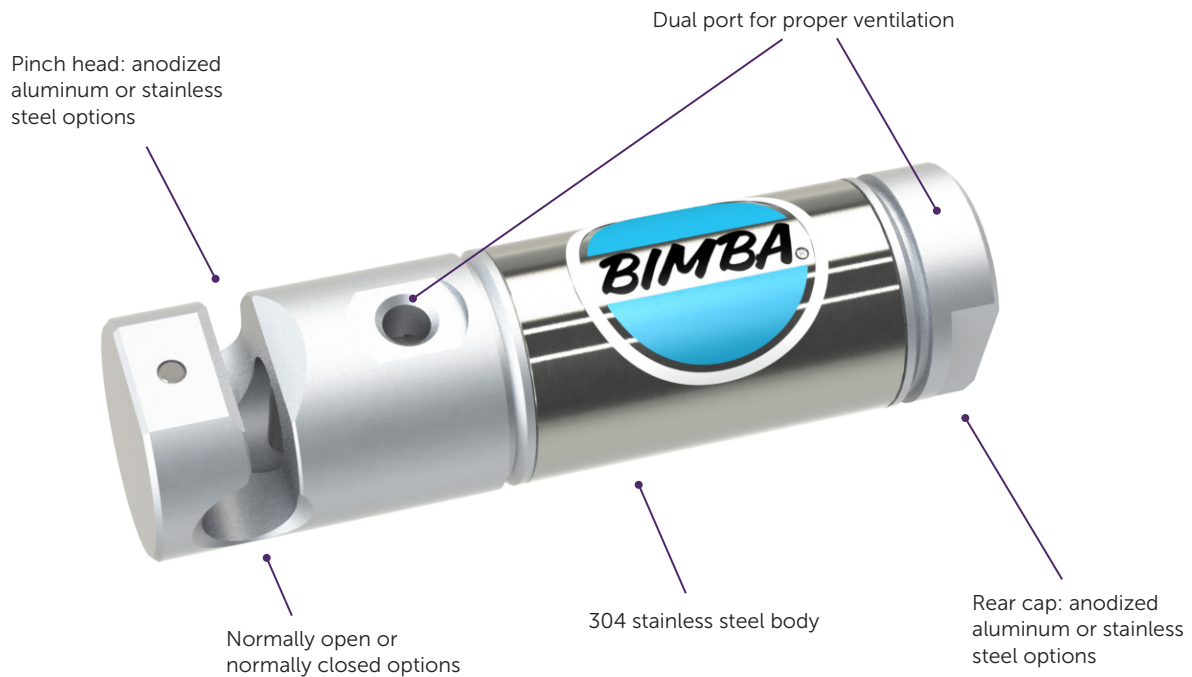


BPV Series Pneumatic Pinch Valves



Features and Benefits

- Compact in size allowing for placement in tight spaces
- Easy and fast tube replacement
- Long performance with a rated life expectancy of 3 million cycles
- Eliminates the potential chance for media contamination
- All stainless steel
 - Chemical resistance
 - Washdown compatible
 - Ideal for sterile environments
- Affordable, cost-effective solution with the ability to be configured:
 - Multiple tube slot sizes
 - Optional mounting brackets
 - Optional magnetic position sensing
 - Aluminum or stainless steel options
 - FKM seals, Buna, or FDA seals available

The BPV Series Pneumatic Pinch Valves are designed specifically to open and close tubing in order to control the flow of various forms of media. The tubing is squeezed at the middle of the valve, clamping or pinching its walls together to close the flow path. Our pinch valves are available in models that are either normally closed or normally open that will either stop the flow of fluid or allow the flow of fluid in an unpressurized state.



Materials of Construction

Pneumatic Pinch Valve

Pinch Head	Anodized Aluminum or Stainless Steel
Rear Cap	Anodized Aluminum or Stainless Steel
Body	Anodized Aluminum or Stainless Steel
Seals	Buna-N, optional FKM or FDA



Market Ideas

- Food and beverage applications
- Industrial industries
- Chemical processing
- Laboratories/medical devices
- Industrial painting
- Water treatment
- Dispensing, filling, and mixing: resin, glue, epoxy, adhesive, paint, slurries, and other media



Target Applications

The BPV Pneumatic Pinch Valves are uniquely suited for a wide range of applications where the control of fluid from normally closed to normally open is critical. This pinch valves series is ideal for industries where high quantities are necessary and unit price is critical.

