

DATASHEET IQP-500C

IQ+FLOW IQP-500C

マイクロフルイディック圧カメータ



Microfluidic Pressure Meters

Bronkhorst® model IQP-500C Pressure Meters are miniature devices which are ideal for use in cramped environments or in systems requiring minimum internal volume e.g. desktop equipment. The Pressure Meter has a chip-based (MEMS) sensor and is suited for pressure ranges between 0,01...0,5 bar and 0,2...10 bar absolute or gauge. Communication with the devices can be either in analog mode or digital over RS232 or RS485.

The ultra compact IQ+FLOW instruments are typically recommended for integration in analytical, bioprocessing and medical equipment.

Technical specifications

Measurement / control system

Absolute pressure sensors	Code: 1K5AC (chip sensor) - Ranges (FS): 0,5 ... 1,5 bara - P-max: 3,0 bara Code: 3K0AC (chip sensor) - Ranges (FS): 1,0 ... 3,0 bara - P-max: 6,0 bara Code: 10KAC (chip sensor) - Ranges (FS): 3,0 ... 10 bara - P-max: 10 bara Code: 2K0AS (media-isolated) - Ranges (FS): 0,5 ... 2,0 bara - P-max: 3 bara Code: 6K0AS (media-isolated) - Ranges (FS): 2,0 ... 6,0 bara - P-max: 10 bara Code: 10KAS (media-isolated) - Ranges (FS): 3,0 ... 10 bara - P-max: 10 bara
Relative pressure sensors	Code: 1K5GC (chip sensor) - Ranges (FS): 0,5 ... 1,5 barg - P-max: 3,0 barg Code: 3K0GC (chip sensor) - Ranges (FS): 1,0 ... 3,0 barg - P-max: 6,0 barg Code: 10KGC (chip sensor) - Ranges (FS): 3,0 ... 10 barg - P-max: 10 barg Code: 0K6GS (media-isolated) - Ranges (FS): 0,2 ... 0,6 barg - P-max: 1 barg Code: 2K0GS (media-isolated) - Ranges (FS): 0,5 ... 2,0 barg - P-max: 3 barg Code: 6K0GS (media-isolated) - Ranges (FS): 2,0 ... 6,0 barg - P-max: 10 barg Code: 10KGS (media-isolated) - Ranges (FS): 3,0 ... 10 barg - P-max: 10 barg
Accuracy (incl. linearity and hysteresis)	$\leq \pm 0,5 \% \text{ FS}$ (Based on calibration at ambient temperature)
Repeatability	$\leq \pm 0,2 \% \text{ FS}$
Turndown ratio	1:50 (2...100%)
Fluids	Chip-sensor : dry, clean, non-flammable and non-corrosive gases. Absolute pressure sensors not suitable for Helium. Media-isolated sensor : Gases compatible with aluminium or stainless steel SS316L and Viton.
Response time (sensor)	$\tau_{95\%} 5 \text{ msec}$
Operating temperature	5 ... 50 °C
Temperature sensitivity	span: 0,1% RD/°C; zero: 0,05% FS/°C
Leak integrity, outboard	$1 \times 10^{-6} \text{ mbar-l/s He}$
Attitude sensitivity	negligible

Mechanical parts

Material (wetted parts)	body : aluminium or stainless steel SS316L; chip sensor (default) : Si, SiOx, epoxy, aluminium; media-isolated sensor (option) : stainless steel SS316L
Process connections	optional: 10-32 UNF threaded internal nut with 1/16" ferrule (SS316 or Peek), 1/16" or 1/8" OD compression type
Seals	standard: Viton®; other on request
Weight	100 g (Aluminium) / 160 g (SS316L)
Ingress protection	IP40

Electrical properties

Readout sample time	2 msec
Power supply	+15 ... 24 Vdc
Max. power consumption	50 mA
Analog output	0...5 (10) Vdc or 0 (4)...20 mA (sourcing output)
Digital communication	RS232, RS485 (Modbus-RTU/ASCII or FLOW-BUS)

Electrical connection

Power/Analog/RS232/RS485	RJ45 modular jack
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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

デジタル表示設定システム

明瞭、広角の1.8" TFTディスプレイ
4つのボタンによるユーザーフレンドリーな操作



PIPS SERIES

プラグイン電源 PiPS

ラボ用および一般工業用
交換可能な主電源用プラグ (欧州、英国、米国(日本向け)、豪州、IEC)

Related products



IQ+FLOW IQPD-500C

最小圧レンジ 1...50 kPa
最大圧レンジ 0.02...1 MPa
超小型、ダウンポート型
MEMS技術



IQ+FLOW IQP-600C EPC (P2-CONTROL)

最小圧レンジ 2.5...50 kPa
最大圧レンジ 0.05...1 MPa
超小型
MEMS技術



IQ+FLOW IQP-700C EPC (P1-CONTROL)

最小圧レンジ 10...50 kPa
最大圧レンジ 0.2...1 MPa
超小型
MEMS技術



IQ+FLOW IQF-200C MFC

最小流量レンジ 0.2...10 ml/min
最大流量レンジ 0.1...5 l/min
定格圧力 1 MPa
超小型
MEMS技術