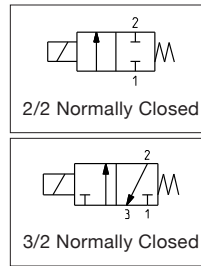


- The RB Series solenoid valves are designed for use with air and inert gases
- Highly customizable construction that is suitable for a wide variety of gas applications
- Compact light-weight architecture and low power consumption make them ideal for portable medical devices
- Exceptional service lifetime over 100 million cycles that increases OEM instrument reliability
- Meets all relevant CE directives, and is RoHS compliant
- Typical applications include:
  - Respiratory Therapy
  - Patient Monitoring
  - Compression Therapy (DVT)
  - Robotic Pharmacy Dispensing



| Fluids*                       | Temperature Range               | Seal Materials* |
|-------------------------------|---------------------------------|-----------------|
| Air or Inert Gas <sup>1</sup> | 0 °C to 60 °C (32 °F to 140 °F) | FKM             |
|                               |                                 | NBR             |

<sup>1</sup> filtered at 10µm

\* Ensure that the compatibility of the fluids in contact with the materials is verified

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

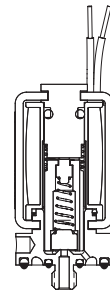
| General Valve Information |                     |
|---------------------------|---------------------|
| Body                      | PBT, brass          |
| Seals                     | NBR, FKM on request |
| Others                    | Stainless steel     |
| Response Time             | < 10ms              |
| Vacuum Rating             | -0.9 bar (13 psi)   |

| Electrical Characteristics |                       |
|----------------------------|-----------------------|
| Standard Voltages*         | 5 VDC, 12 VDC, 24 VDC |
| Power Consumption          | 0.5 to 2.0 W          |

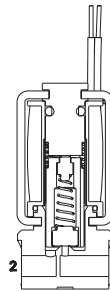
\* Other voltages on request

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

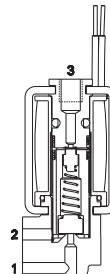
| Insulation Class | Coil Insulation | Protection      | Ambient Temperature Range | Electrical Connection                    |
|------------------|-----------------|-----------------|---------------------------|--|
|                  | °C (°F)         | VA              | °C (°F)                   |  |
| B                | 130 (266)       | IP30 (EN 60529) | 0 to 60 (32 to 140)       | Lead wires 26 AWG or circuit board mount |



