

## T-5800 Series

# Pneumatic Receiver-Controller

### Description

The T-5800 Pneumatic Receiver-Controller is designed for use with remote temperature, humidity, or pressure transmitters that are connected to a control variable (CV) input. The controller provides precise control of pneumatic devices. The T-5800 is capable of providing restricted supply air to low volume remote transmitters, reducing the number of air line connections needed between instruments to only one line. The "CV" input accepts the transmitted output of any pneumatic device with a calibrated output of 3 to 15 psig (21 to 105 kPa).

Refer to *T-5800 Pneumatic Receiver-Controller Product Bulletin (LIT-7171310P)* for important product information.

### Features

- available as single or dual input models with proportional or proportional plus integral (PI) control
- adjustments for gain, local set point, ratio, master input balance, and integral time are located on the controller face
- provided with hypodermic needle test points for pressure checks
- designed for surface mounting
- action and readjustment are field selectable
- air lines connect to the unit through two detachable connectors, with barbed fittings for 1/4 in. O.D. polytubing
- a clear cover protects the components from dust and dirt, and discourages tampering
- output pressure gauge

### Repair Information

If the T-5800 Pneumatic Receiver-Controller fails to operate within its specifications, replace the unit. For a replacement controller, contact the nearest Johnson Controls® representative.

### Selection Charts

#### T-5800 Pneumatic Receiver-Controller

| Code Number | Description                              |
|-------------|------------------------------------------|
| T-5800-1    | Single Input, Proportional               |
| T-5800-2    | Single Input, Proportional Plus Integral |
| T-5800-3    | Dual Input, Proportional                 |
| T-5800-4    | Dual Input, Proportional Plus Integral   |

#### Accessories and Maintenance Parts for T-5800

| Code Number | Callout | Description                        |
|-------------|---------|------------------------------------|
| T-5800-100  | ---     | Time Delay                         |
| JC 5361     | ---     | Hypodermic Needle Test Probe       |
| JC 5383A    | ---     | Calibration Kit                    |
| G-2010-5    | A       | Gauge, 0 to 30 psig (0 to 210 kPa) |
| A-4000-1037 | B       | Oil Indicating Filter Assembly     |
| T-5800-600  | C       | Connectors, Input and Output       |

### Applications

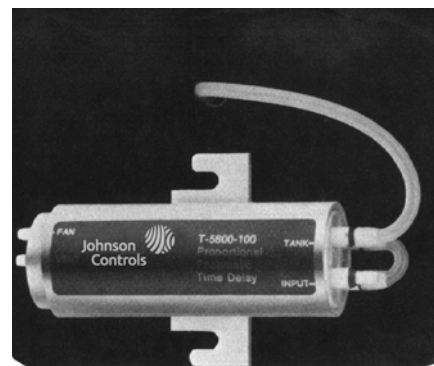
- T-5800-1 and T-5800-3 Proportional-Only Control is an accepted means of controlling variables such as:
  - discharge air temperature
  - humidity
  - water temperature
  - pressure
- T-5800-2 and T-5800-4 Proportional Plus Integral (PI) Control is an accepted means of controlling variables such as closed-loop arrangements utilizing modulating control devices where the control point offset associated with proportional-only control is undesirable.

Applications include:

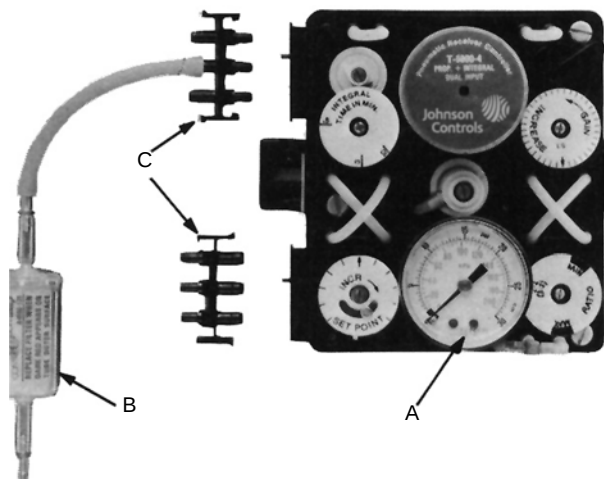
- static pressure of return fans
- return fan volume control
- chilled water temperature control
- T-5800-100 Time Delay provides adjustable times in order to allow the system to approach the proportional control point before the integral function of the T-5800 is initiated. The PI function takes over when the pressure of the time delay signal is approximately 0.5 PSI (3.5 kPa) below the integral supply pressure (9 psig).
- optional time delay available for use with the built-in automatic control cutout feature of the T-5800 Series PI Receiver Controllers.