- Medical and surgical industries
- Applications requiring linear flow
- Food and beverage
- 3D printing
- Powder feed
- Chromatography - analyzers

Advantages

Feature	Advantage	Benefit
Optional all stainless steel	Eliminates potential contamination of media	Ideal for sterile and washdown applications
Lightweight, compactness	Easily installs in confined spaces or where limited space is available	Easy access to install or replace unit as needed
Affordable	Reduce overall valve costs	Save money and time
Precision and accuracy	Instantly seals or opens	Controls the fluid whereas other solutions may take longer to act or retain dead volumes within
Easy snap-in tube slot	Avoid downtime and saves time	Quick unloading and loading procedures without the entire system going down

Specifications

Key specification information for the BPV Series Pneumatic Pinch Valves is given below. For additional specification information, contact IMI Bimba Customer Service at [cs@IMI Bimba.com](mailto:cs@IMI-Bimba.com), or 800.44.IMI Bimba (800.442.4622).

Detail Specifications

Compliance	RoHS and Reach
Supply Pressure	50 psi minimum; 125 psi maximum
Noise Level	65 dB(A) maximum

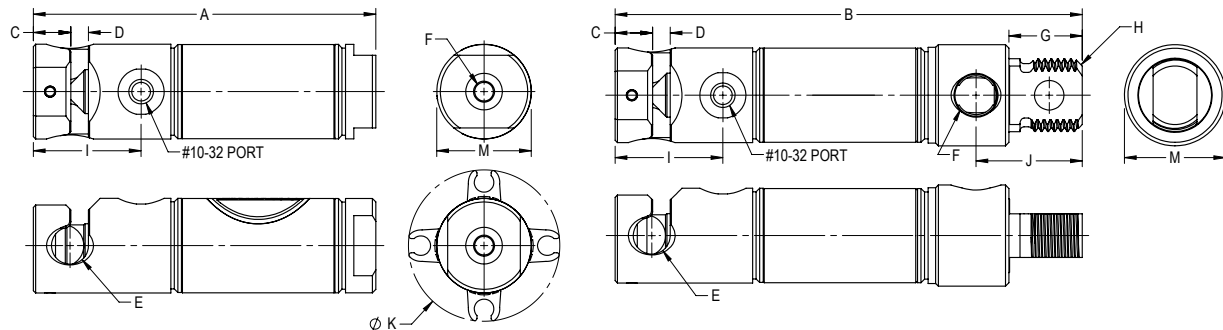
Specifications

Model Number	02	04	06	08
Tube Size, O.D. Supported - Inch (mm)*	0.094 to 0.125 (2.36 to 3.17)	0.156 to 0.250 (4.78 to 6.35)	0.250 to 0.375 (6.35 to 9.5)	0.375 to 0.500 (9.5 to 12.7)
Tube Wall Thickness Supported - Inch (mm)*	0.031 min. (0.78)	0.063 min. (1.6)	0.063 min. (1.6)	0.063 min. (1.6)
Media Pressure, Maximum - psig (barg)	30 (2.07)	30 (2.07)	30 (2.07)	30 (2.07)
Recommended Tubing Durometer**	Up to 65 Shore A	Up to 65 Shore A	Up to 65 Shore A	Up to 65 Shore A
Default (Normal) State	NC and NO	NC and NO	NC and NO	NC and NO
Pinch Gap - Inch (mm)	0.040 (1.016)	0.080 (2.032)	0.080 (2.032)	0.080 (2.032)
Total Opening Nominal - Inch (mm)	0.125 (3.2)	0.250 (6.4)	0.375 (9.5)	0.500 (12.7)
Pinching Force Nominal - LbF (kgF)	Up to 1.8 (0.82)	Up to 4.5 (2.04)	Up to 6.9 (3.13)	Up to 12.2 (5.53)
Min. to Max. Ambient Temperature - F° (C°)	-20° to 200°F (-29° to 90°C)	-20° to 200°F (-29° to 90°C)	-20° to 200°F (-29° to 90°C)	-20° to 200°F (-29° to 90°C)

*Other tubing wall thickness and diameters can potentially be used. Please contact factory with any questions.