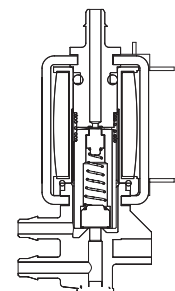
2/2 NC Manifold Mount



2/2 NC Line Mount



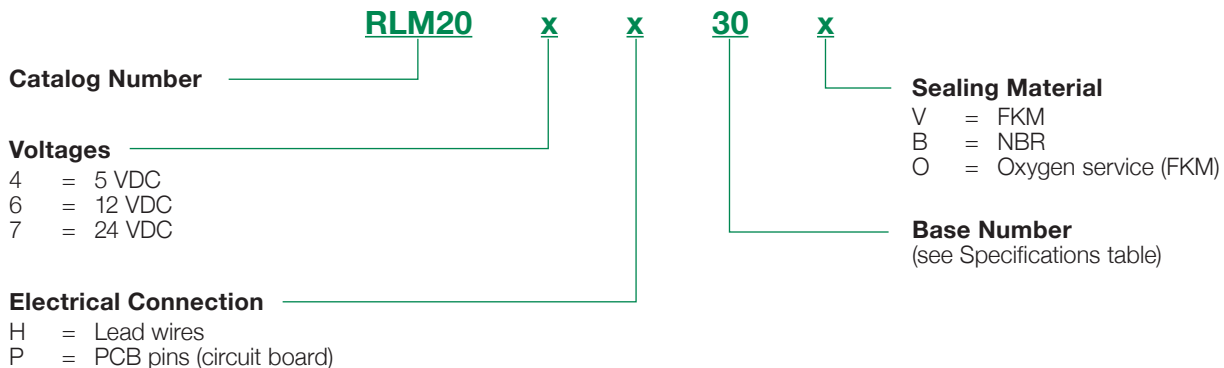
3/2 NC Pad Mount



3/2 NC Push-in Hose Connection

| Specifications                                  |              |                  |                        |                                 |           |                 |                |
|---|--------------|------------------|------------------------|---------------------------------|-----------|-----------------|----------------|
| Connection                                      | Orifice Size | Flow Coefficient |                        | Pressure Differential bar (psi) |           | Power Coil<br>W | Catalog Number |
|   |              | mm (inches)      | Kv (m <sup>3</sup> /h) | Cv                              | min.      |                 |                |
| <b>2/2 NC - Normally Closed</b>                 |              |                  |                        |                                 |           |                 |                |
| 10-32 UNF Stud Manifold Mount, Brass (M)        | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 3.4 (50)  | 0.5             | RLM20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHM20xx30x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 1.0 (15)  | 0.5             | RLM20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 3.4 (50)  | 1.0             | RMM20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHM20xx50x     |
|   | 2.00 (0.079) | 1.68             | 0.056                  | -0.9 (-13)                      | 1.0 (15)  | 2.0             | RHM20xx80x     |
| 10-32 UNF Female In-Line, Brass (L)             | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 3.4 (50)  | 0.5             | RLL20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHL20xx30x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 1.0 (15)  | 0.5             | RLL20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 3.4 (50)  | 1.0             | RML20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHL20xx50x     |
|   | 2.00 (0.079) | 1.68             | 0.056                  | -0.9 (-13)                      | 1.0 (15)  | 2.0             | RHL20xx80x     |
| 3.17mm (0.125in) Push-in Hose Connector PBT (B) | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 1.0 (15)  | 0.5             | RLB20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 3.4 (50)  | 1.0             | RMB20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHB20xx30x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 0.7 (10)  | 0.5             | RLB20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 2.4 (35)  | 1.0             | RMB20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 4.8 (70)  | 2.0             | RHB20xx50x     |
|   | 2.00 (0.079) | 1.68             | 0.056                  | -0.9 (-13)                      | 1.7 (25)  | 2.0             | RHB20xx80x     |
| Pad Mount, PBT (F)                              | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 1.0 (15)  | 0.5             | RLF20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 3.4 (50)  | 1.0             | RMF20xx30x     |
|   | 0.8 (0.031)  | 0.33             | 0.011                  | -0.9 (-13)                      | 6.9 (100) | 2.0             | RHF20xx30x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 0.7 (10)  | 0.5             | RLF20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 2.4 (35)  | 1.0             | RMF20xx50x     |
|   | 1.30 (0.051) | 0.99             | 0.033                  | -0.9 (-13)                      | 4.8 (70)  | 2.0             | RHF20xx50x     |
|   | 2.00 (0.079) | 1.68             | 0.056                  | -0.9 (-13)                      | 1.7 (25)  | 2.0             | RHF20xx80x     |

## How to Order



Ordering Example: **RLM204H30B** = 2-way (normally closed), 5 VDC, manifold mount with 0.8mm (0.031in) orifice, 0.5 Watt, lead wires, NBR seals

| Specifications  |              |             |                        |        |        |        |                                 |                        |                 |                |
|---|--------------|-------------|------------------------|--------|--------|--------|---------------------------------|------------------------|-----------------|----------------|
| Connection  | Orifice Size |             | Flow Coefficient       |        |        |        | Pressure Differential bar (psi) |                        | Power Coil<br>W | Catalog Number |
|   | mm (inches)  |             | Kv (m <sup>3</sup> /h) |        | Cv     |        | min.                            | max.<br>air, inert gas |                 |                |
|   | Port 1       | Port 3      | Port 1                 | Port 3 | Port 1 | Port 3 |                                 |                        |                 |                |
| <b>3/2 NC - Normally Closed</b>                       |              |             |                        |        |        |        |                                 |                        |                 |                |
| 10-32 UNF Stud<br>Manifold Mount,<br>Brass (M)        | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 3.4 (50)               | 0.5             | RLM3xxx34x     |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHM3xxx34x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 1.0 (15)               | 0.5             | RLM3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 3.4 (50)               | 1.0             | RMM3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHM3xxx55x     |
|   | 2.00 (0.079) | 1.3 (0.051) | 1.68                   | 0.87   | 0.056  | 0.029  | -0.9 (-13)                      | 1.7 (25)               | 2.0             | RHM3xxx85x     |
| 10-32 UNF Female<br>In-Line, Brass (L)                | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 3.4 (50)               | 0.5             | RL3xxx34x      |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHL3xxx34x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 1.0 (15)               | 0.5             | RL3xxx55x      |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 3.4 (50)               | 1.0             | RML3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHL3xxx55x     |
|   | 2.00 (0.079) | 1.3 (0.051) | 1.68                   | 0.87   | 0.056  | 0.029  | -0.9 (-13)                      | 1.7 (25)               | 2.0             | RHL3xxx85x     |
| 3.17mm (0.125in)<br>Push-in Hose<br>Connector PBT (B) | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 1.0 (15)               | 0.5             | RLB3xxx34x     |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 3.4 (50)               | 1.0             | RMB3xxx34x     |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHB3xxx34x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 0.7 (10)               | 0.5             | RLB3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 2.4 (35)               | 1.0             | RMB3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 4.8 (70)               | 2.0             | RHB3xxx55x     |
|   | 2.00 (0.079) | 1.3 (0.051) | 1.68                   | 0.87   | 0.056  | 0.029  | -0.9 (-13)                      | 1.7 (25)               | 2.0             | RHB3xxx85x     |
| Pad Mount, PBT (F)                                    | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 1.0 (15)               | 0.5             | RLF3xxx34x     |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 3.4 (50)               | 1.0             | RMF3xxx34x     |
|   | 0.8 (0.031)  | 1.0 (0.040) | 0.33                   | 0.33   | 0.011  | 0.018  | -0.9 (-13)                      | 6.9 (100)              | 2.0             | RHF3xxx34x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 0.7 (10)               | 0.5             | RLF3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 2.4 (35)               | 1.0             | RMF3xxx55x     |
|   | 1.30 (0.051) | 1.3 (0.051) | 0.99                   | 0.87   | 0.033  | 0.029  | -0.9 (-13)                      | 4.8 (70)               | 2.0             | RHF3xxx55x     |
|   | 2.00 (0.079) | 1.3 (0.051) | 1.68                   | 0.87   | 0.056  | 0.029  | -0.9 (-13)                      | 1.7 (25)               | 2.0             | RHF3xxx85x     |

