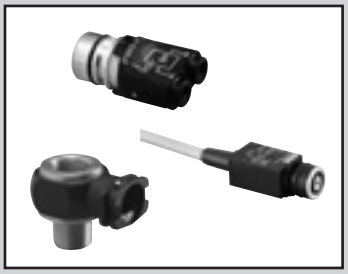


Threshold sensor

PWS Series

Detects exhaust pressure near the stroke end accurately.

● Port size: M5 (Rc or R) 1/8 to 1/2

JIS symbol 

Manufacturer Telepneumatic

CAD

Specifications

Universal fitting connector

Item	PWS-B155	PWS-B1882	PWS-B1992
Working fluid	Compressed air		
Max. working pressure MPa	0.8		
Min. working pressure MPa	0		
Proof pressure MPa	1.5		
Fluid temperature °C	5 to 60		
Ambient temperature °C	-10 to 60 (no freezing)		
Port size	M5	R(c)1/8	R(c)1/4
Effective cross-sectional area mm^2	3	20	50
Flow rate ℓ/min (ANR) *1	190	1300	3200
Weight kg	0.01	0.04	0.05

Built-in sensor module

Item	PWS-P111	PWS-M1012
Output method	Compressed air	Electric
Switching pressure MPa *2	0.04	0.06
Fluid temperature °C	5 to 60	
Ambient temperature °C	-10 to 60 (no freezing)	
Effective cross-sectional area mm^2	1.2	—
Flow rate ℓ/min (ANR) *1	80	—
Output connection	ø4 push-in fitting	0.5 mm^2× 3-wire
Max. voltage	—	250 VAC 5 A or 48 VDC 5 W
Contact type	—	C contact
Insulation class	—	Class B
Compatible tube	O.D. ø4.0, I.D. ø2.5 hard nylon tube	—

*1: The flow is a value at pressure 0.5 MPa.
*2: Switching pressure for PWS-P111 is that output by the air pressure signal to port S.
Select pressure for PWS-M1012 is the pressure changed by the electrical contact.

Operational principle

The threshold sensor is attached like a fitting to the cylinder port. This sensor detects pressure change generated at both ends of the piston or a drop in exhaust pressure (P2) near the stroke end and issues an air pressure signal (S) when P_2 is less than the switching pressure. (Refer to Fig. 1, 2)

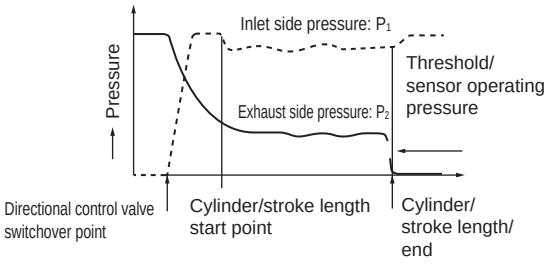


Fig. 1

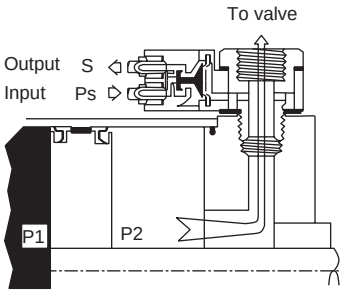


Fig. 2

Usage methods

A limit switch is used to confirm cylinder operation. If it is difficult or time consuming to install a limit switch, this fitting threshold sensor can be used. (Refer to Fig. 3)

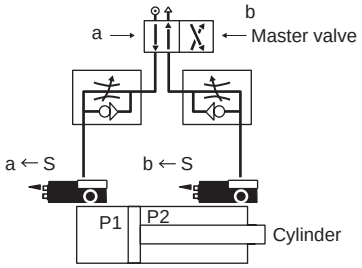


Fig. 3

Connection and installation

- The modular threshold sensor consists of two parts, a built-in sensor module and free fitting connector.
- Connector (free fitting)
  The sensor (detector) to be installed directly on the cylinder port is attached to the connector with a clip. A speed controller, cylinder stop valve, etc., can be mounted on the connector. The connector can be tightened to the port with the hex socket head cap screw inside the connector. (Refer to Fig. 5)
- Built-in sensor module
  Either pneumatic or electric signal outputs can be selected. (Refer to Fig. 4)

