

3 Port Mechanical Valve

VM400 Series



Either N.C. or N.O. is available.

Piping possible to any port.

Proper countermeasures can be taken for applications in which the noise of the exhaust could cause problems to the surroundings.



Specifications

| | | | | |
|--------------------------------------|--|-----|------|------|
| Fluid | Air | | | |
| Operating pressure | -100 kPa to 1.0 MPa | | | |
| Ambient and fluid temperature | -5 to 60°C (No freezing) | | | |
| Flow rate characteristics | $C[d(m^3/(s\cdot bar))]$ | b | Cv | |
| | 1(NC)↔2(OUT) | 1.4 | 0.2 | 0.29 |
| | 2(NO)↔3(OUT) | 1.4 | 0.15 | 0.29 |
| Lubrication | Not required (Use turbine oil Class 1 ISO VG32, if lubricated) | | | |
| Port size | 1/8 | | | |

Model

| | Actuator | Model | Actuator part no. | Application | Weight (g) |
|---------------------------|-----------------------------|--------------|-------------------|---|------------|
| Mechanical operation | Basic | VM430-01-00 | — | — | 110 |
| | Roller lever | VM430-01-01 | VM-01A | Polyacetal roller | 140 |
| | | VM430-01-01S | VM-01AS | Hard steel roller | 150 |
| | One way roller lever | VM430-01-02 | VM-02A | Polyacetal roller | 150 |
| | | VM430-01-02S | VM-02AS | Hard steel roller | 160 |
| | Straight plunger | VM430-01-05 | VM-05A | — | 220 |
| | Roller plunger | VM430-01-06 | VM-06A | Polyacetal roller | 210 |
| | | VM430-01-06S | VM-06AS | Hard steel roller | 220 |
| | | VM430-01-07 | VM-07A | Polyacetal roller | 210 |
| | Cross roller plunger | VM430-01-07S | VM-07AS | Hard steel roller | 220 |
| VM430-01-08 | | VM-08A | — | 200 | |
| Manual operation | Toggle lever | VM430-01-30R | VM-30AR | Red | 168 |
| | | VM430-01-30B | VM-30AB | Black | |
| | | VM430-01-30G | VM-30AG | Green | |
| | | VM430-01-30Y | VM-30AY | Yellow | |
| | Push button (Mushroom) | VM430-01-32R | VM-32AR | Red | 162 |
| | | VM430-01-32B | VM-32AB | Black | |
| | | VM430-01-32G | VM-32AG | Green | |
| | | VM430-01-32Y | VM-32AY | Yellow | |
| | Push button (Flush) | VM430-01-33 | VM-33A | With a set of red, black, green, yellow | 167 |
| | Twist selector (2 position) | VM430-01-34R | VM-34AR | Red | 168 |
| | | VM430-01-34B | VM-34AB | Black | |
| | | VM430-01-34G | VM-34AG | Green | |
| | | VM430-01-34Y | VM-34AY | Yellow | |
| Key selector (2 position) | VM430-01-36 | VM-36A | — | 188 | |

Note 1) Actuator replacement is available for all types.

Note 2) For push button (mushroom), push button (extended), push button (flush) and a single unit of fastening ring, refer to pages 1481 and 1482. The other parts are not replaceable.

Note 3) The handle of the selector (2 position) cannot be removed or replaced alone.

How to Order

VM4 3 0 - 01 - 01 S -

● **Made to Order**

(Refer to pages 1474 to 1477 for details.)

| | |
|--------------|---|
| X207A | Alternate type, Mushroom push button |
| X219A | Push-lock turn-reset type, Mushroom push button |

● **Port size**

| | |
|------------|---------|
| 01 | Rc 1/8 |
| N01 | NPT 1/8 |
| F01 | G 1/8 |

● **Number of ports**

| | |
|----------|--------|
| 3 | 3 port |
|----------|--------|

● **Actuator type***

| | |
|-----------|--|
| 00 | Basic |
| 01 | Roller lever |
| 02 | One way roller lever |
| 05 | Straight plunger |
| 06 | Roller plunger |
| 07 | Cross roller plunger |
| 08 | Toggle lever |
| 30 | Push button (Mushroom) |
| 32 | Push button (Extended) |
| 33 | Push button (Flush) <small>Note 1)</small> |
| 34 | Twist selector (2 position) |
| 36 | Key selector (2 position) |

● **Suffix for actuator***

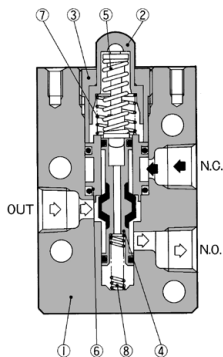
| | | |
|----------|-------------------|-------------------------------|
| S | Hard steel roller | |
| R | Red | Color of push button selector |
| B | Black | |
| G | Green | |
| Y | Yellow | |

* Refer to the table on page 1440 for combinations of actuator type and suffix.