## How to Order

**Catalog Number** RLM3 x x x 30 x

**Port 3 Style**  
 B = 3.2mm (0.125in) push-in hose connection  
 F = 10-32 UNF female

**Sealing Material**  
 V = FKM  
 B = NBR  
 O = Oxygen service (FKM)

**Base Number**  
 (see Specifications table)

**Electrical Connection**  
 H = Lead Wires  
 P = PCB pins (circuit board)

**Voltages**  
 4 = 5 VDC  
 6 = 12 VDC  
 7 = 24 VDC

Ordering Example: **RLM3B7P34V** = 3-way (normally closed), 24 VDC, port 3 with push-in hose connection, manifold mount with 0.8mm (0.031in) orifice, 0.5 Watt, PCB pins, FKM seals

## Options

- Other seal materials available on request
- Other voltages and electrical connections available
- Oxygen service
- Other pipe connections available on request

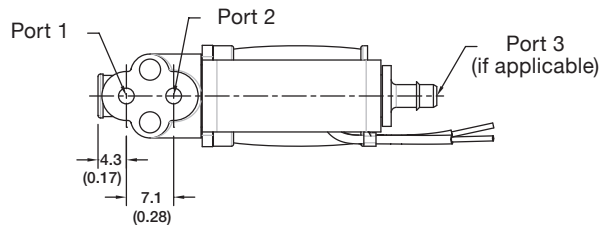
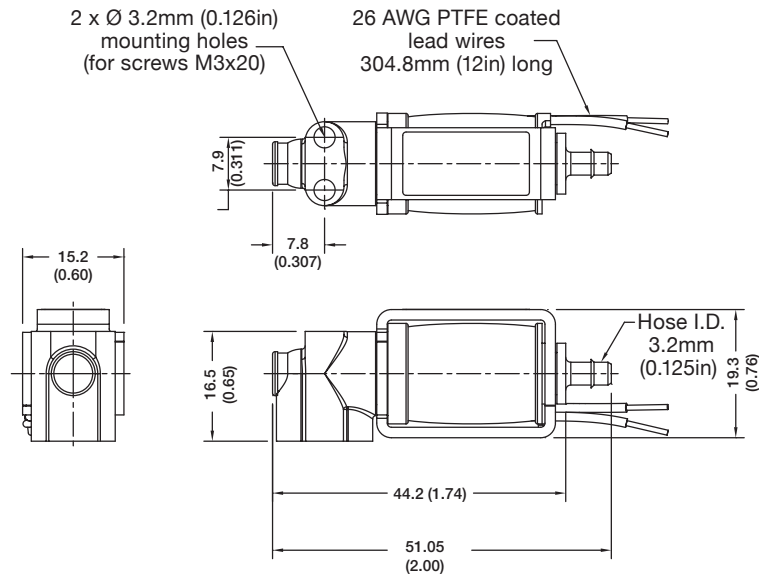
## Installation

- The solenoid valves can be mounted in any position without affecting operation
- Threaded solenoid valves have 2 mounting holes in body

