

# Activa™ Sensor Array

Simultaneously Measures Flow, Pressure and Temperature



- Four flow ranges
- Turbine flow measurement
- IFC converter with 4-20 mA or 0-5 VDC output for flow rate
- 4-20 mA output for temperature and pressure
- Pressures up to 5800 PSI (400 Bar)
- Temperatures up to 300 °F (150 °C)
- Available with SAE or BSPP ports
- Flow accuracy  $\pm 1\%$  of reading @ 32 cSt
- Repeatability  $\pm 0.2\%$

The Activa Sensor Array provides flow, temperature and pressure signals in a compact unit that requires only one hydraulic line break. Each sensor transmits an output signal that is easily integrated with PCs, PLCs, recorders or panel displays. Signals can also be transmitted to Flo-tech's F6700/F6750 Series digital displays.

Typical applications include fluid characteristic measurement on test stands, stationary hydraulic system monitoring, feedback for hydraulic system control, advance warning of impending component failure and mobile hydraulic system diagnosis.

## SPECIFICATIONS

### Performance

**Forward Flow Accuracy:**  $\pm 1\%$  of reading @ 32 cSt

**Repeatability:**  $\pm 0.2\%$

### Temperature<sup>1</sup>:

Fluid -4 to +300 °F (-20 to +150 °C)

Ambient -4 to +131 °F (-20 to +55 °C)

### Operating Pressure:

up to 5800 PSI (400 Bar) maximum

### Pressure Drop:

See  $\Delta P$  charts on page 24

### Readout Accuracy:

$\pm 1$  digit

### IFC Signal Converter:

#### Power:

#### F to I

Loop powered, 6V  
insertion loss max  
10 to 30 VDC supply range

#### F to V

10 to 26 VDC

#### Inputs:

Frequency

Magnetic Pick-up

Magnetic Pick-up

0 to 3500 Hz

0 to 3500 Hz

0 to 3500 Hz

Trigger Sensitivity

30 mV p-p

30 mV p-p

Frequency Measurement

Accuracy

$\pm 1\%$

$\pm 1\%$

#### Analog Output:

Resolution

4-20 mA current loop

0-5 VDC

1:4000

1:4000

1:4000

Temperature Drift

50 ppm / °C max

50 ppm / °C max

Response

1.6 seconds min

1.6 seconds min

#### Environmental:

Ambient Temperature

-22 to +158 °F

-22 to +158 °F

(-30 to +70 °C)

(-30 to +70 °C)

Humidity

0-90%,

0-90%,

non-condensing

non-condensing

### Pressure Sensor:

(optional)

See page 26 for complete specifications

### Temperature Sensor:

(optional)

See page 27 for complete specifications

## Material

### Housing:

6013-T651 Aluminum; anodized

### Turbine Rotor:

T416 Stainless steel

### Ball Bearings:

440C Stainless steel

### Rotor Shaft:

T303 Stainless steel

### Rotor Supports:

F6202 & F6222

6061-T6 Aluminum alloy

CA360 Brass

### Hub Cones:

F6204, F6206, F6208,

F6224, F6226 & F6228 only

6061-T6 Aluminum alloy

### Adapters:

6061-T6 Aluminum; anodized

### Retaining Rings:

6061-T6 Aluminum alloy

### Seals:

Buna N standard;

