

# Pilot Check Valve with State Detection

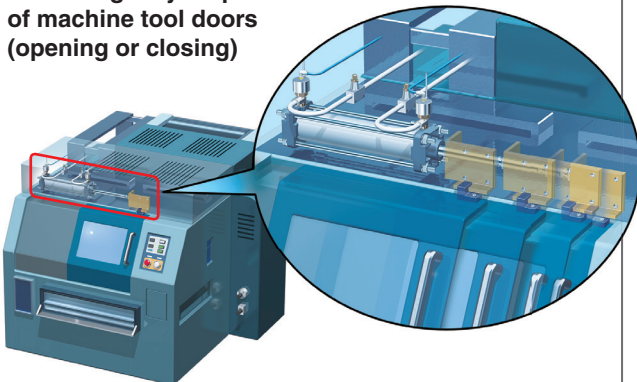
## Features

- The use of positive overlap ensures that signals are output only after the valve has closed completely.  
\* Positive overlap: Structure that ensures a completely closed state by slightly displacing the position of the valve after it has fully closed (to eliminate the effects of hysteresis)
- The open or closed position of the check valve is detected by the auto switch.
- Wide size variations  
Body size: 5 types  
Port size: M5, G1/8, G1/4, G3/8, G1/2

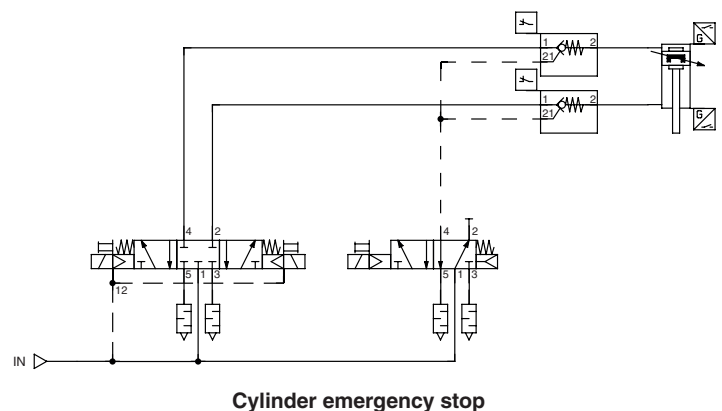


## Application Example

For emergency stops  
of machine tool doors  
(opening or closing)



