

F-106AX

EX-FLOW F-106AX

Ex-Protected Mass Flow Meter for High Gas Flow

- ATEX approval Cat.2, Zone 1
- Also IECEx, TIIS and KCs certified
- High accuracy, excellent repeatability
- Virtually pressure and temperature independent
- "Wafer type" for mounting between flanges (DN40 / 1½")



Intrinsically Safe Gas Mass Flow Meters for high flow rates

Bronkhorst® EX-FLOW Mass Flow Meters (MFMs) are suited for precise gas flow measurement in ATEX Zone 1 hazardous areas. The MFM should be connected to a power supply with galvanic isolation / preamplifier / readout system (located in the safe zone). See Bronkhorst® [E-8000 Series](#).

EX-FLOW model F-106AX covers flow ranges from 0,4...20 m³_n/h up to 4...200 m³_n/h (N₂-equivalent) at operating pressures up to 40 bar.

The intrinsically safe measuring head of the flow meter is tested according to ATEX 114 Directive 2014/34/EU and approved under EC-Type Examination Number: KEMA 01ATEX1172, protection II 2 G Ex ib IIC T4 Gb.

Other certifications: IECEx (IECEx DEK14.0060), TIIS (検・第TC21584号) and KCs = Ex ib IIC T4.

Technical specifications

Measurement / control system

Flow range (intermediate ranges available) min. 0,4...20 m³_n/h
max. 4...200 m³_n/h
(based on N₂)

Accuracy (incl. linearity) (based on actual calibration) ± 1 % FS

Repeatability < 0,2 % RD

Turndown ratio 1:50 (2...100%)

Time constant 5 sec.

Operating temperature -10 ... +70 °C

Temperature sensitivity zero: < 0,05% FS/°C; span: < 0,05% Rd/°C

Leak integrity, outboard tested < 2 x 10⁻⁹ mbar l/s He

Attitude sensitivity max. error at 90° off horizontal 0,2% FS at 1 bar, typical N₂

Warm-up time 30 min. for optimum accuracy
2 min. for accuracy ± 2% FS

Mechanical parts

Material (wetted parts)	Stainless steel 316L or comparable
Pressure rating (PN)	up to 40 bar abs (PN10, 16, 40); for hazardous gases such as O ₂ , H ₂ , etc. do not exceed operating pressure of 10 bar; for higher pressure select a flanged type MFM, series F-107/F-117.
Process connections	Wafer type, for mounting between flanges according to DIN DN40 or ANSI 1½"
Seals	standard: Viton®; options: EPDM, Kalrez® (FFKM)
Ingress protection	IP65

Electrical properties

Output signal	15 ... 20 mA (linear) Terminal connection, cable gland M16x1,5
I/O signals via PS/Readout (located in safe area)	analog: 0...5 Vdc, 0...10 Vdc, 0...20 mA, 4...20 mA; digital: RS232, PROFIBUS DP, DeviceNet™, Modbus RTU or ASCII, PROFINET, EtherCAT®, FLOW-BUS

Electrical connection

Ex-proof measuring head

Terminal connection, cable gland M16x1,5

Control valve options

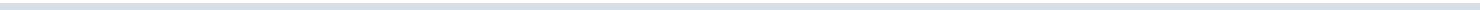
External actuator options to be connected to the controller

Ex-proof specifications

Approvals / certificates

Technical specifications subject to change without notice.

For dimensional drawings and hook-up diagrams please visit the [product page](#) on our [website](#)



Recommended accessories



E-8000 SERIES

Digital Readout / Control Systems

Bright, wide angle, 1.8" display (TFT technology)

User friendly operation, menu driven with 4 push buttons

Related products



EX-FLOW F-113AX

Flow ranges from 4...200 l/min up to 25...1250 l/min
Pressure rating 100 bar
ATEX approval Cat.2, Zone 1
Rugged IP65 construction



EX-FLOW F-116AX

Flow ranges from 0,4...20 m³/h up to 4...200 m³/h
Pressure rating 100 bar
ATEX approval Cat.2, Zone 1
Rugged IP65 construction



EX-FLOW F-107AX

Flow ranges from 0,4...20 m³/h up to 4...200 m³/h
Pressure rating up to 40 bar
ATEX approval Cat.2, Zone 1
Rugged IP65 construction



EX-FLOW F-106BX

Flow ranges from 1...50 m³/h up to 10...500 m³/h
Pressure rating up to 40 bar
ATEX approval Cat.2, Zone 1
Rugged IP65 construction



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