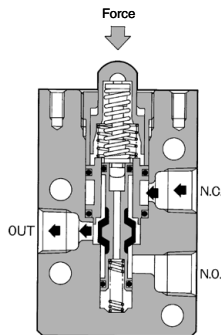
Note 1) When selecting the flush type, it is not necessary to select the suffix for the actuator.

Construction

Non-actuated



Actuated



Component Parts

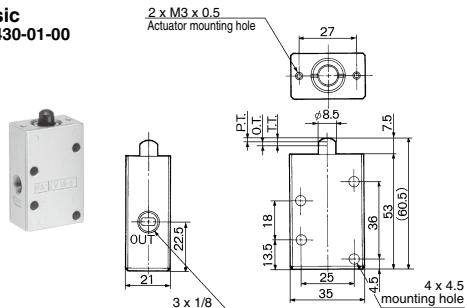
| No. | Description | Material | Note |
|-----|--------------------|---------------------|----------------------|
| 1 | Body | ADC | Platinum silver |
| 2 | Plunger | POM | |
| 3 | Upper lid | Brass | Black zinc chromated |
| 4 | Spool valve | Aluminum alloy, NBR | Rubber lined |

| No. | Description | Material | Note |
|-----|---------------------------|-----------------|------|
| 5 | Over travel spring | Stainless steel | |
| 6 | Retainer | Brass | |
| 7 | Spring | Stainless steel | |
| 8 | Spring | Stainless steel | |

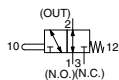
VM400 Series

VM400 Series

Basic VM430-01-00

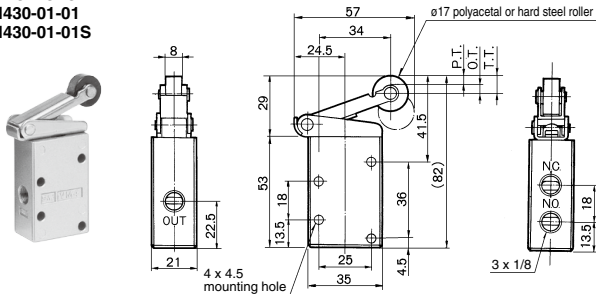


Symbol

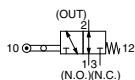


| | |
|--------|--------|
| F.O.F. | 26 N |
| P.T. | 1.5 mm |
| O.T. | 2.0 mm |
| T.T. | 3.5 mm |

Roller lever VM430-01-01 VM430-01-01S

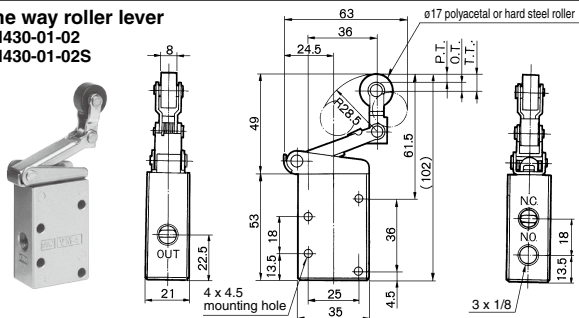


Symbol

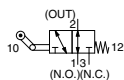


| | |
|--------|--------|
| F.O.F. | 12 N |
| P.T. | 4.0 mm |
| O.T. | 4.5 mm |
| T.T. | 8.5 mm |

One way roller lever VM430-01-02 VM430-01-02S

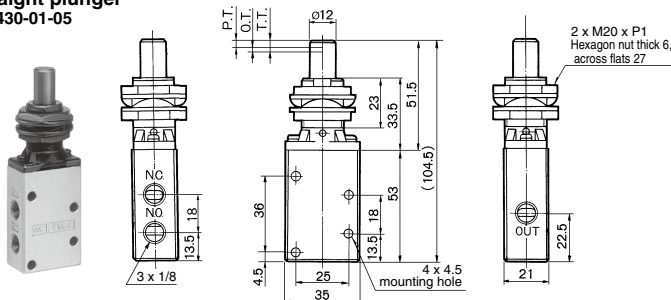


Symbol

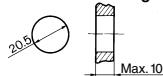


| | |
|--------|--------|
| F.O.F. | 11 N |
| P.T. | 4.0 mm |
| O.T. | 5.0 mm |
| T.T. | 9.0 mm |