**Tube material dependent

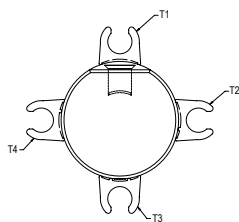
Dimensions



Bore	A	B	C	D	E	F	G	H*	I	J	K	M
02	2.418	2.887	0.258	0.07	0.188	#10-32	0.437	7/16-20	0.73	0.563	1.06	0.62
04	2.920	3.983	0.320	0.15	0.315	1/8 NPT	0.625	5/8-18	0.92	0.906	1.26	0.86
06	3.685	4.560	0.528	0.19	0.438	1/8 NPT	0.625	5/8-18	1.32	0.906	1.60	1.12
08	4.498	5.622	0.625	0.25	0.625	1/8 NPT	0.812	3/4-16	1.59	1.187	1.79	1.33

*Intended for use as a stud mount, pivot is not recommended.

When ordering T1, T2, T3, and T4 use the drawing below for track locations:



Accessories such as switches and mounting brackets are available. When ordering a magnet option for position sensing, any version of a band mounted switches can be used, but we highly recommend using IMI Bimba's mini track mounted switches for a more low profile design.

Mini 4mm Round (C-Slot) Track Mounted Switches

MHF, MHF-90, MHC, MHC-90, MHK, MHK-90, MR, MR-90,

MS, MS-90, MSC, MSC-90, MSK, MSK-90

Compatible and Tested for use with:

Original Line Cylinders, Pneu-Turn Rotary Actuators, Linear Thrusters (-T option required), Extruded Flat, Twist Clamp, Twin Bore, Stopper Cylinders, Extruded Flat Lift Table, Narrow Profile Air Table, Low Profile Air Table, PneuMoment, and ISO 6432 Cylinders

EdgeSwitch™ Solid-State Switch Features:

- Solid-State construction
- Direct replacement for Reed Switch
- Responsive 40-800 Gauss Detection
- Precise Edge Detection technology senses magnet edges/thickness
- Smaller operating window than Reed Switch
- Better repeatability than Reed Switch
- Longer life than Reed Switch
- Low leakage current, 0.1 mA at 28VDC
- CE, RoHS compliant
- Stock units

MHF



90° Switch (MHF-90 shown)

Part Numbers

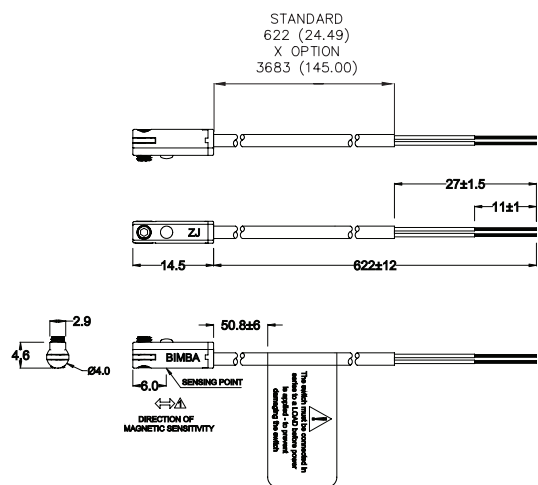
Part Number	Description
MHF	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 24" Pigtail Leads
MHF-90	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 24" Pigtail Leads, 90° version
MHFX	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 144" Pigtail Leads
MHFX-90	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 144" Pigtail Leads, 90° version
MHFQS	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector
MHFQS-90	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector, 90° version
MHFQCS	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 2m Mating Cable
MHFQCS-90	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
MHFQCXS	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 5m Mating Cable
MHFQCXS-90	Mini EdgeSwitch™, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
MHC	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads
MHC-90	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads, 90° version
MHCX	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads
MHCX-90	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads, 90° version
MHCQS	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector
MHCQS-90	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector, 90° version
MHCQCS	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable
MHCQCS-90	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
MHCQCXS	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable
MHCQCXS-90	Mini EdgeSwitch™ Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
MHK	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads
MHK-90	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads, 90° version

