

Datasheet F-001AI

IP65 control valve for gas flow applications

> Introduction

Bronkhorst designed the control valve model F-001AI for gas flow applications with low flow rates and pressure rating up to 64 bar. This control valve is directly operated by a magnetic coil with IP65 (weatherproof) housing and is closed when de-energized (Normally Closed). Depending on flow rate and fluid the F-001AI valve allows a pressure drop of max. 4 to 40 bar (d). Together with Bronkhorst mass flow meters it offers possibilities to constitute a compact flow or pressure control loop.

> Technical specifications

Operating conditions

Max. pressure : 64 bar abs
 Operating temperature : -10...+70°C

Mechanical parts

Material (wetted parts) : stainless steel 316L or comparable
 Process connections : compression type or face seal male
 Seals / Plunger : Viton; other on request
 Leak integrity, outboard : $1 \cdot 10^{-9}$ mbar.l/s He

Electrical specifications

Valve control signal : 0...185 mA
 Coil resistance : 60 Ohm
 Max. power consumption : 2,7 Watt (15 V · 0,185 A)
 Electrical connection : DIN 43650 connector
 Ingress protection : IP65

Kv-values vs Max. ΔP

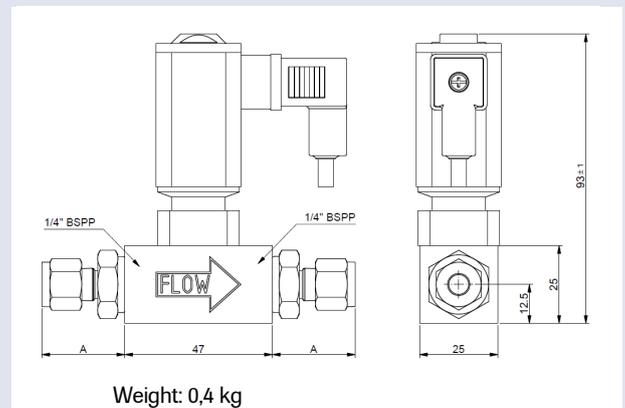
Kv-value (up to)	Orifice size (mm)	Coil type	ΔP max* (bar d)
4,3.10-5	0,05	IIIU	40
8,4.10-5	0,07	IIIU	30
1,7.10-4	0,10	IIIU	30
3,3.10-4	0,14	IIIU	30
6,9.10-4	0,20	IIIU	30
1,5.10-3	0,30	IIIU	30
2,3.10-3	0,37	IIIU	30
4,3.10-3	0,5	IIIU	30
8,4.10-3	0,7	IIIU	24
1,7.10-2	1,0	IIIU	12
2,9.10-2	1,3	IIIU	8
3,9.10-2	1,5	IIIU	6
5,0.10-2	1,7	IIIU	5
6,6.10-2	2,0	IIIU	4

* depending on flow rate (based on air)



Control Valve model F-001AI

> Dimensions (mm) and weight (kg)



Weight: 0,4 kg

Compression type	3/8" tube
	A
adapter 3mm OD	18.0mm
adapter 6mm OD	18.9mm
adapter 8mm OD	26.6mm
adapter 10mm OD	39.7mm
adapter 12mm OD	42.4mm
adapter 1/16" OD	15.6mm
adapter 1/8" OD	17.5mm
adapter 1/4" OD	18.9mm
adapter 3/8" OD	26.4mm
adapter 1/2" OD	42.2mm

Face-seal male	3/8" tube
	A
adapter 1/8" inlet	13.7mm
adapter 1/4" inlet	17.6mm
adapter 1/2" inlet	37.6mm

NOTE: Although all specifications in this datasheet are believed to be accurate, the right is reserved to make changes without notice or obligation.



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Model number identification

F - N N N A I - AAA - NN - A