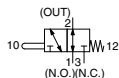
Straight plunger VM430-01-05



Panel mounting hole



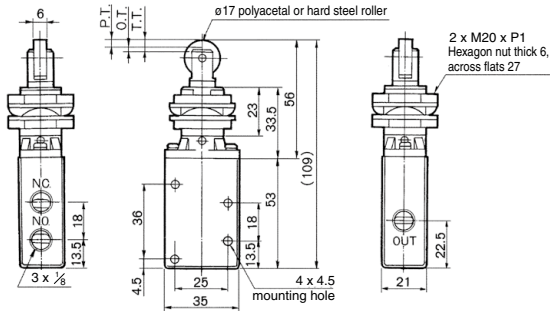
Symbol



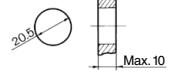
| | |
|--------|--------|
| F.O.F. | 30 N |
| P.T. | 3.5 mm |
| O.T. | 2.0 mm |
| T.T. | 5.5 mm |

VM400 Series

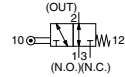
Roller plunger VM430-01-06 VM430-01-06S



Panel mounting hole

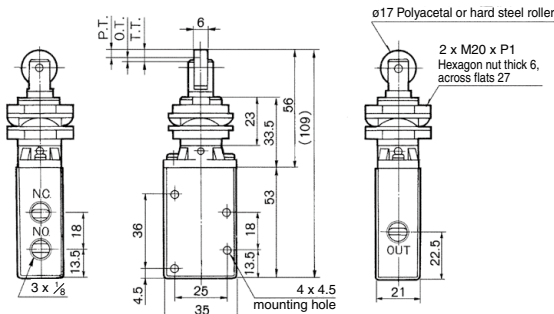


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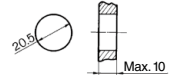


| | |
|--------|--------|
| F.O.F. | 30 N |
| P.T. | 3.5 mm |
| O.T. | 2.0 mm |
| T.T. | 5.5 mm |

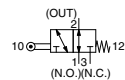
Cross roller plunger VM430-01-07 VM430-01-07S



Panel mounting hole

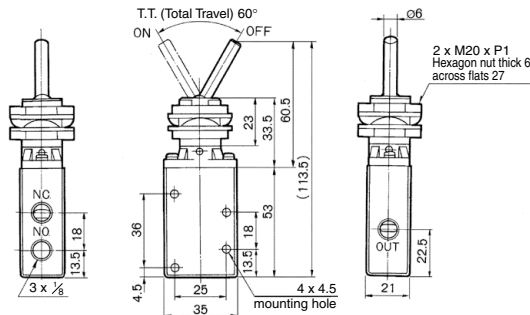


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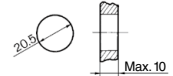


| | |
|--------|--------|
| F.O.F. | 30 N |
| P.T. | 3.5 mm |
| O.T. | 2.0 mm |
| T.T. | 5.5 mm |

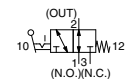
Toggle lever VM430-01-08



Panel mounting hole

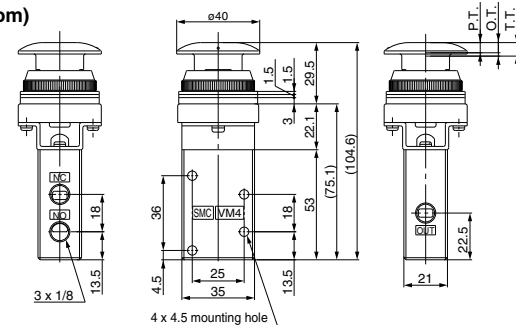


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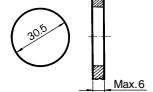


| | |
|--------|-----|
| F.O.F. | 7 N |
| T.T. | 60° |

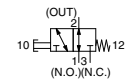
Push button (Mushroom) VM430-01-30R/B/G/Y



