

ESRF-HF

Insertion Gas Flow Transmitters



ES Systems has developed ESRF-HF, a family of insertion gas flow transmitters, based on the hot-film anemometer principle for mass gas flow measurements.

The ESRF-HF is a family of mass flow transmitters which enable fast and accurate measurements of gas flow over a wide dynamic range. Each transmitter integrates a MEMS flow sensor and readout electronics inside a housing with very small form factor made from stainless steel. The duty pressure of the flow transmitter is 11bar. All measurement data are fully calibrated, and temperature compensated on board, leading to a reduced temperature coefficient and high measurement accuracy.

The standard system provides analog signal output, with excellent repeatability and hysteresis combined with good resolution. Calibration gas is air, but other non-aggressive gases can be also available upon request.

The compact size of the ESRF-HF flow transmitters combined with the ruggedized stainless-steel housing makes them ideal for use in industrial applications within confined spaces. For easier handling and mounting, a series of in-line pipe adaptors (Ø20, Ø25, Ø32) is also available upon request.



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ESRF-HF

Insertion Gas Flow Transmitters



Specifications

| | |
|--------------------------------|----------------------------------|
| Calibration Gas | Air, other available on request |
| Flow Range | Up to 1500 l/min, Unidirectional |
| Supply Voltage | 14 V to 32 V |
| Output | 4-20 mA |
| Accuracy | ± 2 RD + 0.3%FS |
| Total Error | ± 5 RD + 0.5%FS |
| Resolution | 12 bit |
| Output Update Rate | 10 Hz |
| Duty Pressure | 11 bar |
| Operating Temperature | -40°C ... + 85°C |
| Calibration Temperature | 0°C ... + 50°C |
| Humidity | 0% - 95% RH, Non - Condensing |
| Size (with Adapter) | W x L x H (mm) |
| DN20 | 36 x 68 x 40 (mm) |
| DN25 | 40 x 78 x 42.5 (mm) |
| DN32 | 48 x 88 x 46 (mm) |
| Pneumatic Interface | Ø20, Ø25, Ø32 |
| Electrical Interface | Cable |

Features

- Unidirectional operation
- High stability
- Wide dynamic range
- High duty pressure
- Excellent repeatability and hysteresis
- Low temperature coefficient
- Compact size

Ordering Information

ESRF-HF - NNNNNN - NN - NN - NN - NN

| | | | | | |
|-------------------|-------------------|--|--|--|--|
| Flow Range | FS (l/min) | | | | |
| 0100NL | 100 | | | | |
| 0150NL | 150 | | | | |
| 0250NL | 250 | | | | |
| 0300NL | 300 | | | | |
| 0500NL | 500 | | | | |
| 0600NL | 600 | | | | |
| 0700NL | 700 | | | | |
| 0800NL | 800 | | | | |
| 01000NL | 1000 | | | | |
| 01200NL | 1200 | | | | |
| 01500NL | 1500 | | | | |

| | | | | |
|-----------------------|--|------------|--|---------------|
| Directionality | | Gas | | Output |
| 01 Unidirectional | | 01 Air | | 01 4-20mA |
| | | 02 Other | | |

| |
|----------------|
| Adapter |
| 01 DN20 brass |
| 02 DN25 brass |
| 03 DN32 brass |



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