

## RSA-TVW Paddlewheel Flow Transmitter



### Applications & Features

- For monitoring liquid flow rates in pipes from 1-1/2 to 40" , integral 4- 20 mA output
- Bearings and shaft offer excellent wear protection even in applications with particulate for long life
- One unit adjustable over a large pipe size range
- Sensor technology uses inductive sensing to sense the blades of the impeller therefore does not use magnets allowing low flow rate monitoring with no concerns regarding magnetic material in the flow

### Specifications

**Service:** Water-based fluids

**Range:** 1.2 to 25 ft/s (0.37 to 7.62 m/s)

**Wetted Materials:** Body and fitting: Brass; O-ring: FKM; impeller: 316 SS; shaft: Tungsten carbide; bearing: RSA-TVWE

**Linearity:**  $\pm 1.0\%$ FS

**Repeatability:**  $\pm 0.5\%$ FS

**Temperature Limits:** -40 to 212°F (-40 to 100°C)

**Pressure Limits:** 400 psig (27.6 bar) @ 100°F (37.8°C), 325 psig (22.4 bar) @ 212°F (100°C)

**Process Connection:** 1-1/2" NPT male, optional weldolet accessories

**Output:** 4-20 mA

**Power Requirement:** 10 to 35 VDC, 40 mA (max.)

**Electrical Connection:** 22 AWG shielded UL type PTLT rated 105°C, 20' (6.1 m) long with cable gland

**Enclosure Rating:** IP67

**Weight:** 3 lb (1.36 kg)

**Approvals:** CE

### Models

Model	Description
RSA-TVW	Paddlewheel Flow Transmitter , 4-20mA output

## RSA-TFIE Insertion Electromagnetic Flow Transmitter



### Applications and Features

- For various liquids flow measurement in 4" to 36" pipe
- Setup LCD display can field configure various applications with one model through multiple configurations i.e. pipe size/material, liquid type, analog/pulse/frequency/alarm/ communication outputs, damping, and calibration factor
- High accuracy in changing temperature, density or viscosity
- Simple setup wizard and installation tool for quick and precise installation
- No moving parts, durable, maintenance free and no fouling
- Optional isolation valve for hot-tap application

### Specifications

**Service:** Compatible non coating, conductive liquids

**Range:** 0-20 ft/s (0-6 m/s)

**Accuracy:** High accuracy:  $\pm 0.5\%$  of reading at calibrated velocity;  $\pm 1\%$  of reading from 2-20 ft/s (0.6-6 m/s);  $\pm 0.02$  ft/s ( $\pm 0.006$  m/s) at  $< 2$  ft/s (0.6 m/s). Standard accuracy:  $\pm 1\%$  FS **Applicable Pipe Size:** High accuracy: 4 to 10" (101 to 254 mm); Standard accuracy: 4 to 36" (101 to 914 mm)

**Diameter Length Requirements:**  $> 10$  upstream,  $> 5$  downstream

**Wetted Materials:** Body shaft/fitting: 316SS; Electrodes: 316SS;

Electrode cap: Polymer/Polystyrene; O-ring: Silicon. **Temperature Limits:** Ambient: -20-60°F (-29-71°C);

Process: 15-250°F (121°C); Storage: -40-185°F (-40-85°C)

**Process Connection:** 1" NPT, optional weldolet accessories

**Pressure Limits:** 400 psi (27.6 bar) @ 100° F (37.8°C) **Pressure Drop:**  $< 0.1$  psi at 12 ft/s in  $\geq 4$ " (101.6 mm) pipe **Outputs:** (1)

Analog: 4-20mA, 0-5V, 0-10V or 2-10V (display selectable); (2) Pulse/Frequency: 0-15V peak pulse, 0-500Hz or scalable pulse output (display selectable); (3) Alarm: (I) Empty pipe detection or minimum/maximum velocity, (display selectable); (II) Reverse flow output indication

**Power:** 12-42.4VDC, 25 A @ 24 VDC; 12-36VAC

**Electrical Connection:** Removable terminal blocks, PG 16

**Display (-LCD option):** large graphic LCD with backlight.

**Conductivity:**  $> 20$  microsiemens

**Enclosure Material:** Powder coated die cast aluminum **Enclosure**

**Ratings:** NEMA 6P (IP68) (Non display models); NEMA 4X (IP66) (-LCD option)

**Approvals:** BTL, CE, NSF/ANSI 61 and 372 pending

**COMMUNICATIONS (-COM OPTION):** BACnet MS/TP or

Modbus RTU protocol (default disabled, display selectable). Supported Baud Rates: 9600, 19200, 38400, 57600, 76800, or 115200 bps (display selectable). Device Load: 1/8 unit load.

### Models

Model	RSA-TFIE				Insertion Electromagnetic Flow Transmitter
Accuracy		H			High accuracy; 1% of reading
		S			Standard accuracy; 1% FS
Process Connection			N		1" NPT
Electrical Connector			P	G	PG 16 gland
Options				LCD	Integral LCD
				COM	BACnet or Modbus communication

### ACCESSORIES

Model	Description
RSA-TIEF-KIT	Setup kit (includes setup display, thickness gage and measuring tape)
RSA-TIEF-DS	Setup display
RSA-IEF-IVB	1-1/4" full port isolation valve brass