Panel mounting hole



Symbol

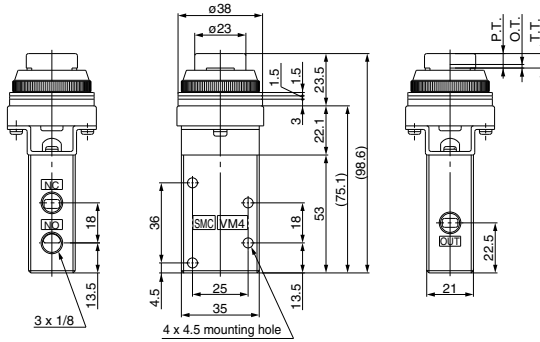


| | |
|--------|--------|
| F.O.F. | 26 N |
| P.T. | 4.6 mm |
| O.T. | 1.6 mm |
| T.T. | 6.5 mm |

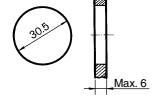
VM400 Series

VM400 Series

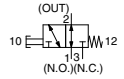
Push button (Extended) VM430-01-32R/B/G/Y



Panel mounting hole

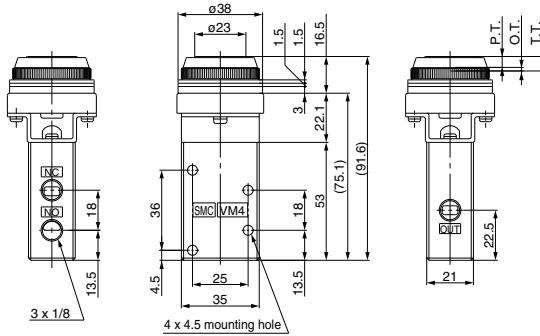


Symbol

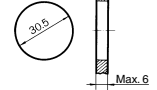


| | |
|--------|--------|
| F.O.F. | 26 N |
| P.T. | 5.4 mm |
| O.T. | 1.6 mm |
| T.T. | 6.5 mm |

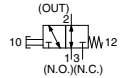
Push button (Flush) VM430-01-33



Panel mounting hole

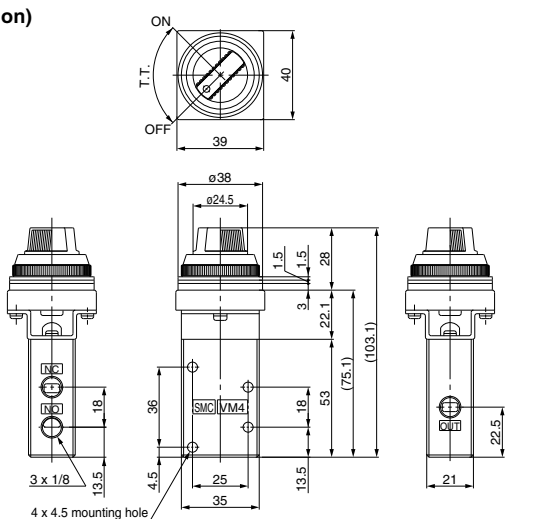


Symbol

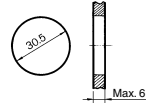


| | |
|--------|--------|
| F.O.F. | 26 N |
| P.T. | 4.9 mm |
| O.T. | 1.6 mm |
| T.T. | 6.5 mm |

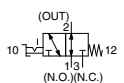
Twist selector (2 position) VM430-01-34R/B/G/Y



Panel mounting hole



Symbol



| | |
|--------|------|
| F.O.F. | 20 N |
| T.T. | 90° |

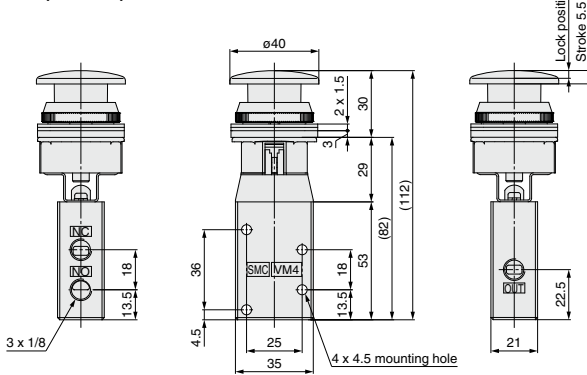


Alternate Type, Mushroom Push Button

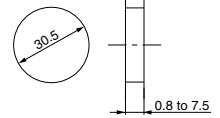
X207A

Alternate type: When pushing the push button, the valve actuates and will hold its position even after the button is released. Pushing the button again will return the button and valve to their previous position.