Mini 4mm Round (C-Slot) Track Mounted Switches

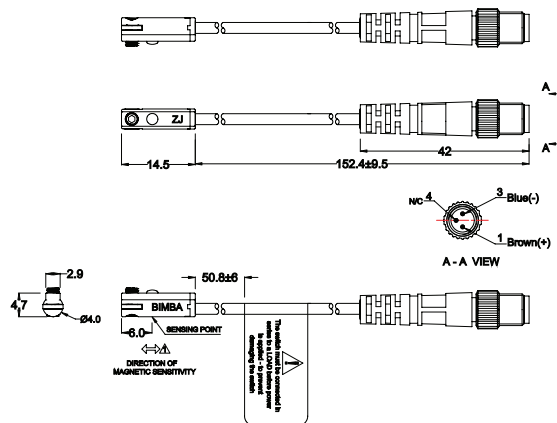
Part Number	Description
MHKX	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads
MHKX-90	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads, 90° version
MHKQS	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector
MHKQS-90	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector, 90° version
MHKQCS	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable
MHKQCS-90	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
MHKQCXS	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 5m Mating Cable
MHKQCXS-90	Mini EdgeSwitch™ Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
MR	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, 1m Pigtail Leads
MR-90	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, 1m Pigtail Leads, 90° version
MRQ	Reed Switch, 2 wire, LED, 5-120VAC/VDC, with M8 Male Connector
MRQ-90	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, with M8 Male Connector, 90° version
MRQC	Reed Switch, 2 wire, LED, 5-120VAC/VDC, with M8 Male Connector and 2m Mating Cable
MRQC-90	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, with M8 Male Connector and 2m Mating Cable, 90° version
MRQCX	Reed Switch, 2 wire, LED, 5-120VAC/VDC, with M8 Male Connector and 5m Mating Cable
MRQCX-90	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, with M8 Male Connector and 5m Mating Cable, 90° version
MRX	Reed Switch, 2 wire, LED, 5-120VAC/VDC, with 144" Pigtail Leads
MRX-90	Reed Switch, 2 wire, LED, 5-120VAC/VDC, 30mA, with 144" Pigtail Leads, 90° version
MS	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with 24" Pigtail Leads
MS-90	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with 24" Pigtail Leads, 90° version
MSQ	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector
MSQ-90	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector, 90° version
MSQC	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector and 2m Mating Cable
MSQC-90	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector and 2m Mating Cable, 90° version
MSQCX	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector and 5m Mating Cable
MSQCX-90	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with M8 Male Connector and 5m Mating Cable, 90° version
MSX	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with 144" Pigtail Leads
MSX-90	Auto Configure, PNP or NPN, 3 wire, LED, 30VDC, 100mA, with 144" Pigtail Leads, 90° version
MSC	Sourcing Switch (PNP), LED, 30VDC, 50mA, with 24" Pigtail Leads
MSC-90	Sourcing Switch (PNP), LED, 30VDC, 200mA, with 24" Pigtail Leads, 90° version
MSCQ	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector
MSCQ-90	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector, 90° version
MSCQC	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector and 2m Mating Cable
MSCQC-90	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector and 2m Mating Cable, 90° version
MSCQCX	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector and 5m Mating Cable
MSCQCX-90	Sourcing Switch (PNP), LED, 30VDC, 200mA, with M8 Male Connector and 5m Mating Cable, 90° version
MSCX	Sourcing Switch (PNP), LED, 30VDC, 200mA, with 144" Pigtail Leads
MSCX-90	Sourcing Switch (PNP), LED, 30VDC, 200mA, with 144" Pigtail Leads, 90° version
MSK	Sinking Switch (NPN), LED, 30VDC, 200mA, with 24" Pigtail Leads
MSK-90	Sinking Switch (NPN), LED, 30VDC, 200mA, with 24" Pigtail Leads, 90° version
MSKQ	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Male Connector
MSKQ-90	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Cable Connector, 90° version
MSKQC	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Male Connector and 2m Mating Cable
MSKQC-90	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Cable Connector and 2m Mating Cable, 90° version
MSKQCX	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Male Connector and 5m Mating Cable
MSKQCX-90	Sinking Switch (NPN), LED, 30VDC, 200mA, with M8 Cable Connector and 5m Mating Cable, 90° version
MSKX	Sinking Switch (NPN), LED, 30VDC, 200mA, with 144" Pigtail Leads
MSKX-90	Sinking Switch (NPN), LED, 30VDC, 200mA, with 144" Pigtail Leads, 90° version