Viton® and EPR optional

### IFC (includes magnetic pick-up):

Pick-up Body

12L14 Steel; electroless nickel plate

Pick-up Nut

12L14 Steel; electroless nickel plate

IFC Case

6061-T6 Aluminum; nickel-plated

IFC Connector

Brass; nickel-plated

### Ports:

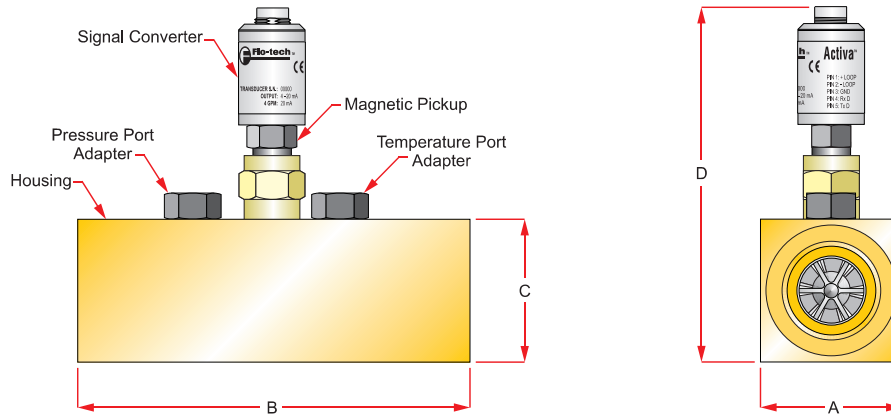
SAE J1926/1; ISO1179 (BSPP)

<sup>1</sup> When an optional pressure sensor is installed, the temperature range will be limited to the specifications for that device.

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## DIMENSIONS



MODEL	A WIDTH IN (mm)	B LENGTH IN (mm)	C HEIGHT IN (mm)	D w/IFC IN (mm)	WEIGHT LBS (KG)
F6202-A / F6222-A	1.23 (31.2)	4.72 (120.0)	1.47 (37.3)	5.18 (131.5)	1.60 (0.73)
F6204-A / F6224-A	1.48 (37.6)	5.08 (129.0)	1.80 (45.7)	5.46 (138.7)	1.90 (0.86)
F6206-A / F6226-A	1.98 (50.3)	5.87 (149.0)	2.20 (56.0)	6.07 (154.2)	2.80 (1.27)
F6208-A / F6228-A	2.46 (62.5)	6.81 (173.0)	2.48 (63.0)	6.37 (161.8)	4.20 (1.91)

## ORDERING INFORMATION

NOMINAL PORT SIZE	FLOW RANGE	MODEL NUMBER	FLOW TRANSDUCER	SEALS	TEMPERATURE	PRESSURE
SAE 8	0.4 - 7 GPM	F6202-A	<b>I</b> 4-20 mA Out (IFC) <b>V</b> 0-5 VDC Out (IFC)	<b>B</b> Buna N <b>V</b> Viton® <b>E</b> EPR	<b>T</b> with Sensor <b>N</b> 1/4 NPTF (F) Plugged <b>S</b> SAE 2 (J514) Plugged <b>G</b> G 1/4 (F) Plugged <b>D</b> SAE 4 Plugged	<b>1</b> 1000 PSI (69 Bar) Sensor <b>3</b> 3000 PSI (207 Bar) Sensor <b>5</b> 5000 PSI (345 Bar) Sensor <b>6</b> 6000 PSI (414 Bar) Sensor <sup>2</sup> <b>N</b> 1/4 NPTF (F) Plugged <b>S</b> SAE 2 (J514) Plugged <b>F</b> G 1/4 (F) Plugged
SAE 12	2 - 40 GPM	F6204-A				
SAE 16	4 - 80 GPM	F6206-A				
SAE 20	8 - 160 GPM	F6208-A				
G 1/4	1.5 - 26 LPM	F6222-A				
G 3/4	7.5 - 151 LPM	F6224-A				
G 1	15 - 302 LPM	F6226-A				
G 1-1/4	30 - 605 LPM	F6228-A				

<sup>2</sup> Not available with Models F6208 or F6228

Examples:

**F6204-AIB-T6** = SAE 12 ports  
 2 - 40 GPM flow range  
 4-20 mA output  
 Buna N seals  
 Temperature sensor  
 6000 PSI (414 Bar) pressure sensor

**F6228-AVV-G5** = G 1-1/4 ports  
 30 - 605 LPM flow range  
 0-5 VDC output  
 Viton® seals  
 G 1/4 (F) plugged temp port  
 5000 PSI (345 Bar) pressure sensor

## ACCESSORIES

MODEL NUMBER	DESCRIPTION
F001109	5-Point Calibration Certificate <sup>3</sup>
F001110	10-Point Calibration Certificate <sup>3</sup>

<sup>3</sup> Certificates are traceable to NIST, ISO 9001.

For information about	Refer to
Digital Displays	Form No. 549
Pressure Sensors	Page 26
Temperature Sensor	Page 27
Cables	Pages 28 & 29

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DEPENDABLE CUSTOMER SERVICE

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