**T-5800-4**  
Dual Input Receiver-Controller



**T-5800-100 Time Delay**



**T-5800 Maintenance Parts**

## Pneumatic Receiver-Controller (Continued)

### Technical Specifications

| T-5800 Series Pneumatic Receiver-Controller                                                |                                                     |                                                                                                          |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Action                                                                                     | T-5800-1, -2, Single Input Models                   | Direct or Reverse Acting, Field Selectable                                                               |
|                                                                                            | T-5800-3, -4, Dual Input Models                     | Direct or Reverse Acting with Direct or Reverse Readjustment, Field Selectable                           |
| Set Point Adjustment                                                                       |                                                     | Factory Set Local at Approximately 9 psig (63 kPa), Field Selectable Local or Remote                     |
| Gain                                                                                       | T-5800-1, -3<br>(Proportional-Only Models)          | Adjustable From 0.5:1 to 15:1, Factory Set at Approximately 10:1                                         |
|                                                                                            | T-5800-2, -4<br>(Proportional Plus Integral Models) | Adjustable From 0.5:1 to 15:1, Factory Set at Approximately 5:1                                          |
| Ratio<br>(T-5800-3, -4 Only)                                                               | Jumper 1:1                                          | Variable From 0.1:1 to 2.5:1, Factory Set at Approximately 1:1                                           |
|                                                                                            | Jumper 3:1                                          | Variable From 0.1:1 to 6:1, Factory Set at Approximately 3:1                                             |
| Integral Time<br>(T-5800-2, -4 Only)                                                       |                                                     | Adjustable From 0.01 to 30 Minutes (Per Repeat), Factory Set at Approximately Three Minutes              |
| Supply Pressure                                                                            |                                                     | 18 to 22 psig (126 to 154 kPa), Nominal 20 psig (140 kPa)<br>Air Supply Must Be Clean, Dry, and Oil-Free |
| Air Consumption<br>(Does Not Include<br>Air Consumption for<br>Transmitter<br>Restrictors) | T-5800-1                                            | 45 scim (12 mL/s)                                                                                        |
|                                                                                            | T-5800-2                                            | 60 scim (16 mL/s)                                                                                        |
|                                                                                            | T-5800-3                                            | 60 scim (16 mL/s)                                                                                        |
|                                                                                            | T-5800-4                                            | 75 scim (20 mL/s)                                                                                        |
| Output Capacity                                                                            |                                                     | 1000 scim                                                                                                |
| Materials                                                                                  | Body                                                | Glass-Reinforced Polypropylene                                                                           |
|                                                                                            | Cover                                               | Clear Acrylic Thermoplastic                                                                              |
| Mounting                                                                                   |                                                     | Surface                                                                                                  |
| Air Connections                                                                            |                                                     | Two Detachable Connectors with Barbed Fittings for 1/4 in. O.D. Poly tubing                              |
| Ambient Operating<br>Limits                                                                | Temperature                                         | 50 to 120°F (10 to 49°C)                                                                                 |
|                                                                                            | Humidity                                            | 10 to 90% RH at Maximum Dew Point or 85°F (29°C)                                                         |
| Ambient Storage Temperature Limits                                                         |                                                     | -20 to 150°F (-29 to 66°C)                                                                               |