Dimensions

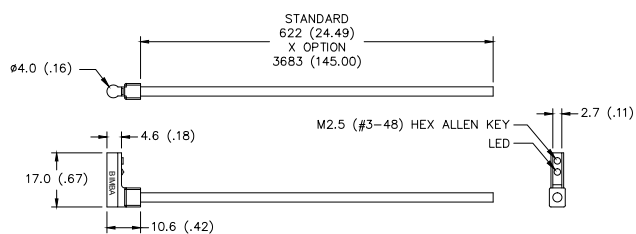
Mini 4mm Round (C-Slot) Track Mounted Switches



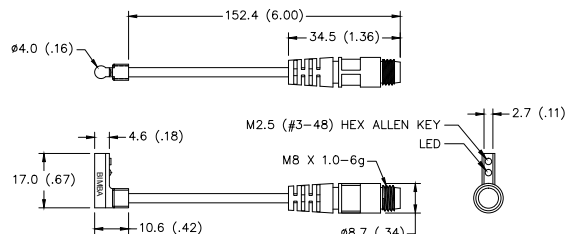
MHF, MHFX, MHK, MHKX, MHC, MHCX



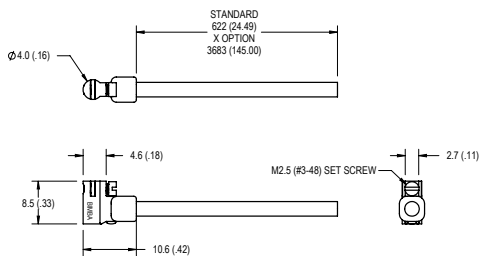
MHFQS, MHFQCS, MHFQCXS
MHKQS, MHKQCS, MHKQCXS
MHCQS, MHCQCS, MHCQCXS



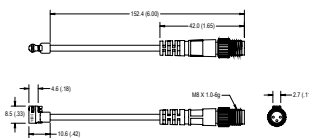
MSC-90, MSCX-90, MSK-90, MSKX-90



MSCQ-90, MSCQC-90, MSCQCX-90,
MSKQ-90, MSKQC-90, MSKQCX-90



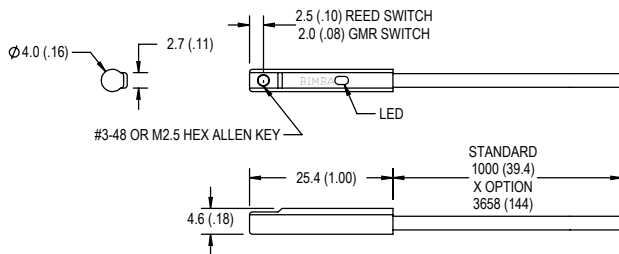
MHF-90, MHFX-90, MHC-90, MHCX-90, MHK-90, MHKX-90



