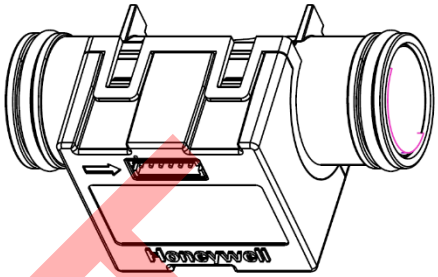
Honeywell

X115622-AF

Mass Flow Sensor



Key Features

- Fully flow calibrated and temperature compensated
- Both digital and analog output of flow
- Both digital and analog output of temperature as an optional
- High reliability and stability
- Local manufacturing and R&D team for safer supply chain and faster technical support

Product Description

The X115622-AF is designed based on the Honeywell new generation airflow sense die. The sensor provides both digital output and analog output for reading airflow over 0-160SLPM. The sensor is designed to measure mass flow of air.

The X115622-AF is fully calibrated, and temperature compensated over the specified flow range. The X115622-AF has a linearized flow output over the temperature range of 0°C to 60°C and operates across a temperature range of -20°C to 80°C. The sensor also has a linearized temperature output over the range of -20°C to 80°C(optional).

The sensor operates on the heat transfer principle to measure mass airflow. It provides the customer with enhanced reliability, high accuracy, repeatable measurements and the ability to customize sensor options to meet many specific application needs.

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Specifications

Units

Mass Flow rate	SLPM [1]

Operating Specifications

Supply voltage, Vsupply	5Vdc ±5%
Calibrated flow range	0 SLPM to 160 SLPM
Accuracy(flow) [2]	±3 %m.v.[3]
Null accuracy [4]	±0.05 SLPM TYP
Span shift due to temperature variation	±0.5 %m.v. per 10°C [5]
Calibration gas [6]	Clean, dry air.
Bus standards	I^2C, fast mode (up to 400 kHz)
I2C address	0x48 (other available)
Resolution	16bits [7]
Warm-up time [8]	50ms
Response time [9]	1ms

Environmental Specifications

Operating temperature range	-20°C to 80°C
Calibration temperature range [10]	0°C to 60°C
Operating humidity range	0% to 95% RH, non-condensing
Storage temperature range	-40°C to 85°C

Materials

Wetted materials	glass reinforced (GR) thermoplastic polymer, gold, silicon, silicon nitride, epoxy, NBR
Compliant with	RoHS

Note 1 – Standard for mass flow rate units is SLPM, which has reference conditions of 0° C and 1 atm.

Note 2 – Accuracy is the maximum deviation in output from nominal over the entire calibrated flow range at 25 ºC. Errors include Offset, Full Scale Span, Linearity, Flow Hysteresis, and Repeatability.

Note 3 – Measured value.

Note 4 – Null Accuracy is the maximum deviation in output from nominal at null flow over the entire calibrated temperature range.

Note 5 – Span shift due to temperature over the calibrated temperature range.

Note 6 – Contact Honeywell for requirements with other custom gases for calibration.

Note 7 – Honeywell HAF2xxx Series use a very high performance MCU with 24bits ADC.

Note 8 – Warm-up time: time to the first valid flow measurement after power is applied.

Note 9 – Response time: time to electrically respond to any mass flow change at the microbridge airflow transducer (response time of the transducer may be affected by the pneumatic interface).

Note 10 – Custom and extended calibrated temperature ranges are possible. Contact Honeywell for details.