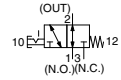
VM430-01-30(R/B/G/Y)-X207A



Panel mounting hole



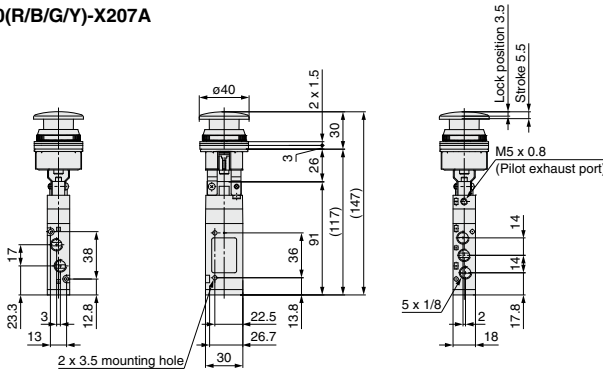
Symbol



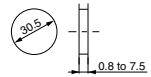
* 0.5 MPa supply

| | |
|---------|------|
| F.O.F.* | 26 N |
|---------|------|

VZM450-01-30(R/B/G/Y)-X207A



Panel mounting hole



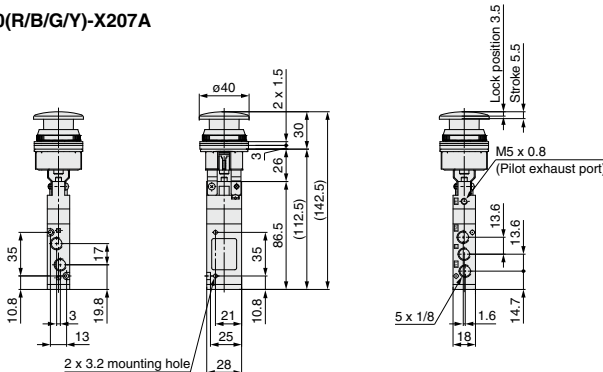
Symbol



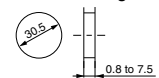
* 0.5 MPa supply

| | |
|---------|------|
| F.O.F.* | 16 N |
|---------|------|

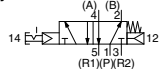
VZM550-01-30(R/B/G/Y)-X207A



Panel mounting hole



Symbol



* 0.5 MPa supply

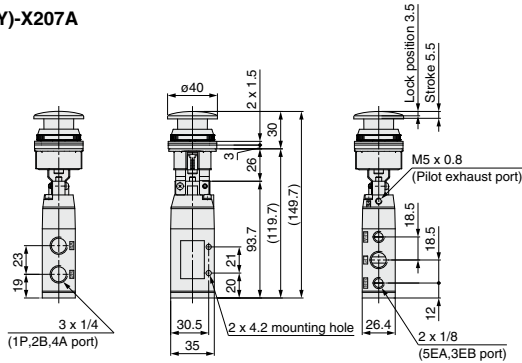
| | |
|---------|------|
| F.O.F.* | 21 N |
|---------|------|



