Pneumatic components (air sensor)

Safety Precautions

Be sure to read this section before use.
For general precautions for pneumatic components, refer to Intro Page 63, and to " ⚠ Safety precautions" for detailed precautions for individual series.

Product-specific cautions: Mechanical pressure switch APS Series

Mounting, installation and adjustment

⚠ CAUTION

■ Setting pressure
- The pressure displayed on the scale plate is used as a guideline. When setting pressure, refer to the separate pressure gauge.
- The pressure displayed on the scale plate is the value when the contact is OFF. To set the value when the contact is ON, set the pressure displayed on the scale plate to a value smaller than that from which hysteresis has been subtracted. (refer to the chart below) If not set as above, operation may not take place at the set value. (Hysteresis refers to the pressure range from when the switch is turned ON at the set pressure until the pressure drops and the switch turns OFF.)

Operation chart
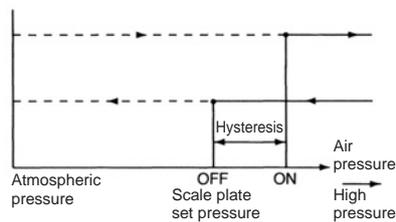
- Turning the adjusting screw in the L (low pressure) direction further from 0.1MPa setting activates the stopper and the adjusting screw does not turn. Note that if torque is forcibly applied in the L (low pressure) direction, the adjusting screw may lock and become inoperable.

■ Installation:
- Do not drop or bump the product when handling it.
- Wire so that repeated bending or tension are not applied to the lead wires. Otherwise, this could lead to disconnection.
- Do not use the product near a strong magnetic field or large current (large magnet or spot welding machine, etc.). This may cause malfunction.
- Do not pressurize the atmospheric pressure inlet port or blow it with compressed air. Product performance could decrease or the product could be damaged.
- The APS Series is equivalent to IP-65, but the mounting direction is restricted to upward and vertical. If water enters the atmospheric pressure inlet port from below, pipe an M3 fitting and extend with tubing to where water does not enter. Do not plug the atmospheric pressure inlet port. Plugging could cause malfunctions to occur. Not for outdoor use.
- When piping to the body Rc1/8 thread part, do not apply more than the recommended torque (3 to 5 Nm).
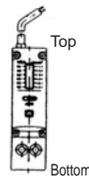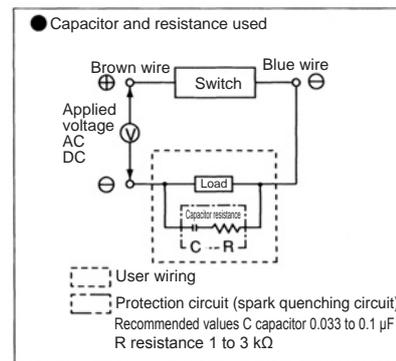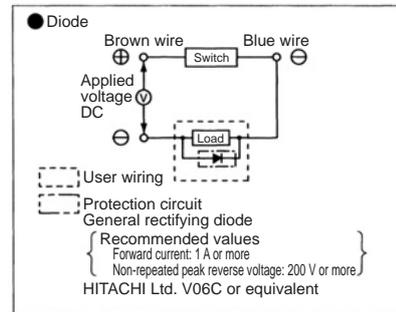

■ Wiring
- Connecting the lead wire
  (1) Do not connect the lead wire directly to the power supply. Be sure to connect the load serially. Failure to do so may result in burning out the lamp or melting the contact.
  (2) When using for DC, connect the brown wire to the ⊕ side and the blue wire to the ⊖ side. The lamp will not come on if wires are connected in reverse.
  (3) When connected to the AC relay or PC input, the switch lamp may not come on if the circuit is half-wave rectified. In this case, the lamp comes on if the switch lead wire polarity is reversed.

- Contact capacity
  Do not exceed the specified load voltage or load current range. This may result in burning out the lamp or melting the contact. The lamp may not come on if the current is less than the rated current.
- Contact protection
  (1) When using this sensor with an inductive load such as a relay, provide the contact protection circuit shown below. The contact could melt if this protection circuit is not provided.

(2) If DC wiring exceeds 50 m or AC wiring exceeds 10 m, the wiring capacity will be reached and a rush current will occur, damaging the switch or shortening the service life. Install a contact protection circuit if the wiring length is exceeded.
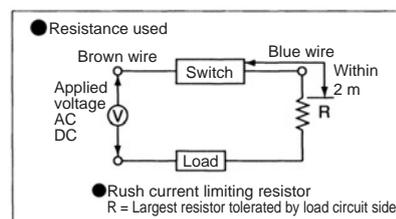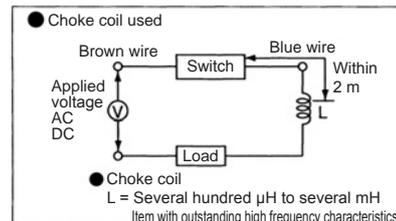
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending