EN

MASS-STREAM

D-6463/004BI

Direct Thermal Mass Flow Controller for Gases, IP65 protected

Bronkhorst®

Technical specifications

Measurement & control

Type of media	almost all gases and gas-mixes, compatible with chosen materials
Flow range	min. 0.4…20 l_n/min max. 4…200 l_n/min
Accuracy	±1.0% Rd plus ±0.5% FS (FS relates to the instrument max FS)
Repeatability	< ±0.2% FS
Turndown ratio	up to 1:50
Multi fluid capability	up to 8 calibration curves
Settling time (in control, typical)	< 5 sec.
Control stability	< 0.2% FS typical
Response time (sensor)	approx. 0.9 seconds
Operating temperature	0…+50°C
Temperature sensitivity	±0.1% Rd/°C (Air)
Leak integrity, outboard	< 2 x 10^{-8} mbar l/s He < 2 x 10^{-6} mbar l/s He (D-6471/DR3)
Pressure sensitivity	< ±0.3% Rd / bar typical (Air)
Max. Kv-value	0.1 … 1
Mounting	at 90° deviation from horizontal max. error 0.2% at 1 bar typical N2
Warm-up time	30 minutes
Storage/transport conditions	0...+50°C, max. 95% RH (non-condensing)

Approvals

Marking	CE, RoHS, WEEE, REACH

Mechanical specs

Pressure rating (PN) - in barg	10
Ingress protection	IP65
Material wetted parts	Body: Aluminium EN AW-6082-T6 (non-anodised) or stainless steel SS316; Sieves and rings: Teflon or stainless steel SS316
Sealing material	standard: FKM/Viton®; options: EPDM
Process connections	G1/2" (ISO1179-1 cavity) / compression type or face seal (VCR/VCO) couplings
Max. ΔP	5 bar(d)
Weight	Aluminum: 5.6 kg; Stainless steel: 5.9 kg

Electrical properties

Power supply	+15…24 Vdc ± 10 %
Power consumption	3.5 W typical at 24 V for fieldbus: add + 0.9 W for display: add + 0.5 W
Analog output	0…5 (10) Vdc or 0 (4)…20 mA (sourcing)
Analog setpoint	0…5 (10) Vdc or 0 (4)…20 mA (sinking)
Digital communication	standard: RS232 options: CANopen®, DeviceNet™, EtherCAT®, PROFIBUS DP, PROFINET, Modbus (RTU, ASCII or TCP/IP), EtherNet/IP, POWERLINK or FLOW-BUS

Electrical interfaces

Power (main connector)	8-pin DIN (male)
Function (instrument connector)	Analog, RS232, RS485
PROFIBUS DP	8-pin M12B (female)
CANopen / DeviceNet	5-pin M12A (male)
Modbus RTU/ASCII/FLOW-BUS	5-pin M12A (male)
Modbus TCP / EtherNet/IP / EtherCAT®/ PROFINET / POWERLINK	2x 4 pin M12D (female)

Last modified 01-12-2025.