## Circuit Example



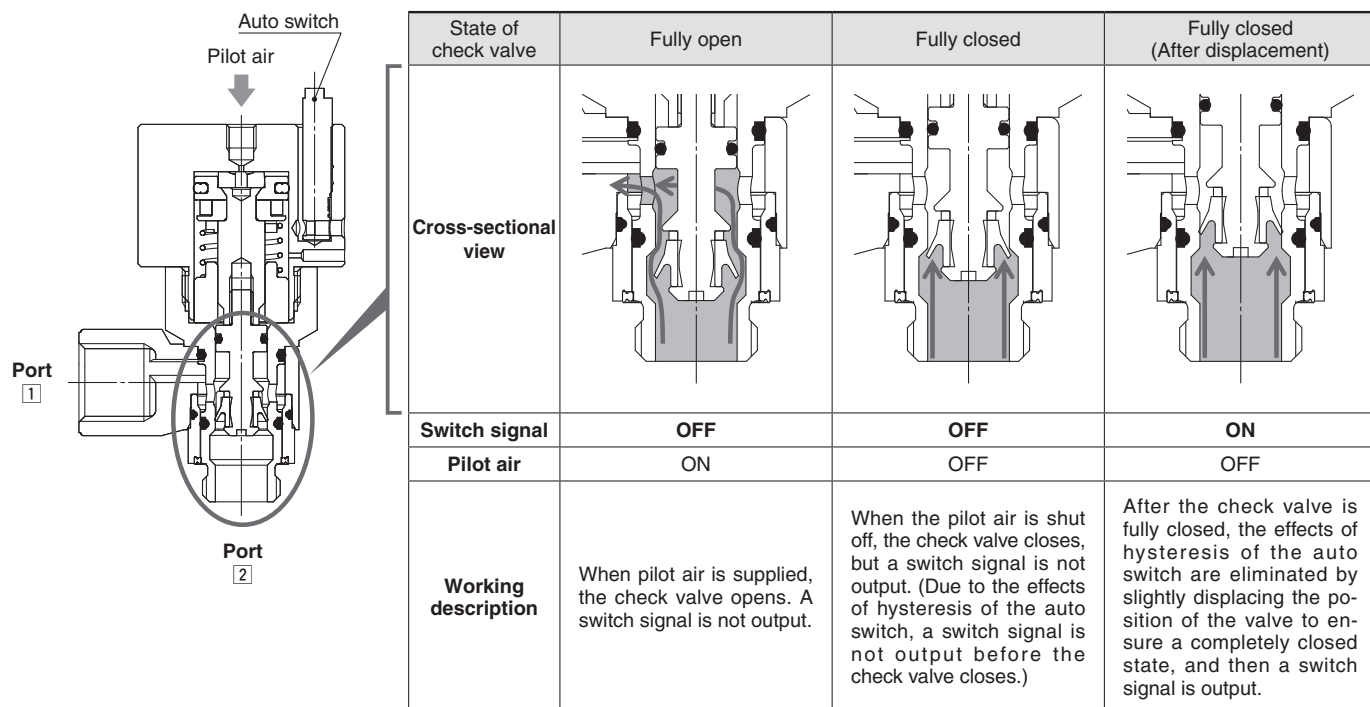
# XT34-303-□



SP173X-020EU-UK

# XT34-303-□

## Working Principle



## Specifications

|   |                            |   |
|---|----------------------------|---|
| <b>Fluid</b>                                |                            | Air   |
| <b>Operating pressure range</b>             |                            | 0.1 to 0.7 MPa  |
| <b>Pilot check valve operating pressure</b> | <b>XT34-303-M5</b>         | 50 % or more of the operating pressure (0.25 MPa or more) |
|   | <b>XT34-303-F01 to F04</b> | 60 % or more of the operating pressure (0.35 MPa or more) |
| <b>Ambient and fluid temperatures</b>       |                            | -5 to 60 °C (No freezing)                                 |

### Connector specification

| Pin arrangement | Pin no. and designation |     |
|-----------------|-------------------------|-----|
|                 | 1                       | 2   |
|                 | DC (+)                  |     |
|                 | 3                       | 4   |
|                 | DC (-)                  | OUT |

## Flow Rate Characteristics

| Model  |       | XT34-303-M5 | XT34-303-F01 | XT34-303-F02 | XT34-303-F03 | XT34-303-F04 |
|--|-------|-------------|--------------|--------------|--------------|--------------|
| Flow direction   |       |             |              |              |              |              |
| <b>Flow rate</b><br>[l/min (ANR)]                        | 1 → 2 | 30          | 160          | 390          | 600          | 1300         |
|  | 2 → 1 | 65          | 270          | 430          | 960          | 1100         |
| <b>Sonic conductance</b><br>C [dm <sup>3</sup> /(s·bar)] | 1 → 2 | 0.1         | 0.4          | 1.1          | 1.7          | 3.6          |
|  | 2 → 1 | 0.2         | 0.8          | 1.2          | 2.7          | 3.1          |
| <b>Critical pressure ratio</b><br>b                      | 1 → 2 | 0.2         | 0.2          | 0.2          | 0.3          | 0.3          |
|  | 2 → 1 | 0.1         | 0.3          | 0.1          | 0.3          | 0.3          |

\* These values have been calculated according to ISO6358 and indicate the flow rate under standard conditions with an inlet pressure of 0.6 MPa (relative pressure) and a pressure drop of 0.1 MPa.

