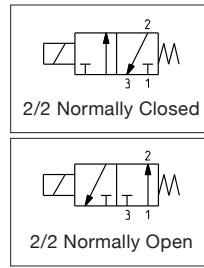


MINIATURE HIGH FLOW SOLENOID GENERAL SERVICE VALVES



- The 188 Series high flow solenoid valves are designed for use with air and inert gases
- High flow-rate capacity exceeds similarly sized products in the market
- Compact architecture and low power consumption make them ideal for portable medical devices
- LED visual indicator and electrical protection circuitry are standard features
- Meets all relevant CE directives, and is RoHS compliant
- Typical applications include:
 - Respiratory Therapy
 - Anesthesia Delivery
 - Dental
 - Industrial Gas Analyzers

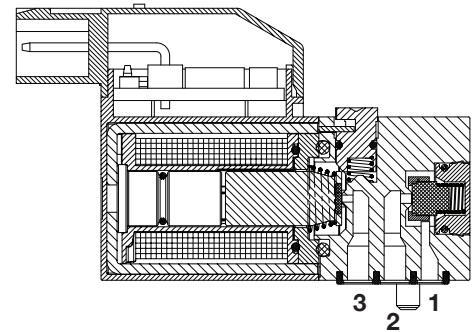


Fluids	Temperature Range	Seal Materials
Air or Inert Gas, non-lubricated ¹	5 °C to 50 °C (41 °F to 122 °F)	FKM

¹ filtered at 25 µm

NOTE: Additional constructions and options are available including alternate elastomers and orifice sizes. Minimum quantities apply.

General Valve Information	
Body	PBT (polybutylene terephthalate)
Seals	FKM (fluoroelastomer)
Others	Stainless steel, synthetic material
Response Time	< 10ms
Options	Oxygen clean available 300 Series Stainless Steel Body



2/2 NC or 2/2 NO Function
Pad Mount Body

Electrical Characteristics	
Standard Voltages*	12 VDC, 24 VDC (± 10%)
Power Consumption	1.3 - 3.2 W

* Other voltages on request

NOTE: The solenoid valves are designed for continuous operation within the maximum ambient temperature limits.

Insulation Class	Coil Insulation °C (°F)	Protection VA	Power Ratings ¹		Ambient Temperature Range °C (°F)	Electrical Connection
			Inrush W	Holding W		
F	155 (311)	IP40	3.2	1.3	5 to 50 (41 to 122)	X1, X2, X3, X4, X5 *see Electrical Connection Type

¹ The valves are provided with power save electronics and LED which switch to holding power after 100ms

*Electrical Connection Type

- X1 = Type 01, horizontal, distance between contacts 5.08mm (0.2in)
 - X2 = Type 02, vertical, distance between contacts 5.08mm (0.2in)
 - X3 = Type 03, horizontal, distance between contacts 2.54mm (0.1in)
 - X4 = Type 04, vertical, distance between contacts 2.54mm (0.1in)
 - X5 = Type 05, two leads 0.5m (19.7in) long, 0.25mm²
- Type 01, 02, 03, 04, 05 with LED, protection and power save electronics.

Specifications							
Orifice Size		Flow Coefficient		Pressure Differential bar (psi)		Consumption	Catalog Number
mm (inches)		Kv (m3/h)	Cv	min.	max.	W	
1 → 2	2 → 3				gases, liquids		
3/2 NC - Normally Closed							
1.0 (0.040)	1.0 (0.040)	0.12	0.14	0	10 (145)	1.3	R188B213xxV11xx
1.3 (0.051)	1.3 (0.051)	0.27	0.31	0	6 (87)	1.3	R188B214xxV11xx
1.6 (0.063)	1.6 (0.063)	0.39	0.45	0	3.5 (50.8)	1.3	R188B215xxV11xx
3/2 NO - Normally Open							
1.0 (0.040)	1.0 (0.040)	0.12	0.14	0	8 (116)	1.3	R188B223xxV11xx
1.3 (0.051)	1.3 (0.051)	0.27	0.31	0	4 (58)	1.3	R188B224xxV11xx
1.6 (0.063)	1.6 (0.063)	0.39	0.45	0	1.5 (21.8)	1.3	R188B225xxV11xx

