

# D-6361A-002BI

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## MASS-STREAM D-6361A/002BI MFC

Direct Thermal Mass Flow Controller for Gases, IP65 protected

- Proven direct inline CTA sensor (no bypass)
- Compact, rugged design (IP65, dust and waterproof)
- Less sensitivity to humidity or dirt
- Optional with integrated TFT display
- Very good price-performance ratio



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### Compact IP65 Mass Flow Controllers for medium flow rates of gases

Bronkhorst® model D-6361A/002BI Mass Flow Controllers (MFCs) are suited for precise measurement of flow ranges between 1...50 l/min and 10...500 l/min at operating pressures between vacuum and 20 bar. The MFC consists of a proven inline thermal (CTA) mass flow sensor, a precise control valve and a microprocessor based pc-board with signal and fieldbus conversion. As a function of a setpoint value, the flow controller swiftly adjusts the desired flow rate. The instrument is IP65 compliant and can optionally be equipped with a modern, multi-functional and multi-colour display, with operator buttons on the instrument.

The digital MASS-STREAM™ series is characterized by a high degree of signal integrity and, as an option, up to 8 calibration curves of different gases and process conditions can be memorized in the instrument. In addition to the standard RS232 output the instruments also offer analog I/O. As an option, an on-board interface can be mounted to provide CANopen®, DeviceNet™, PROFIBUS DP, PROFINET, Modbus or FLOW-BUS protocols.

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### Technical specifications

## Measurement / control system

Flow range (intermediate ranges available)	min. 1...50 l/min max. 10...500 l/min
Accuracy (incl. linearity) (based on actual calibration)	$\pm 1,0\%$ RD plus $\pm 0,5\%$ FS (at calibration conditions)
Repeatability	$< 0,2\%$ FS
Turndown ratio	1:50
Response time (sensor)	approx. 0,9 sec.
Settling time (in control, typical)	plus approx. 2 sec.
Control stability	$< 0,2\%$ FS typical
Operating temperature	10 50 °C
Temperature sensitivity	$\pm 0,2\%$ Rd/°C (Air)
Pressure sensitivity	$\pm 0,3\%$
Leak integrity, outboard	tested $< 2 \times 10^{-8}$ mbar l/s He
Attitude sensitivity	at 90° deviation from horizontal max. error 0,2 % at 1 bar typical N2
Warm-up time	30 min. for optimum accuracy, within 30 seconds for accuracy $\pm 4\%$ FS

## Mechanical parts

Pressure rating (PN)	20 bar g
Max. $\Delta P$	5 bar d
Process connections	G1/2" / compression type or face seal couplings
Seals	Teflon or stainless steel SS 316
Ingress protection	IP65

## Electrical properties

Power supply	+15 24 Vdc $\pm 10\%$			
Max. power consumption	Supply	Basic model	Add. for fieldbus	Add. for display
	15 V	300 mA	80 mA	30 mA
	24 V	200 mA	50 mA	20 mA
Analog output	0...5 (10) Vdc or 0 (4)...20 mA (sourcing output)			
Digital communication	standard: RS232 options: PROFIBUS DP, PROFINET, CANopen®, DeviceNet™, Modbus RTU or FLOW-BUS			

## Electrical connection

Analog/RS232	8 DIN (male);
PROFIBUS DP	bus: 5-pin M12 (female); power: 8 DIN (male)
CANopen® / DeviceNet™	5-pin M12 (male)
FLOW-BUS/Modbus-RTU/ASCII	5-pin M12 (male)

## Approvals / certificates

Environmental / EMC	Rd/bar typical (Air)
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Technical specifications subject to change without notice.

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

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## Recommended accessories



### PIPS SERIES

#### Plug-in Power Supply

For lab-style or industrial devices  
Interchangeable plugs (Euro, UK, USA,  
Australian, IEC) for mains connection

## Related products



**MASS-STREAM D-6341 MFC**

Min. flow 0,14...7 l/min  
Max. flow 1...50 l/min  
Pressure rating up to 20 bar  
Rugged sensor and housing (IP65)  
Optional integrated TFT display



**MASS-STREAM D-6360 MFM**

Min. flow 0,4...20 l/min  
Max. flow 2...200 l/min  
Pressure rating up to 20 bar  
Rugged sensor and housing (IP65)  
Optional integrated TFT display



**MASS-STREAM D-6361/FAS MFC**

Min. flow 0,4...20 l/min  
Max. flow 4...200 l/min  
Pressure rating up to 7 bar  
Rugged sensor and housing (IP65)  
Optional integrated TFT display



**BRONKHORST USA INC.**

57 South Commerce Way

Suite 120

USA - Bethlehem, PA 18017

Tel. +1-610-866-6750

[sales@bronkhorstusa.com](mailto:sales@bronkhorstusa.com)