KURZ INSTRUMENTS INC.

Insertion Flow Meter

K-BAR 454 FOR AUTOMATED MEASURING SYSTEMS(AMS)





TÜVRheinland CERTIFIED
Suitability Tested
EN 15267
QAL1 Certified
Regular
Surveillance
www.tuv.com
ID 0000040211

Several EU directives and national laws in European countries set requirements for continous monitoring of flue gas emissions at waste incinerators, power plants, cement plants, and other industrial plants. Quality Assurance Level 1 (QAL1), is a certification for automated measuring systems(AMS) used for continuous emissions monitoring. A QAL1 certificate, based on standards EN ISO EN 15267, EN ISO 16911-2 and EN 14181 verifies that the measuring equipment is suitable for its intended use.

The K-BAR 454 thermal mass flow meter is certified to QAL1. It provides excellent measurement capabilities for monitoring flow in stacks and ducts in combustion and emission applications.

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SPECIFICATIONS

- **Velocity range**
  0 to 6,440 SFPM (30 NMPS)
- **Velocity accuracy**
  ± (1% of reading +20 SFPM)
- **0.25% reading repeatability**
- **Velocity time constant**
  1 second for velocity changes at 6,000 SFPM (constant temperature)
- **Process temperature time constant**
  8 seconds for temperature changes at 6,000 SFPM (constant velocity)
- **Velocity angle sensitivity**
  <2% per degree angle up to ±20°
- **Electronics operating temperature**
  -40°F to 149°F (-40°C to 65°C)
- **Process pressure rating**
  Up to 150 PSIG (10 BARg)
- **Process temperature rating**
  -40°F to 500°F (-40°C to 260°C) (HT)
  -40°F to 932°F (-40°C to 500°C) (HHT)

FEATURES

- **Two Optically-isolated loop-powered 4-20 mA outputs**
- **One 4-20mA non-isolated analog input**
- **Two optically isolated solid-state relays / alarms**
- **Two digital inputs dedicated to purge and zero-mid-span drift check**
- **User-configurable digital filtering from 0 to 600 seconds**
- **Velocity-dependent correction factors for flow rate**
- **Built-in zero-mid-span drift check**
- **Built-in flow totalizers and elapsed time**
- **Configuration/data access via USB or RS-485 Modbus (ASCII or RTU)**
- **3-year warranty**

APPROVALS

- **Explosive Atmosphere Compliance**
  IEC / EN / UL / CSA C22.2 / 60079-0
  IEC / EN / UL / CSA C22.2 / 60079-7
  II 3 G, Ex ec IIC T4...T1 Gc
  Class I, Div. 2, Group A, B, C and D
- **EPA mandatory GHG certification**
  40 CFR 98.34(c)(1)
- **Alarm output conformity**
  NAMUR NE43
- **CE compliance**
  QAL1, EMC, LVD, PED, ROHS, WEEE

K-BAR 454 Benefits

The K-BAR 454 supports the effort to reduce maintenance, save money, improve data performance, and increase efficiency in combustion and emissions monitoring applications by including the qualities and features found in all Kurz thermal mass flow meters.

- **Easy installation and no maintenance**
- **Capable of reading the low flows that occur during start-up, shut-down, or obstruction events**
- **Sensors are resistant to dirt and corrosion**
- **Greenhouse gas emissions can be accurately reported**

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**