KURZ INSTRUMENTS INC.

In-Line Flow Meter

534FTB FOR EXCEPTIONAL ACCURACY

Kurz 534FTB in-line flow meters for industrial gas flow measurement are designed to eliminate the need for field fabrication and assembly of inlet and outlet piping sizes by providing accurate gas flow measurement under changing upstream and downstream flow profiles. Built-in reducers/expanders result in exceptional immunity to upstream and downstream flow disturbances caused by valves, bends, and short straight runs.

The patented design produces very low flow noise and provides exceptional accuracy and repeatability, and it supports a high turn-down ratio. Kurz thermal mass in-line flow meters deliver incredibly fast response to temperature and velocity changes.

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SPECIFICATIONS

- **Mass flow range**
  Up to 7,016 SCFM (10,944 NCMH)
  depending on model and calibration option
- **Flow accuracy** (SCFM at laboratory conditions)
  ± (1% of reading + (A x 20 SFPM))
  where A is the flow area of the 504FTB
- **0.25% reading repeatability**
- **Velocity time constant**
  1 second for velocity changes at
  6,000 SFPM (constant temp)
- **Process temperature time constant**
  8 seconds for temperature changes at
  6,000 SFPM (constant velocity)
- **Temperature accuracy**
  ± (0.5% of reading +1°C) for
  velocities above 100 SFPM
- **Electronics operating temperature**
  Integral display
  -13°F to 149°F (-25°C to 65°C)
  Remote aluminum display
  -40°F to 149°F (-40°C to 65°C)
  Remote polycarbonate display
  -13°F to 122°F (-25°C to 50°C)
- **Process pressure rating**
  Up to 300 PSIG (20 BARg)
- **Process temperature rating**
  -40°F to 257°F (-40°C to 125°C)

FEATURES

- **Aluminum (Type 4, IP66) dual-chamber polyester powder-coated enclosure**
- **Eight models available in pipe diameters from 1/2" to 8"**
- **Adjustable display/keypad orientation**
- **Integral or remote user interface**
- **Easy-to-use interface**
- **User-configurable flow display**
- **User-configurable English or metric units for mass flow rate, mass velocity, or process temperature**
- **Optically-isolated loop-powered 4-20 mA output**
- **Two optically isolated solid-state relays / alarms**
- **Built-in flow totalizers and elapsed time**
- **Configuration/data access via USB or RS-485 Modbus (ASCII or RTU)**
- **Patent US 7,418,878**
- **3-year warranty**

APPROVALS

- **EPA mandatory GHG certification**
  40 CFR 98.34(c)(1)
- **Alarm output conformity**
  NAMUR NE43
- **European Union CE compliance**
  EMC, LVD, PED, ROHS, and WEEE
- **CSA, ATEX & IECEx approvals for Nonincendive, Flameproof, and Explosion-proof**
  EN IEC 60079-0, EN IEC 60079-1
  EN IEC 60079-15, CSA Class I, Div. 1 and 2

OPTIONS

- **Enclosures**
  Aluminum or polycarbonate (remote only)
- **Multiple gas calibrations with up to five curves loaded in memory**
- **User-defined binary gas composition**
- **Communication protocols**
  HART (v7 FSK) and PROFIBUS DP
- **Hardware accessories**

Series 534FTB Benefits

The 534FTB is ideal for accurate high-pressure gas flow measurements, and includes the qualities and features found in all Kurz thermal mass flow meters.

- **Built-in flow conditioners to accommodate upstream and downstream flow disturbances**
- **Ideal for process and specialty gases**
- **Exceptional low end-to-end pressure drop**
- **Very low flow noise**
- **Sensors resistant to dirt and corrosion**
- **Wide turndown capability**
- **Zero velocity as a valid data point**

The Kurz Advantage

Kurz Instruments is dedicated to manufacturing and marketing the best thermal mass flow meters available and to support our customers in their efforts to improve their businesses.

In this effort, we provide:

- **The highest repeatability, accuracy, and reliability available**
- **The fastest response to temperature and velocity changes in the industry**
- **Continuous self-monitoring electronics that verify the integrity of sensor wiring and measurements**
- **Sensors that do not overheat at zero flow using a patented constant temperature control method and power limiting design**
- **Velocity-temperature mapping for wide ranging velocity and temperature**