How to Order

R 188 B 1 1 1 xx V 0 1 xx

Fluid Connection Type
R = Pad Mount

Product Series
188 = 188 Series

Coil Size & Power-Save
2 = 10mm (0.40in) with power-save

Valve Type
1 = 3/2 NC
2 = 3/2 NO

Valve Orifice
3 = 1.0mm (0.040in)
4 = 1.3mm (0.051in)
5 = 1.6mm (0.063in)

Voltage
F3 = 12 VDC
F1 = 24 VDC

Manual Override
1 = without manual override

Fastening Screws
0 = without screws
1 = with metric screws M1.7x12.5
2 = with self-tapping screws KB18x14

Sealing Material
V = FKM

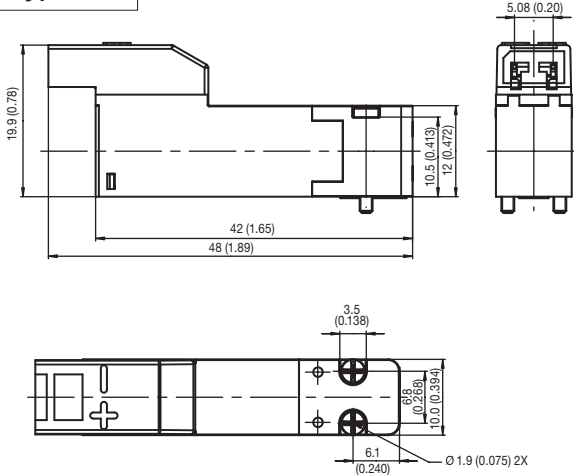
Electrical Connection Type
X1 = Type 01, horizontal 5.08mm (0.2in)
X2 = Type 02, vertical 5.08mm (0.2in)
X3 = Type 03, horizontal 2.54mm (0.1in)
X4 = Type 04, vertical 2.54mm (0.1in)
X5 = Type 05, 2 leads 0.5m (19.7in) x 0.25mm²

Ordering Example: **R188B213X1V11F1** = pad mount, 188 Series, Micro 10 Revision B (grey), with power-save, 3/2 NC, orifice 1.0mm (0.040in), Type 1, FKM, M1.7 x 12.5, without manual override, 24 VDC

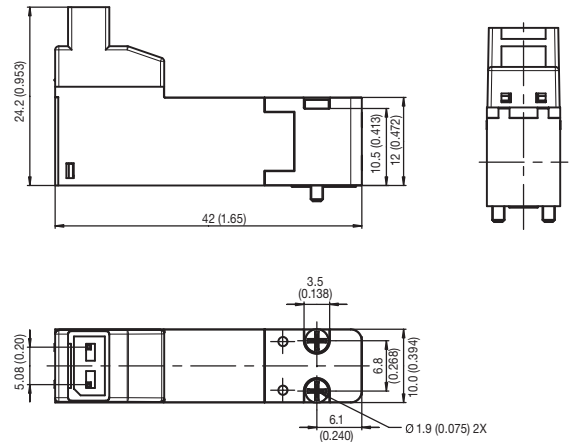
Dimensions: mm (inches)

