

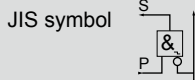


Threshold sensor

PWS Series

Detects exhaust pressure near the stroke end accurately.

● Port size: M5 (Rc or R) 1/8 to 1/2



Manufacturer



Specifications

Universal fitting connector

Descriptions	PWS-B155	PWS-B1882	PWS-B1992	PWS-B1332	PWS-B1222
Working fluid	Compressed air				
Max. working pressure MPa	0.8 (≈120 psi, 8 bar)				
Min. working pressure MPa	0 (≈0 psi, 0 bar)				
Proof pressure MPa	1.5 (≈220 psi, 15 bar)				
Fluid temperature °C	5 (41°F) to 60 (140°F)				
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)				
Port size	M5	R(c)1/8	R(c)1/4	R(c)3/8	R(c)1/2
Effective cross-sectional area mm ²	3	20	50	80	120
Flow rate ℓ/min (ANR) *1	190	1300	3200	5200	7800
Weight kg	0.01	0.04	0.05	0.08	0.11

Built-in sensor module

Descriptions	PWS-P111	PWS-M1012
Output method	Compressed air	Electric
Switching pressure MPa *2	0.04 (≈5.8 psi, 0.4 bar)	0.06 (≈8.7 psi, 0.6 bar)
Fluid temperature °C	5 (41°F) to 60 (140°F)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)	
Effective cross-sectional area mm ²	1.2	—
Flow rate ℓ/min (ANR) *1	80	—
Output connection	φ4 push-in fitting	0.5 mm ² x 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. φ4.0, I.D. φ2.5 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 P2 is less than the switching pressure. (Refer to Fig. 1, 2)

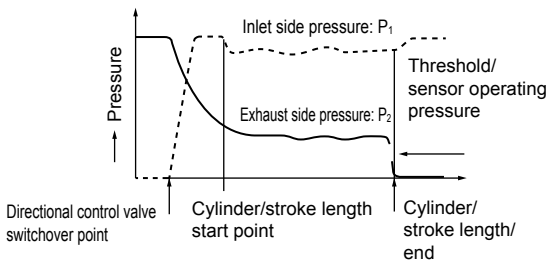


Fig. 1

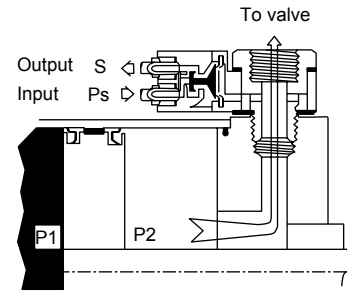


Fig. 2

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)

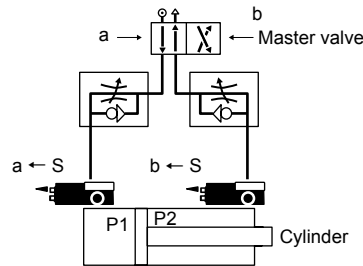


Fig. 3

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)

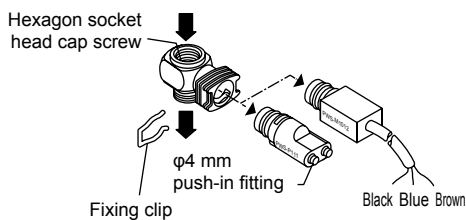


Fig. 4

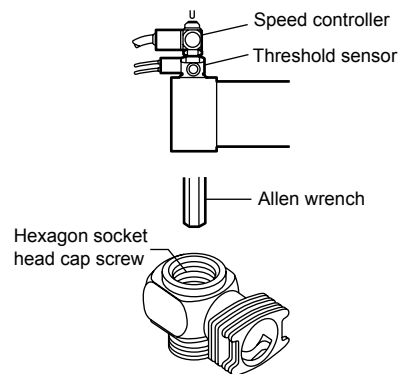
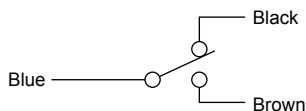


Fig. 5

Connection

- Air pressure outlet module
phi 4 mm tube connection
- Electric output module (C contact)

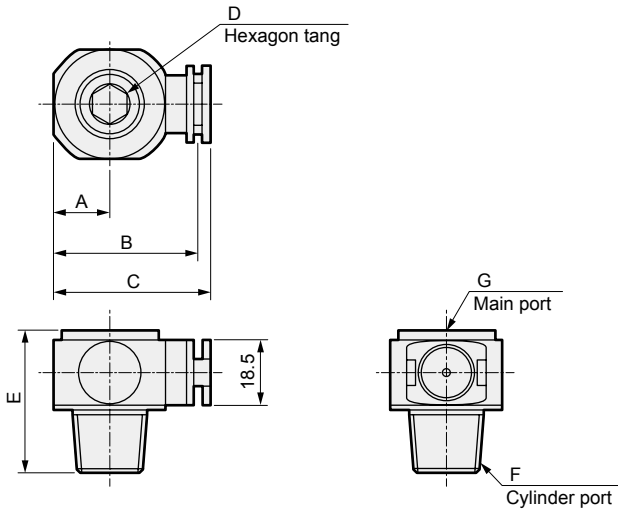


F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FimResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PrecsCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

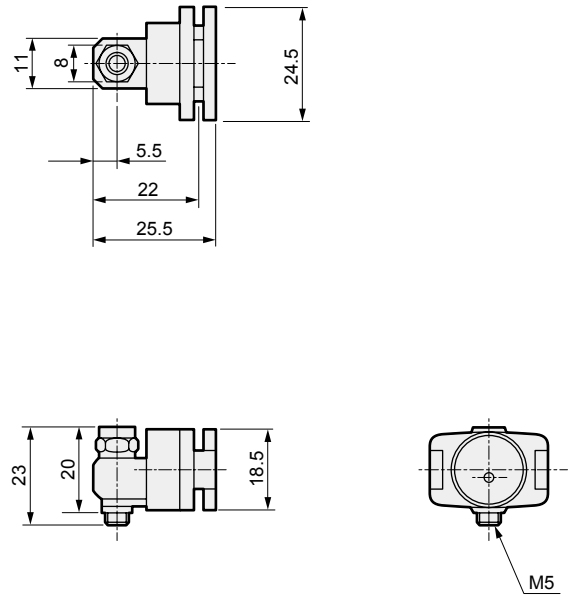


Dimensions

● PWS-B1**2

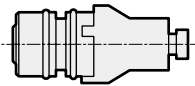


● PWS-B155



Model No.	A	B	C	D	E	F	G
PWS-B1882	8	28	31.5	5	28	R1/8	Rc1/8
PWS-B1992	10.5	32.5	36	8	32.5	R1/4	Rc1/4
PWS-B1332	14	39	43.5	10	35	R3/8	Rc3/8
PWS-B1222	16.5	42.5	46	12	42	R1/2	Rc1/2

● PWS-P111



● PWS-M1012