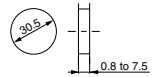
Alternate Type, Mushroom Push Button

X207A

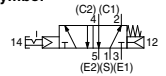
VFM350-02-30(R/B/G/Y)-X207A



Panel mounting hole



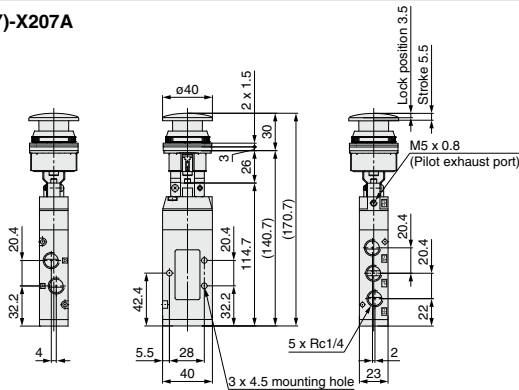
Symbol



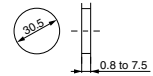
* 0.5 MPa supply

| | |
|----------|------|
| F.O.F. * | 21 N |
|----------|------|

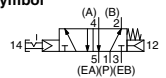
VFM250-02-30(R/B/G/Y)-X207A



Panel mounting hole



Symbol



* 0.5 MPa supply

| | |
|----------|------|
| F.O.F. * | 21 N |
|----------|------|

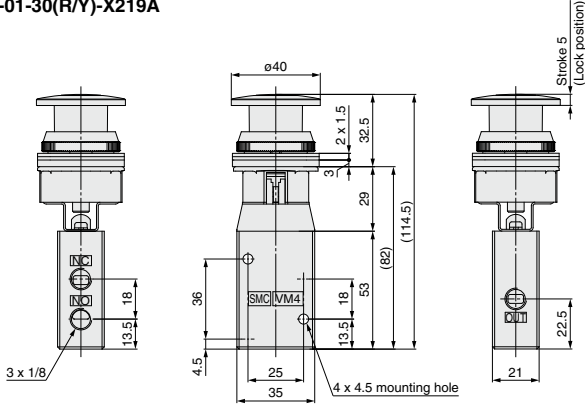


Push-lock Turn-reset Type, Mushroom Push Button

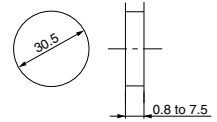
X219A

Push-lock turn-reset type: When pressing the push button, it is locked in this status. Turning the button clockwise will reset it.

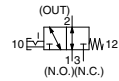
VM430-01-30(R/Y)-X219A



Panel mounting hole



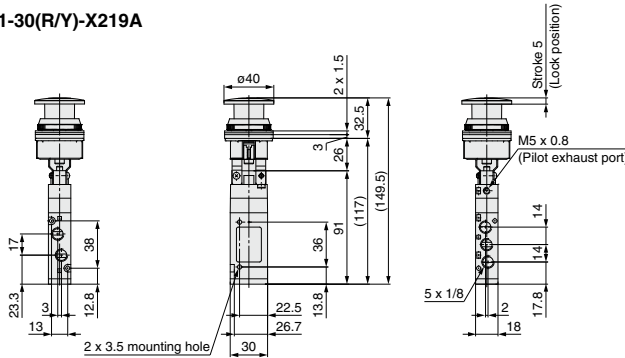
Symbol



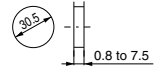
* 0.5 MPa supply

F.O.F. * 26 N

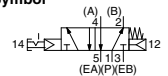
VZM450-01-30(R/Y)-X219A



Panel mounting hole



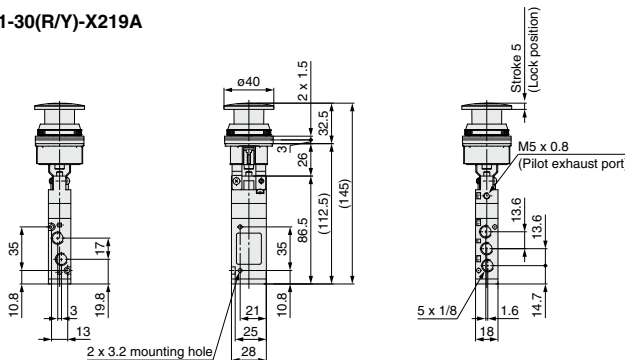
Symbol



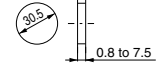
* 0.5 MPa supply

F.O.F. * 21 N

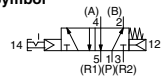
VZM550-01-30(R/Y)-X219A



Panel mounting hole



Symbol



* 0.5 MPa supply

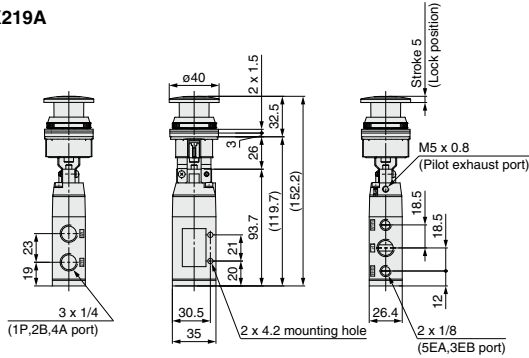
F.O.F. * 21 N



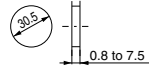
Push-lock Turn-reset Type, Mushroom Push Button

