YQ-5401

Multi-channel orifice flow meter

Overview

The YQ-5401 multi-channel orifice flow meter is intended for multi-range flow and pressure calibration of sampling instruments and provides simulated flue-gas temperature. Applications listed in the source include flow calibration of VOC, ambient-air, medium-flow ambient particulate and portable dust samplers, as well as micro-pressure, gauge-pressure and selected PT100 temperature calibration.

Features



- Portable, compact design with low power consumption and low noise.

- Flow calibration: two 20-200 mL/min channels, two 0.2-2 L/min channels and one 5-120 L/min channel. A 200-1400 L/min high-flow option is listed.

- The source says three- or five-channel flow calibration can be selected and standard-condition and scale flow are automatically converted.

- Micro-pressure calibration: 0-2500 Pa; gauge pressure: -30.00 to +30.00 kPa.

- PT100 flue-temperature simulation: 0, 80, 100, 120, 200 and 500 °C.

- Integrated orifice plate avoids frequent plate changes; 5-inch capacitive touchscreen and an internal pressure sensor.

- Built-in battery: more than 6 hours of continuous operation is stated in the features.

- Bluetooth printing and USB export are described; up to 10000 sets of measurement-data files can be stored. See the configuration note below.

Technical specifications

Parameter	Range / value	Resolution	Accuracy
Channel A flow	20-200 mL/min	≤0.01 mL/min	Better than ±1.0%
Channel B flow	20-200 mL/min	≤0.01 L/min	Better than ±1.0%
Channel C flow	0.2-2 L/min	≤0.1 mL/min	Better than ±1.0%
Channel D flow	0.2-2 L/min	≤0.1 mL/min	Better than ±1.0%
Channel E flow	5-120 L/min	≤0.1 mL/min	Better than ±1.0%
Micro-pressure	0-2500 Pa	≤0.1 Pa	Better than ±1.0%
Gauge pressure	-30 to +30 kPa	≤0.01 kPa	Better than ±2.0%
Atmospheric pressure	50-130 kPa	≤0.01 kPa	Better than ±0.5 kPa
Ambient temperature	-40 to 85 °C	≤0.1 °C	Better than ±2 °C
Simulated flue-gas temperature	0, 80, 100, 120, 200, 500 °C	—	Better than ±1.0%
Operating temperature	-10 to +50 °C	—	—
Battery runtime	≥6 h	—	—
Battery	12 V / 2.6 Ah	—	—
Instrument weight	2.2 kg	—	—

Referenced standards

- JJG 640-2016 - Verification regulation for differential pressure flowmeters

- JJG 875-2005 - Verification regulation for digital pressure gauges

- HJ/T 368-2007 - Technical requirements and test methods for orifice flowmeters used to calibrate total suspended particulate samplers

Configuration

Standard	Main unit
Optional	Pressure generator / Medium-flow orifice assembly / Bluetooth printer

Source notes and verification

- Channel B resolution is printed as ≤0.01 L/min, unlike Channel A’s ≤0.01 mL/min. This difference is retained from the source and requires confirmation.

- The feature text describes a Bluetooth printer fitted to the instrument, while the configuration section lists it as optional. Both descriptions are retained; confirm actual configuration.

- The feature text also lists a 200-1400 L/min high-flow option; it is not shown in the illustrated optional configuration. Confirm availability and configuration.

- The specification table states battery runtime ≥6 h; the feature text says continuous operation for more than 6 hours. These source statements are retained separately.

- Standard identifiers and descriptions are translated from the supplied catalogue and have not been independently verified for accuracy or current status.

- English translation has not been reviewed by a native technical translator.