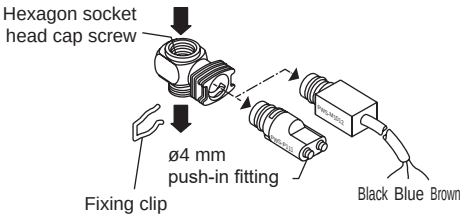


Fig. 4

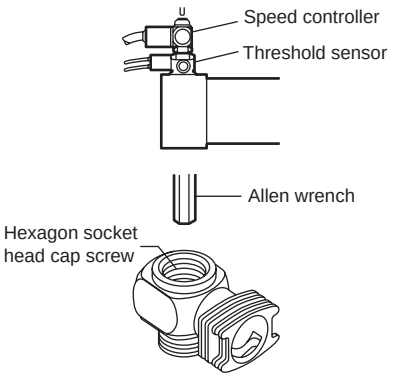
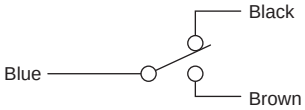


Fig. 5

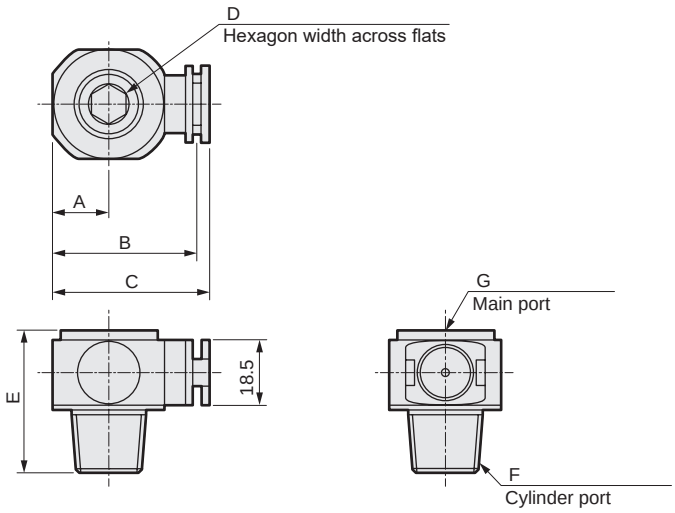
Connection

- Air pressure outlet module
  ø4 mm tube connection
- Electric output module
  (C contact)

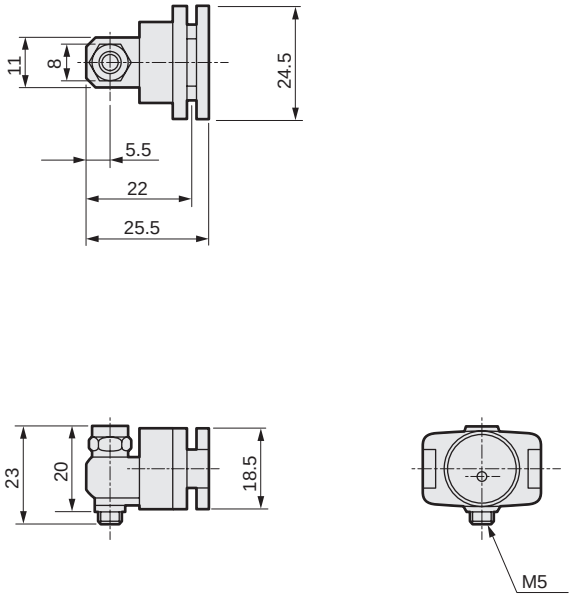


Dimensions

● PWS-B1**2

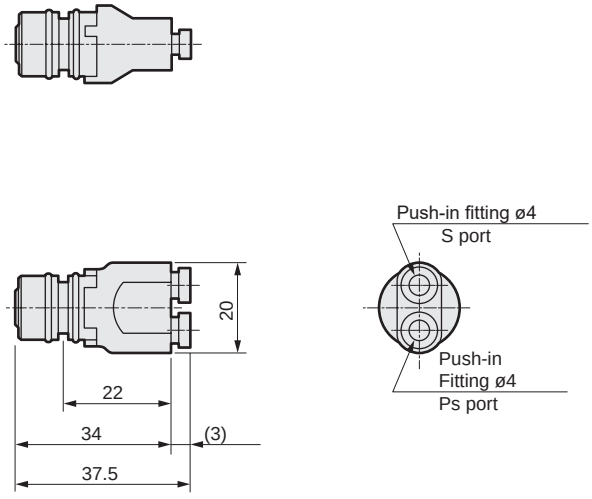


● PWS-B155



Model No.	A	B	C	D	E	F	G
PWS-B1882	8	28	31.5	5	28	R 1/8	Rc1/8
PWS-B1992	10.5	32.5	36	8	32.5	R 1/4	Rc1/4

● PWS-P111



● PWS-M1012