MHFQS-90, MHFQCS-90, MHFQCXS-90,
MHCQS-90, MHCQCS-90, MHCQCXS-90
MHKQS-90, MHKQCS-90, MHKQCXS-90

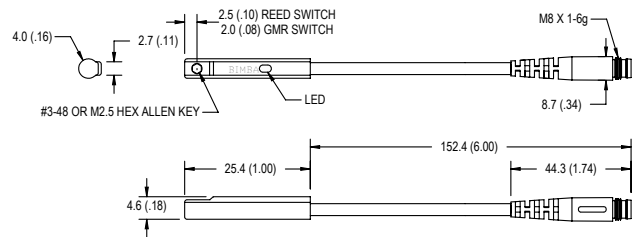
Dimensions

Mini 4mm Round (C-Slot) Track Mounted Switches

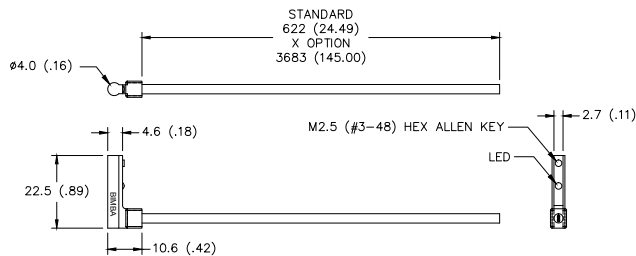


MR, MRX, MS*, MSX, MSC*, MSCX, MSK*, MSKX

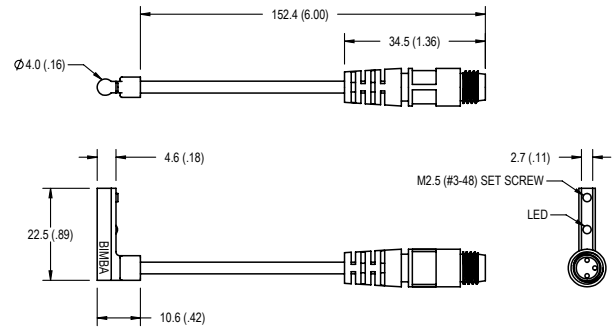
*Standard pigtail length for MS, MSC, and MSK switches is 622 (24.49)



MRQ, MRQC, MRQCX, MSQ, MSQC, MSQCX, MSCQ, MSCQC, MSCQCX, MSKQ, MSKQC, MSKQCX



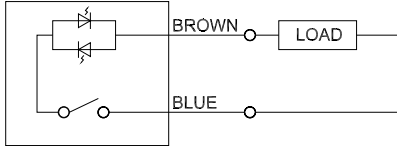
MR-90, MRX-90, MS-90, MSX-90



MRQ-90, MRQC-90, MRQCX-90, MSQ-90, MSQC-90, MSQCX-90

Wiring Diagrams

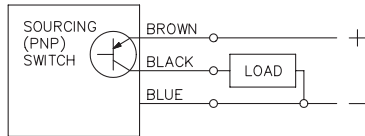
MHF (All types)



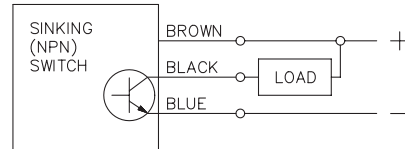
Reverse Polarity Not Protected

On Quick Connect switch models, connect only the Blue and Brown wires on the mating cable and cut back the Black wire. Do not connect switch to a mating cable that has been previously wired for a three-wire solid state switch as it will short the MHFQ switch.

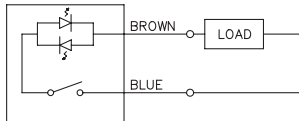
MHC, MSC (All types) (PNP, Sourcing, Solid State)



MHK, MSK (All types) (NPN, Sinking, Solid State)



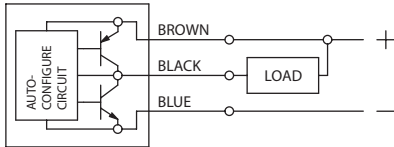
MR (All types) (Reed Switch)



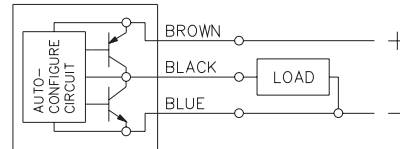
Reverse Polarity Not Protected

On Quick Connect switch models, connect only the Blue and Brown wires on the mating cable and cut back the Black wire. Do not connect switch to a mating cable that has been previously wired for a three-wire solid state switch as it will short the MRQ switch.

