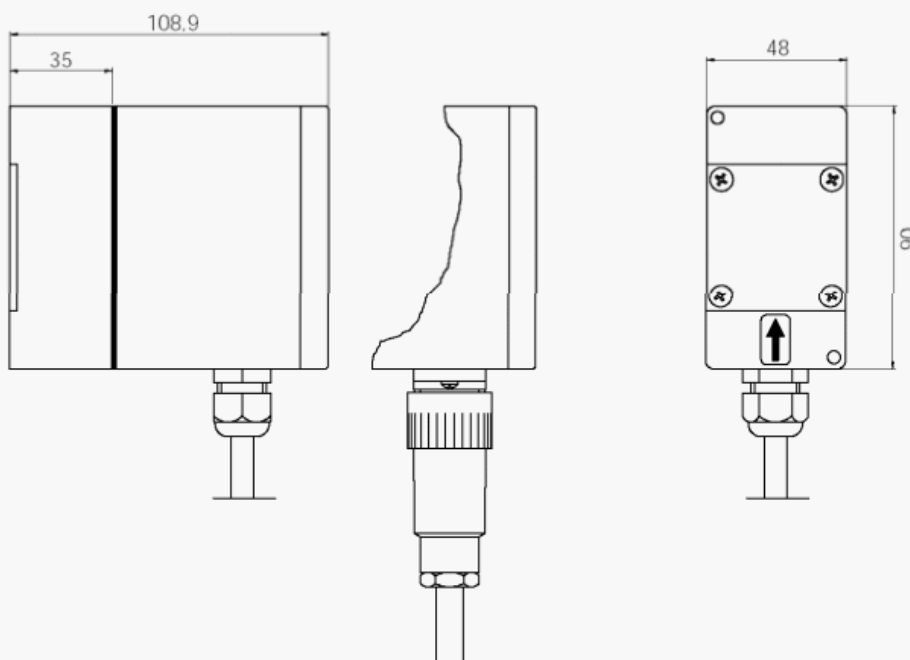
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DFT with MA/WM/K/E/G Electronics

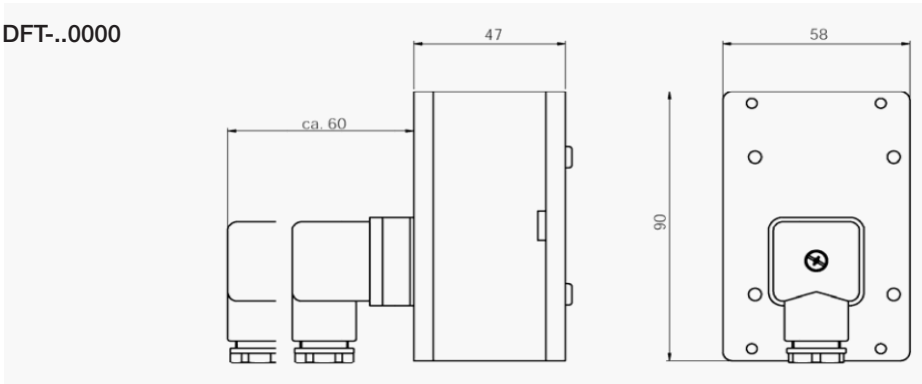




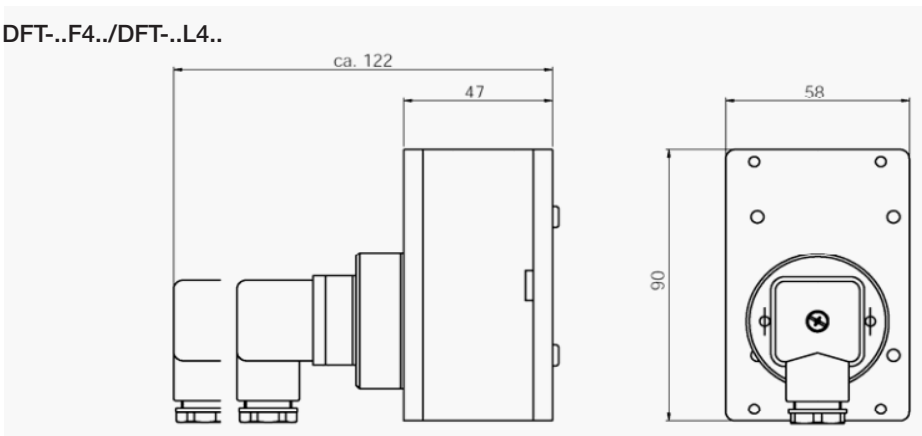
### Compact Paddle Flow Sensor Model DFT

#### Dimensions PTFE (mm)

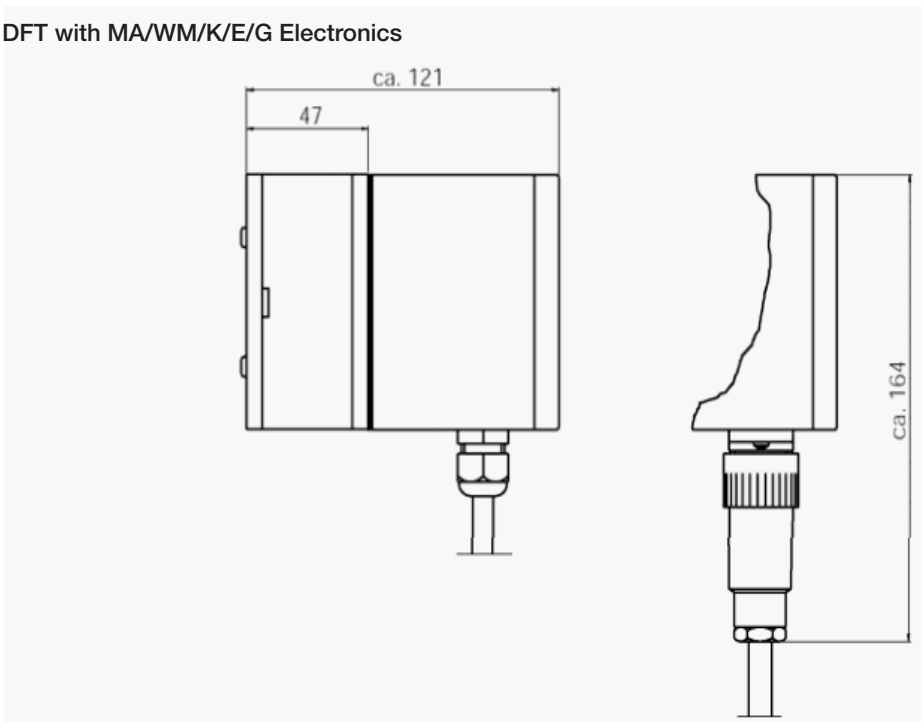
DFT-.0000



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