

Datasheet model F-021Ax

control valve for gas applications

> Introduction

Bronkhorst designed the control valve model F-021Ax for gas flow applications with low flow rates and pressure rating up to 200 bar. This control valve is directly operated by a magnetic coil with IP40 or IP65 (weatherproof) housing and is closed when de-energized (Normally Closed). The F-021Ax valve allows a pressure drop of max. 200 bar (d). Together with Bronkhorst mass flow meters it offers possibilities to constitute a compact flow or pressure control loop.



Control Valve model F-021Ax

> Technical specifications

Operating conditions

Max. pressure : 200 bar g
Operating temperature : 10...+70°C

Mechanical parts

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

Electrical specifications

Valve control signal : 0...185 mA
Coil resistance : IP40: 58.5 Ohm
IP65: 62 Ohm
Max. power consumption : 2,7 Watt (15 V · 0,185 A)
Ingress protection : IP40/IP65

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

Kv-values vs Max. ΔP

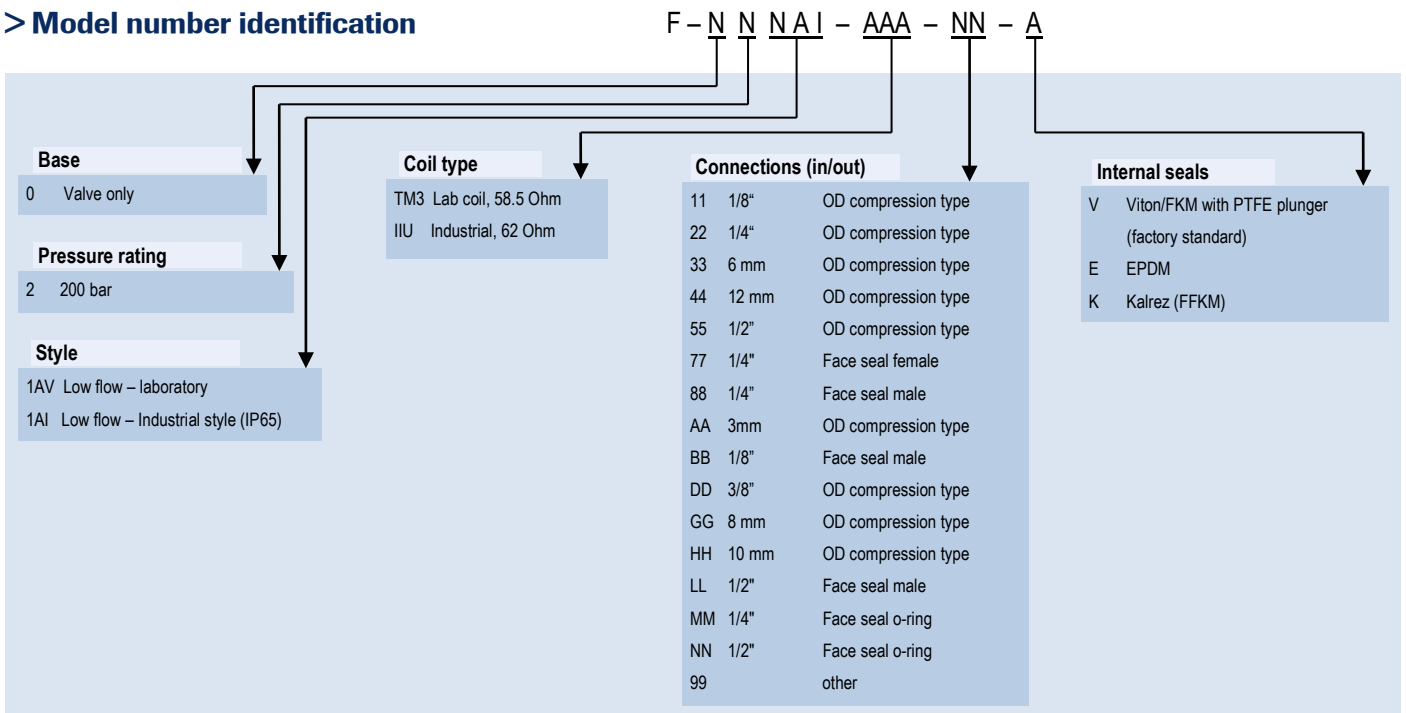
Kv-value (up to)	Orifice size (mm)	ΔP max (bar d)
4.3 · 10 ⁻⁵	0.05	200
6.4 · 10 ⁻⁵	0.07	200
1.7 · 10 ⁻⁴	0.10	200
3.3 · 10 ⁻⁴	0.14	200
6.9 · 10 ⁻⁴	0.20	200
1.5 · 10 ⁻³	0.30	200



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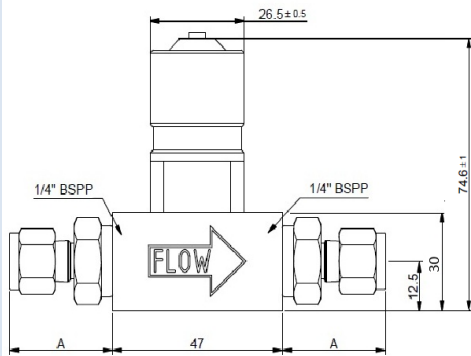
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> Model number identification



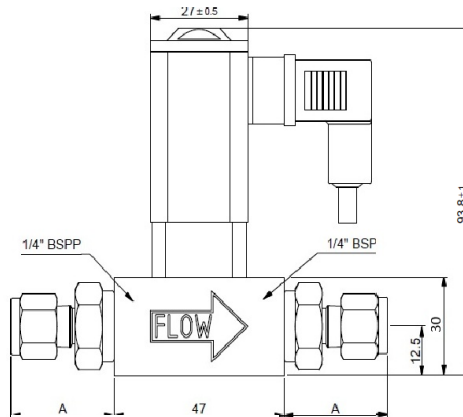
> Dimensions (mm) and weights (kg)

F-021AV



Weight 0.43 kg

F-021AI



Weight 0.53 kg

			A
adapter	3 mm	OD	26.1
adapter	6 mm	OD	28.4
adapter	8 mm	OD	29.4
adapter	10 mm	OD	30.2
adapter	12 mm	OD	32.5
adapter	1/8"	OD	26.1
adapter	1/4"	OD	28.4
adapter	3/8"	OD	29.9
adapter	1/2"	OD	32.7

			A
adapter	1/8"	Face seal male	19.3
adapter	1/4"	Face seal female	48.2
adapter	1/4"	Face seal male	23.4
adapter	1/4"	Face seal o-ring	19.8
adapter	1/2"	Face seal male	27.8
adapter	1/2"	Face seal o-ring	22.8