

T-5312 Receiver-Controller for Pneumatic Transmission Systems

The T-5312 Receiver-Controller is designed for use in Pneumatic Transmission Systems to directly control dampers, valves and other devices. This instrument produces an output signal that is proportional to a 3 to 15 PSIG (21 to 105 kPa) pressure signal from a remotely located transmitter measuring the value of any variable, such as temperature, humidity or pressure. A two-position instrument is also available. The T-5312 is ideally suited for installations that require the controller to be mounted on a local control panel.

Shock and vibration tests have proven the durability of the T-5312. The use of flexure levers reduces hysteresis and friction. This instrument can be made to function as a direct or reverse acting controller by changing the position of the patented sliding control port.

Repositioning the sliding control port will also change the gain on proportional models and the differential on two-position models. Gain is the output pressure change in PSI per input change in PSI. Differential is the amount of change in input needed to change the output from maximum and minimum or vice versa.

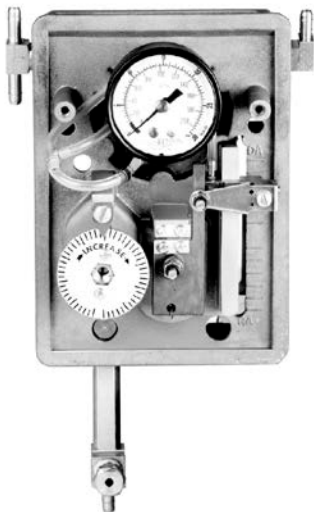
The output pressure is indicated on an integral gage that is visible through the cover. The graduated set point dial is also visible through the cover. An external dial adjustment assembly is available as a separate item.



T-5312 Receiver-Controller

Pneumatic Transmission

Pneumatic Transmission Systems are especially designed for applications that require centralization of control and indication functions.



T-5312 With Cover Removed

Specifications

Product	T-5312 Receiver-Controller	
Models	Proportional or Two-Position	
Action	Direct or Reverse (Furnished Direct Acting; Field Reversible)	
Element	Flexible Metal Diaphragm	
Instrument Ambient Temperature Limits	-20 to 150F (-29 to 65°C)	
Gain (Proportional)	Adjustable from 1:1 to 24:1; Factory Set at 8:1	
Differential (Two Position Model)	Adjustable from .2 to 4 PSI (1 to 28 kPa) Factory Set at .25 PSI (2 kPa)	
Set Point Adjustment	Visible Graduated Dial; Concealed Adjustment	
Material	Body	Die Cast Aluminum; Iridite Finish
	Cover	Die Cast Zinc; Sprayed Beige Finish
Mounting	Surface	
Air Connections	Barbed Fittings for 1/4 in. O.D. Polyethylene Tubing	
Output Pressure	0 to 30 PSIG (0 to 210 kPa); Integral Gage	
Maximum Supply Pressure	25 PSIG (175 kPa)	

"The performance specifications for this equipment are nominal and conform to generally acceptable industry standards. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products."

The system consists of a remotely located transmitter, a receiver-controller and an indicator all connected by air pressure piping. A double fitting for supply air is used to provide air pressure to the receiver-controller and, through a field supplied .007 in. (.18 mm) restrictor, to the remote transmitter. Variables such as humidity, temperature, electrical current and voltage fluctuations which may affect electric and electronic transmission signals have no effect on pneumatic transmission.

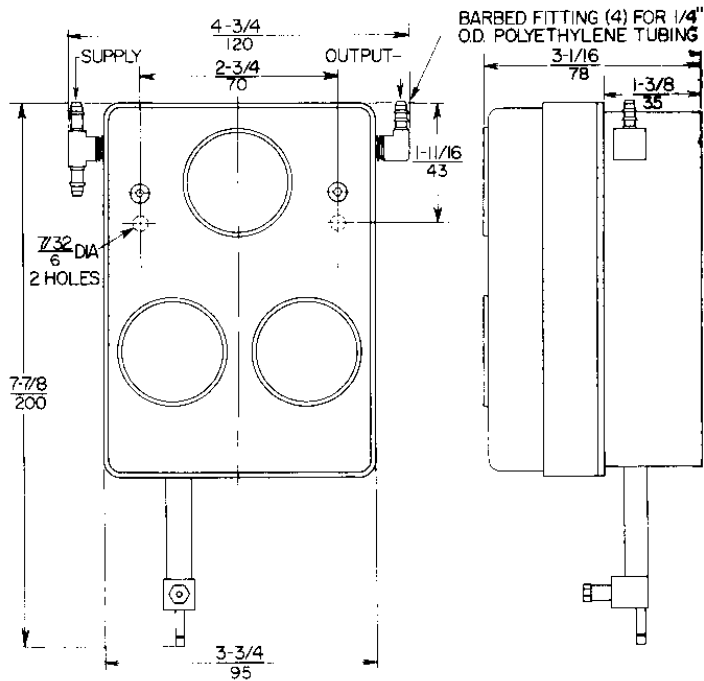
Operation

As the pressure signal from the remote transmitter increases or decreases, it is measured by the element diaphragm of the T-5312. The pressure change at the diaphragm is transmitted to a system of levers that open and close the control port. This causes the output pressure of the T-5312 to change according to the transmitted pressure signal change.

The sliding control port rail is marked DA (Direct Acting) at the top and RA (Reverse Acting) at the bottom. Moving the sliding control port upward (DA) or downward (RA) from the mid-point on the slider rail increases the gain for proportional action applications and decreases the differential for two-position applications.

Mounting

The T-5312 is designed for surface mounting; use barbed fittings provided for air connections.



Dimensions $\frac{\text{in.}}{\text{mm}}$

Set Point Dial Graduations

Transmitter Span	Graduations Represent
25C°	1/2C°
50F° or C°	1F° or C°
100F° or C°	2F° or C°
200F°	4F°



Building Efficiency

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