Dimensional Drawings

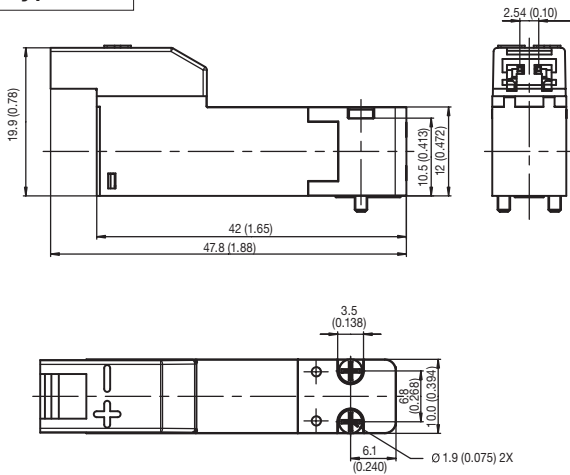
Type 01



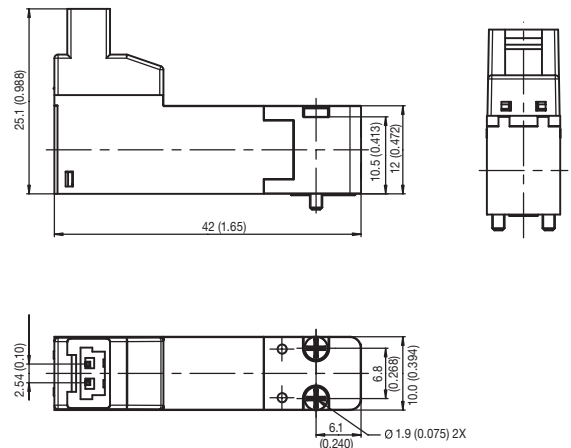
Type 02



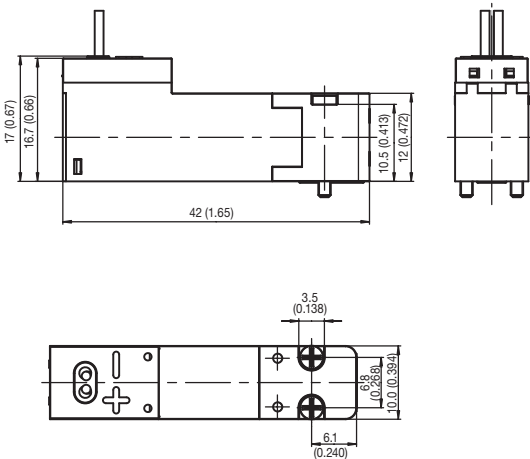
Type 03



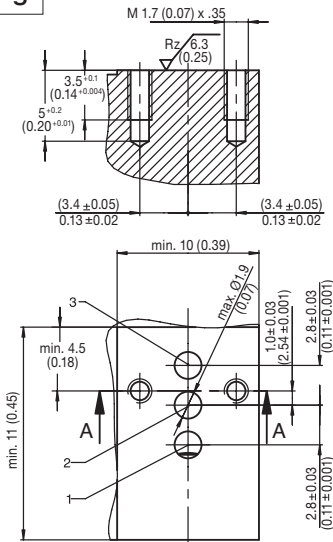
Type 04



Type 05



Flange Facing

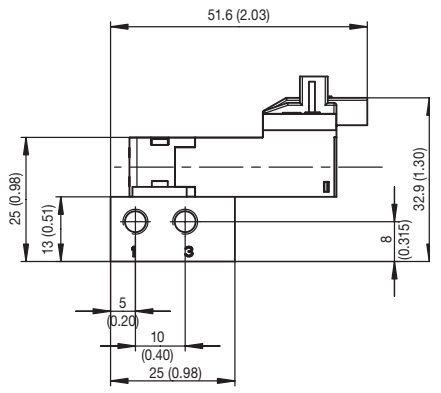
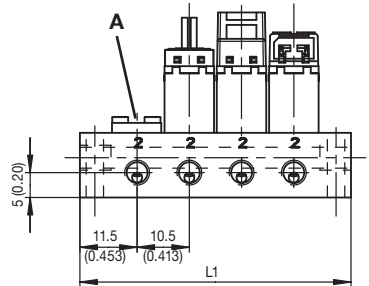
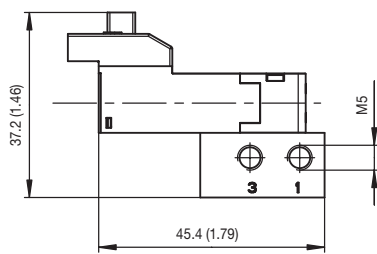
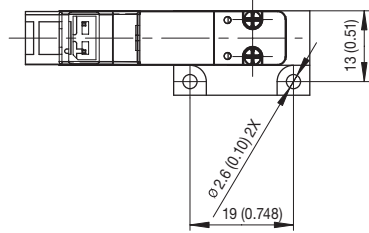
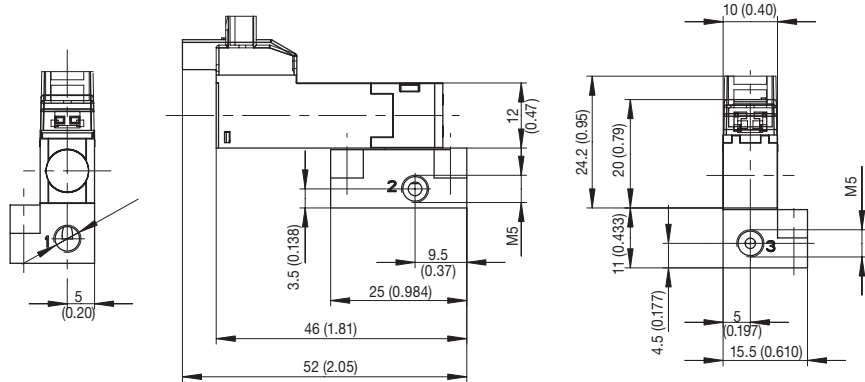


Dimensions: mm (inches)

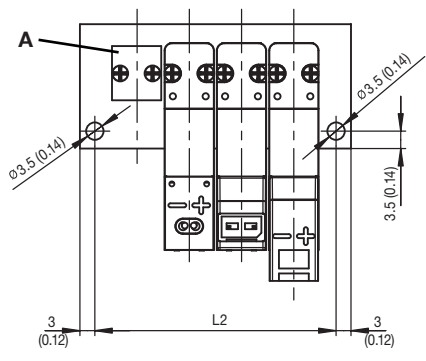
Dimensional Drawings

Solenoid Valve Mounted on Single Subbase

Number of Valves	Subbase Catalog Number	Weight
		kg
1	35300207	0.027



Number of Valves	Subbase Catalog Number*	Length	
		L1	L2
2	35300198	35.7 (1.41)	29.7 (1.17)
3	35300199	46.2 (1.82)	40.2 (1.58)
4	35300200	56.7 (2.23)	50.7 (2.00)
5	35300201	67.2 (2.65)	61.2 (2.41)
6	35300202	77.7 (3.06)	71.7 (2.82)
7	35300203	88.2 (3.47)	82.2 (3.24)
8	35300204	98.7 (3.89)	92.7 (3.65)
9	35300205	109.2 (4.30)	103.2 (4.06)
10	35300206	119.7 (4.71)	113.7 (4.48)



A : Blanking plate, cat. number 513697-001

* The connectors must be ordered separately, please indicate the quantity and one of the following codes:
Connector, 2 wires

Distance between contacts 5.08mm (0.20in)

- Length 0.5m (19.7in) - cat. no.: **88118801**
- Length 1.5m (59.1in) - cat. no.: **88118802**
- Length 3m (118.1in) - cat. no.: **88118803**

Distance between contacts 2.54mm (0.10in)

- Length 0.5m (19.7in) - cat. no.: **88118806**
- Length 1.5m (59.1in) - cat. no.: **88118807**
- Length 3m (118.1in) - cat. no.: **88118808**