MS (All types) (Auto Configure PNP, Sourcing)



MS (All types) (Auto Configure NPN, Sinking)

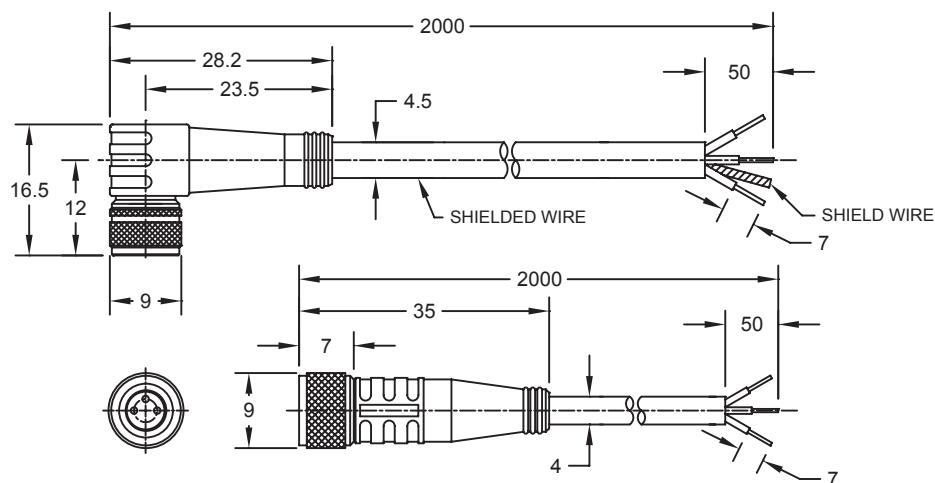


Color Codes

Brown	(+) Positive
Black	Output
Blue	(-) Negative

Dimensions

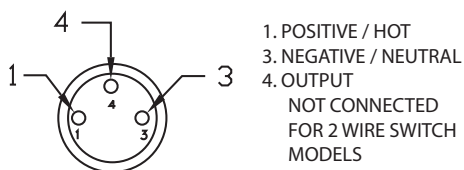
M8 Female Quick Connect Cables



Pin and Wire Assignments for Quick Connect

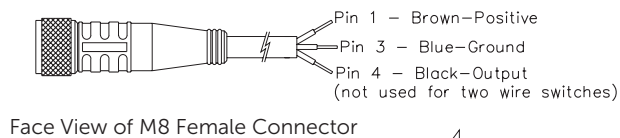
Switch "Q" Option Male Connector

Face View of M8 Male Connector

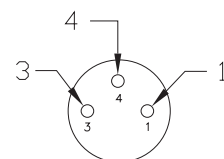


C4 and C5 Cable Female Connector

Side View of M8 Female Connector



Face View of M8 Female Connector



M8 Female Quick Connect Cables (C4 and C5)

Part Number	Description
C4	Straight M8 Female Connector, Threaded Connection with 2 Meter Cable
C4-S	Straight M8 Female Connector, Threaded Connection with 2 Meter Shielded Cable
C4X	Straight M8 Female Connector, Threaded Connection with 5 Meter Cable
C4X-S	Straight M8 Female Connector, Threaded Connection with 5 Meter Shielded Cable
C5-S	Right Angle M8 Female Connector, Threaded Connection with 2 Meter Shielded Cable
C5X-S	Right Angle M8 Female Connector, Threaded Connection with 5 Meter Shielded Cable

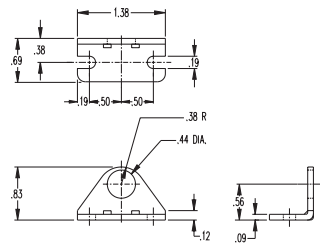


Mounting Bracket Options

For mounting options, our stud mount offers the ability to use a foot bracket and mounting nut to mount the pinch valve from the rear.

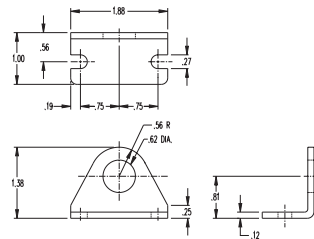
Model Number	02	04	06	08
Mounting Bracket, Zinc	D-770	D-129		D-241
Mounting Nut, Plated Steel	D-154	D-9		D-3556
Mounting Bracket, Stainless Steel	D-770-SS	D-129-SS		D-241-SS
Mounting Nut, Stainless Steel	D-154-SS	D-9-SS		D-3556-SS