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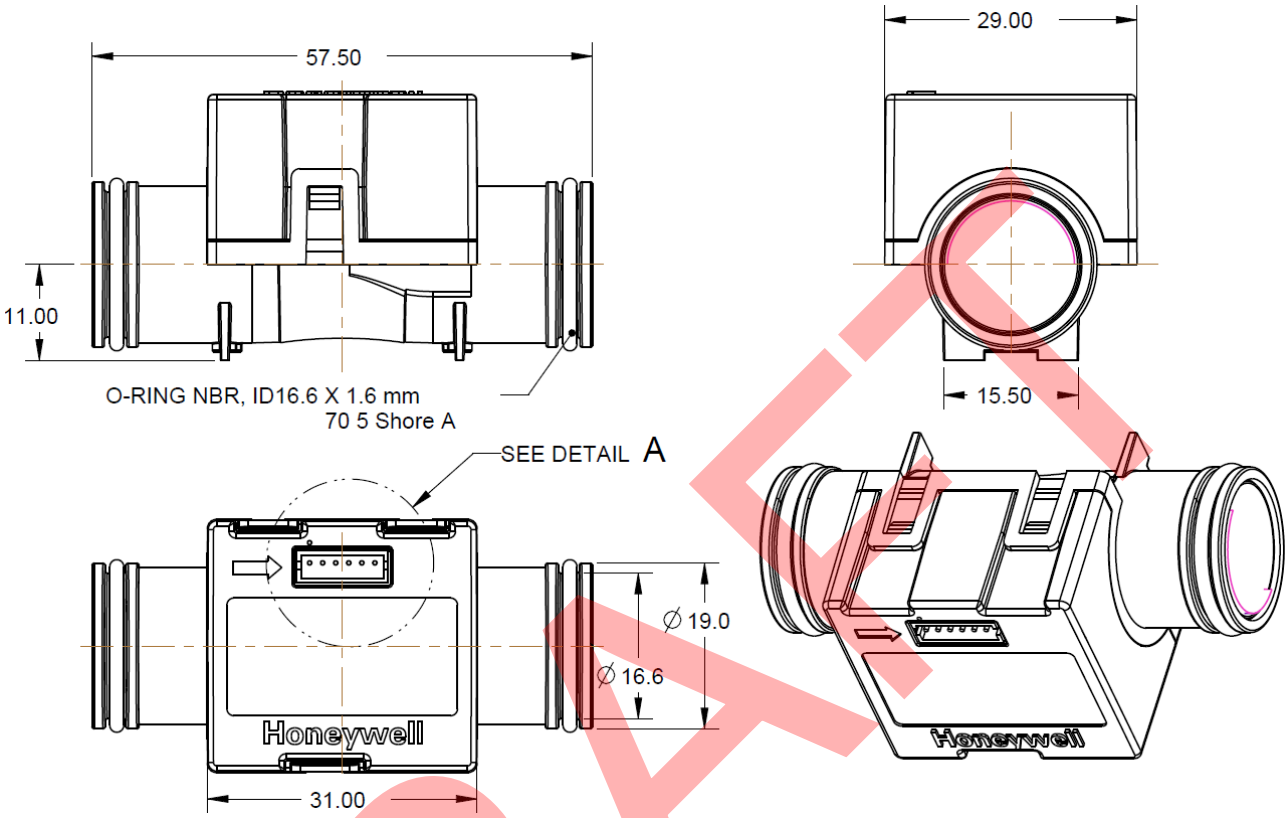
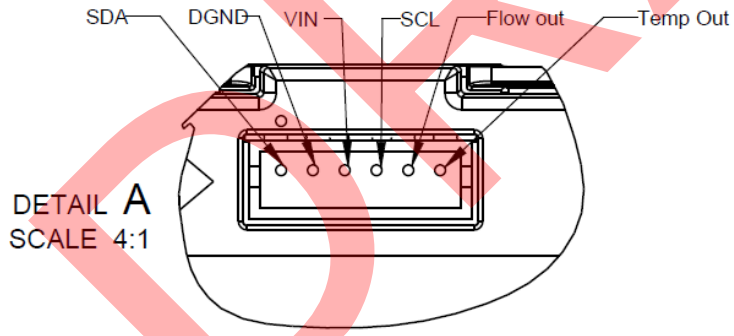
Product Outline Dimensions and Connector Pin Definition





Name	Description
SCL	I^2C SCL
SDA	I^2C SDA
Temp Out	TBD
Flow Out	V(flow out)
DGND	GND
VIN	Vs+

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This is described an unreleased product.
All Specifications are subject to change
without notice