X219A

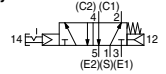
VFM350-02-30(R/Y)-X219A



Panel mounting hole



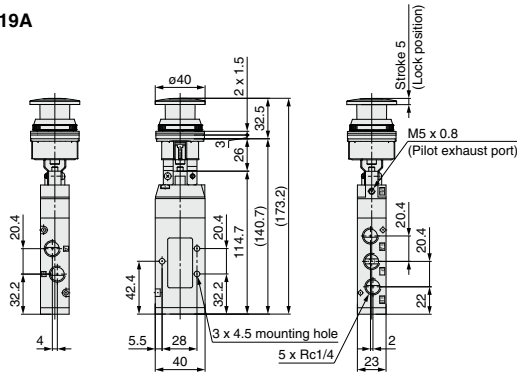
Symbol



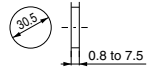
* 0.5 MPa supply

| | |
|----------|------|
| F.O.F. * | 21 N |
|----------|------|

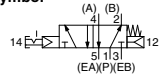
VFM250-02-30(R/Y)-X219A



Panel mounting hole



Symbol



* 0.5 MPa supply

| | |
|----------|------|
| F.O.F. * | 21 N |
|----------|------|



RoHS

Foot Pedal Type 5 Port Mechanical Valve

XT34-60/67

- 5 port is added to the foot pedal type mechanical valve.
- Models with lock and without lock are available.

Model

| | | |
|--------|-----------|--------------|
| Model | XT34-60 | XT34-67 |
| Lock | With lock | Without lock |
| Weight | 0.8 kg | 0.5 kg |

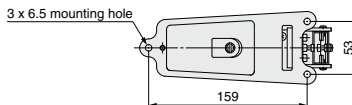
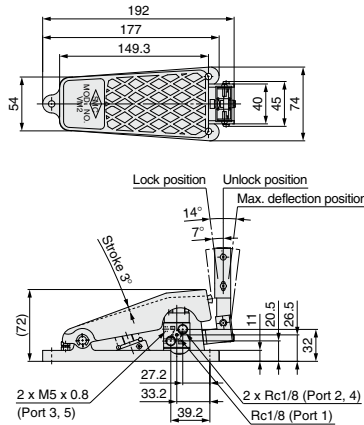
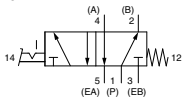
Specifications

| | | | |
|-------------------------------|--|------|------|
| Fluid | Air/Inert gas | | |
| Operating pressure | 0.15 to 0.9 MPa | | |
| Ambient and fluid temperature | -5 to 60°C (No freezing) | | |
| Flow rate characteristics | C [dm ³ /(s·bar)] | b | Cv |
| 1(P) → 2(B)/4(A) | 0.76 | 0.22 | 0.17 |
| 2(B)/4(A) → 4(EB)/5(EA) | 0.53 | 0.28 | 0.13 |
| Lubrication | Not required (Use turbine oil Class 1 ISO VG32, if lubricated) | | |
| Port size | Port 1(P), Port 2(B), Port 4(A): Rc1/8 Port 3(EB), Port 5(EA): M5 x 0.8 | | |

■ XT34-60 (With lock)



Symbol



| | |
|---|-------------------|
| Travel required for operation | 3° |
| Full Operating Force (F.O.F.) | 55 N (at 0.5 MPa) |
| Travel required to release the lock | 7° |
| Force required to release the lock (F.O.F.) | 3.5 N |

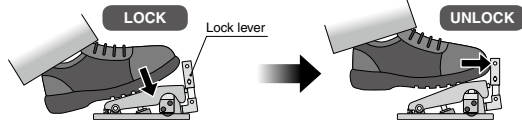
Operation

Locked

When stepping on the pedal, it is locked by the lock lever, and held in a locked state.

Unlocked

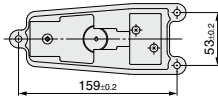
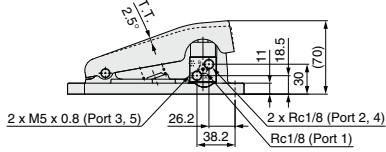
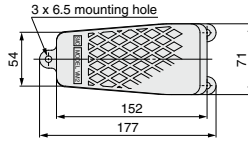
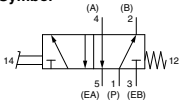
When pushing the lock lever with the toe, the lock is released, and the pedal returns to its original position.



XT34-67 (Without lock)



Symbol



| | |
|--|-------------------|
| Total Travel (T.T.) | 2.5° |
| Full Operating Force (Reference value)(F.O.F.) | 55 N (at 0.5 MPa) |