D-770
D-770-SS



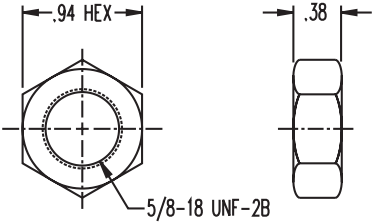
Mounting Bracket

D-129
D-129-SS



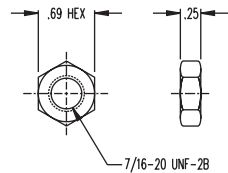
Mounting Bracket

D-9
D-9-SS



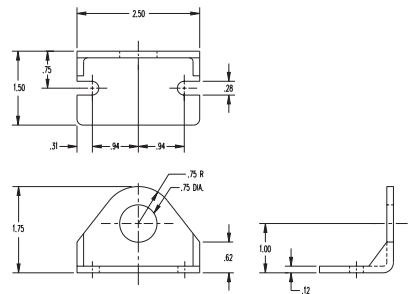
Mounting Nut

D-154
D-154-SS



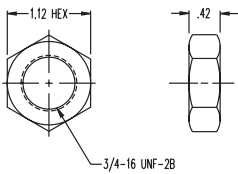
Mounting Nut

D-241
D-241-SS



Mounting Bracket

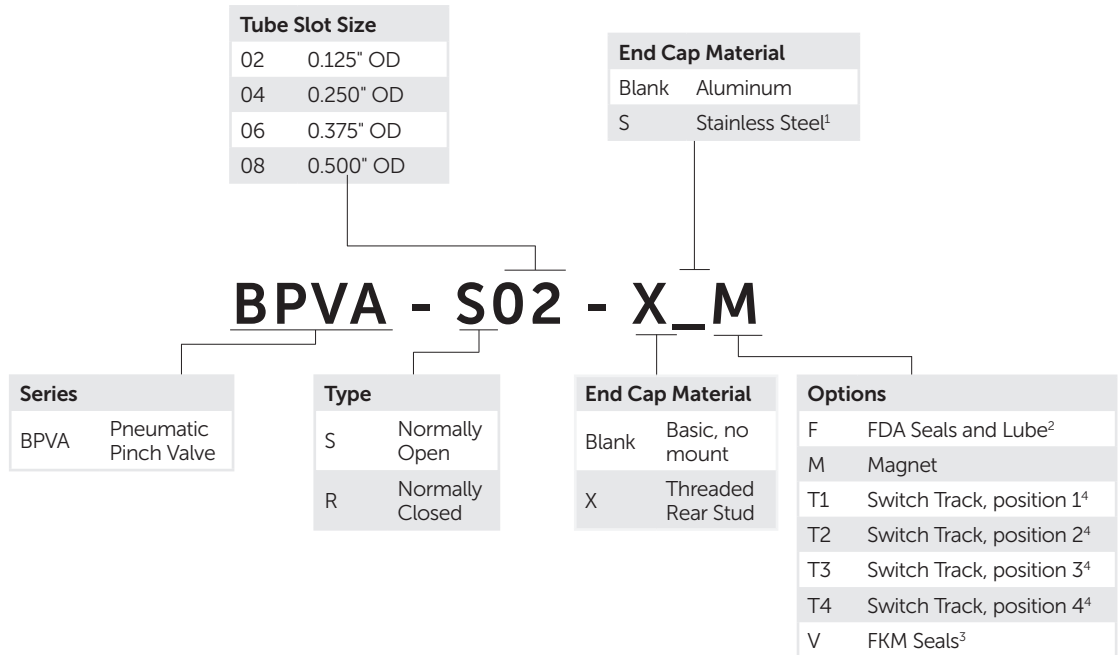
D-3556
D-3556-SS



Mounting Nut

The model numbers of the BPV Series Pneumatic Pinch Valves consist of an alphanumeric cluster designating series, type, tube slot size, mounting, end cap material, and additional options that together make up the complete part number to use when ordering. Use the ordering information below to build a valid part number.

An example of a BPV Series Pneumatic Pinch Valve that is normally closed, 0.125" OD tube slot, threaded rear stud mounting, aluminum end cap with a magnet is shown below in the part number configurator.



¹Stainless steel end cap option is not compatible with T1, T2, T3, or T4 switch track

²Cannot be ordered with FKM Seals

³Cannot be ordered with FDA Seals and Lube. If ordered with "M" option, magnet is not reliable above 200°F

⁴A maximum of two track options can be ordered together