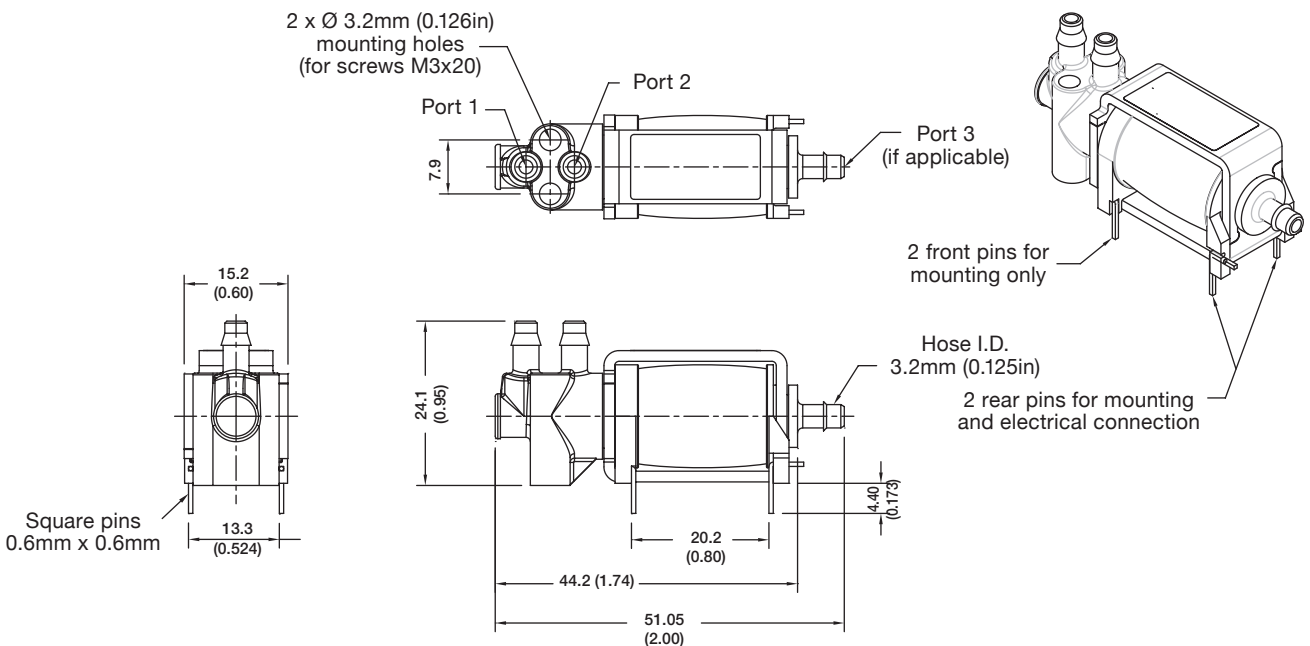
**Dimensions: mm (inches)**

**Dimensional Drawings**

**2- and 3-Way Pad Mount Solenoid Valve**



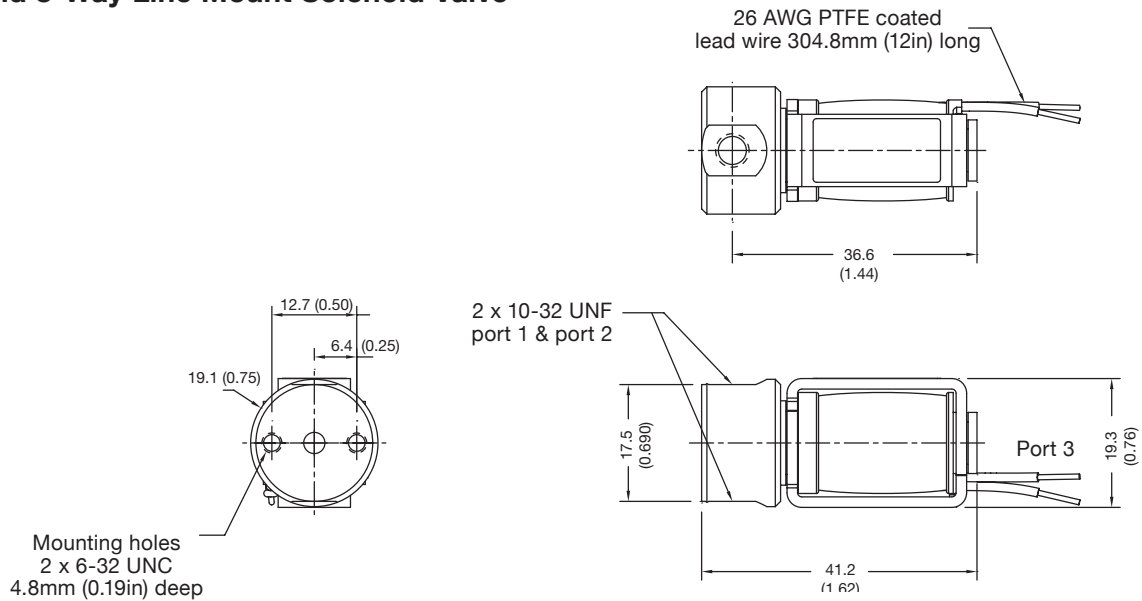
**2- and 3-Way Solenoid Valve with Push-in Hose Connection**



## Dimensions: mm (inches)

### Dimensional Drawings

#### 2- and 3-Way Line Mount Solenoid Valve



#### 2- and 3-Way Manifold Mount Solenoid Valve