## How to Order

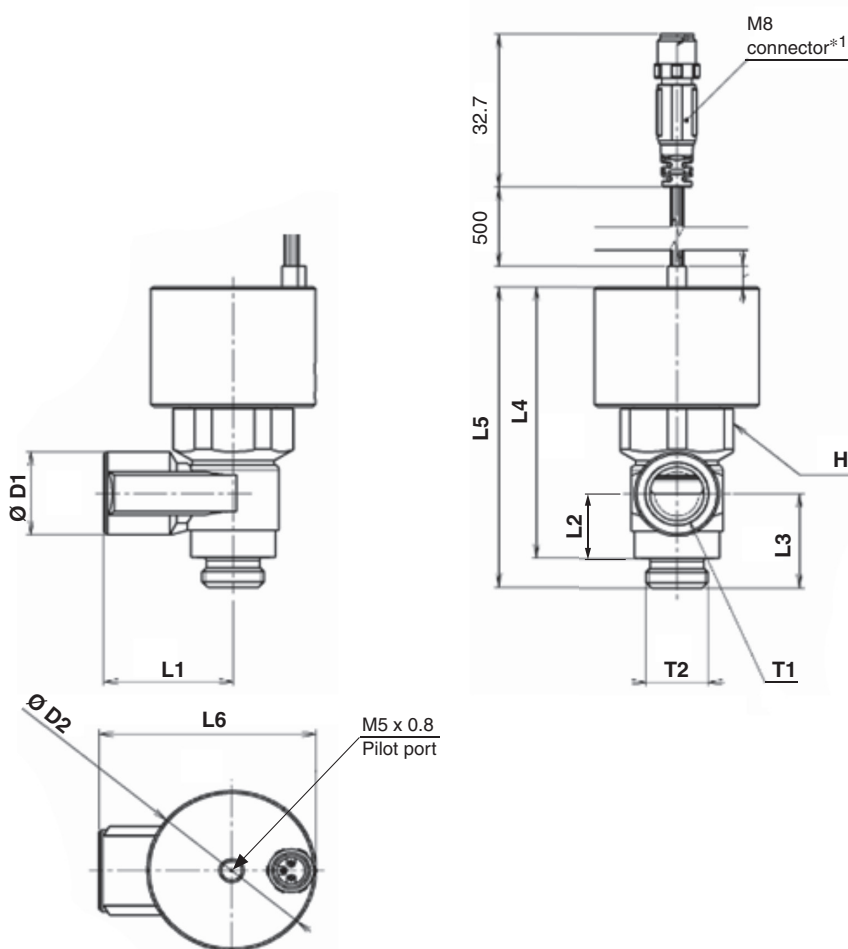
### XT34-303-M5

#### Port size

| Symbol     | Port size | Pilot port |
|------------|-----------|------------|
| <b>M5</b>  | M5        | M5 x 0.8   |
| <b>F01</b> | G1/8      |            |
| <b>F02</b> | G1/4      |            |
| <b>F03</b> | G3/8      |            |
| <b>F04</b> | G1/2      |            |

## Dimensions

[mm]



| Model                  | T1       | T2       | H  | D1   | D2 | L1   | L2 | L3   | L4   | L5   | L6   |
|------------------------|----------|----------|----|------|----|------|----|------|------|------|------|
| <b>XT34-303-M5</b> *2  | M5 x 0.8 | M5 x 0.8 | 9  | —    | 24 | 10   | 7  | —    | 47.7 | 51   | —    |
| <b>XT34-303-F01</b> *3 | G1/8     | G1/8     | 19 | 14.3 | 30 | 18   | —  | 17.5 | 55.4 | 60.6 | 33.5 |
| <b>XT34-303-F02</b> *4 | G1/4     | G1/4     | 24 | 18   | 35 | 27.5 | —  | 20.2 | 57.6 | 63.9 | 45   |
| <b>XT34-303-F03</b> *5 | G3/8     | G3/8     | 27 | 22.6 | 40 | 30.5 | —  | 23.6 | 65.6 | 71.5 | 50.8 |
| <b>XT34-303-F04</b> *6 | G1/2     | G1/2     | 36 | 27.5 | 44 | 39   | —  | 30.4 | 82.1 | 89.6 | 61   |

\*1 The solid state auto switch is a 3-wire PNP type with a 500 mm lead wire and an M8 connector.

\*2 First, tighten it by hand, and then give it an additional 1/6 to 1/4 turn with a wrench. The reference value for the tightening torque is 1 to 1.5 N·m.

\*3 First, tighten it by hand, and then use a wrench to tighten it an additional 10 to 20 degrees. The reference value for the tightening torque is 3 to 4 N·m.

\*4 First, tighten it by hand, and then use a wrench to tighten it an additional 15 to 35 degrees. The reference value for the tightening torque is 4 to 5 N·m.

\*5 First, tighten it by hand, and then use a wrench to tighten it an additional 15 to 35 degrees. The reference value for the tightening torque is 8 to 9 N·m.

\*6 First, tighten it by hand, and then use a wrench to tighten it an additional 15 to 35 degrees. The reference value for the tightening torque is 14 to 15 N·m.



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