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Single Input Receiver-Controller

RETROLINE[®]

easily replaces:

- Barber-Coleman
- Johnson Controls
- Honeywell
- Robertshaw
- Seibe



195 Single Input Receiver-Controller.

Description

The 195 Single Input Receiver-Controller is a pneumatic controller which receives one pneumatic input, and produces a pneumatic output signal based on the net pneumatic input and the mechanical settings of the setpoint and percent proportional band. This controller can be easily changed from direct to reverse acting.

Retroline Receiver-Controller (195-1000) includes decals and installation instructions to replace competitive models.

Features

- Rugged proven design
- Plug-in air connections for ease of installation, calibration, and service
- Internal restrictors for transmitter inputs
- Stick-on scales included for setpoint dial in standard transmitter ranges
- Large, easy-to-read scales on all adjustments
- Calibration card for converting transmitter range to 3 to 15 psi (21 to 103 kPa) signal
- Tamper-resistant cover

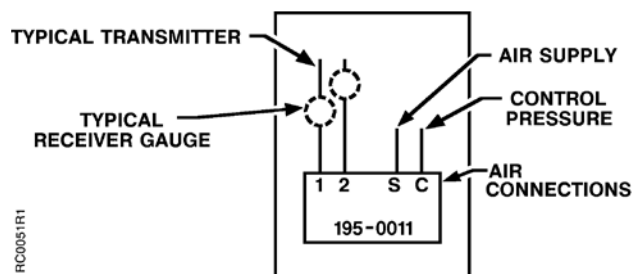
Options

- Retroline products for replacing competitive products
- Pressure Gauge (order separately, see page C-21)

Applications

The 195 Single Input Receiver-Controller is a one-input, direct/reverse acting instrument used to control temperatures, humidity, and pressure of mechanical equipment in commercial and industrial facilities.

Typical Connections



195 Specifications

Action
 Input #1 Direct
 Input #2 Reverse

Pneumatic Inputs 3 to 15 psi (21 to 103 kPa)

Control Output 0 psi (0 kPa) to supply pressure 22 psi (152 kPa)

Operating Ambient Temperature Range 40 to 120°F (4 to 49°C)

Supply Pressure
 Operating 22 psi (152 kPa)
 Maximum Safe 30 psi (207 kPa)

% Proportional Band Adjustment Range 2 to 20% for a 5 psi (34 kPa) control pressure change

Air Consumption 60 scim (17 ml/s), *not including transmitters*

Air Capacity 2 psi (14 kPa) Pressure Change at
 9 psi (62 kPa) control pressure
 Supply 640 scim (175 ml/s)
 Exhaust 590 scim (161 ml/s)

Mounting Surface

Air Connections
 Barb fittings for 1/4" (6 mm) OD polyethylene tubing. Two plug-in connectors are provided; one for the direct acting and the reverse acting transmitter inputs and one for supply and control lines. 1/8" NPT connection provided for control pressure gauge (gauge not included).

Case Material Lexan, 20% glass-filled

Dimensions 6.75" W x 5.69" H x 3.5" D
 (171 mm W x 144 mm H x 89 mm D)

Shipping Weight 3.1 lb. (1.4 kg)

195 Product Ordering

| Description | Part No. |
|----------------------------------|-----------------|
| Single Input Receiver-Controller | 195-0011 |

RETROLINE®

| Manufacturer | Manufacturer Part No. | Part No. ¹ |
|------------------|-----------------------|-----------------------|
| Barber-Coleman | RKS-1001 | 195-1000 |
| Barber-Coleman | RKS-2001 | 195-1000 |
| Barber-Coleman | RKS-5001 | 195-1000 |
| Honeywell | RP908A | 195-1000 |
| Honeywell | RP920A | 195-1000 |
| Johnson Controls | T-5800-1 | 195-1000 |

Ordering Note

- Includes **195-0011** plus decals to replace any competitive single input receiver-controller.

Accessories & Service Kits

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Controllers & Transmitters

Multiple Input Receiver-Controller

RETROLINE®

easily replaces:

- Barber-Coleman
- Johnson Controls
- Honeywell
- Robertshaw
- Seibe



195 Multiple Input Receiver-Controller with Control Pressure Gauge.

Description

The 195 Multiple Input Receiver-Controller is a pneumatic controller that receives up to three pneumatic inputs and produces a pneumatic output signal based on the net pneumatic input and the setpoint, percent proportional band, and authority settings. The Controller can be easily changed from direct to reverse acting.

Retroline Receiver-Controller (195-1000) includes decals and installation instructions to replace competitive models.

Features

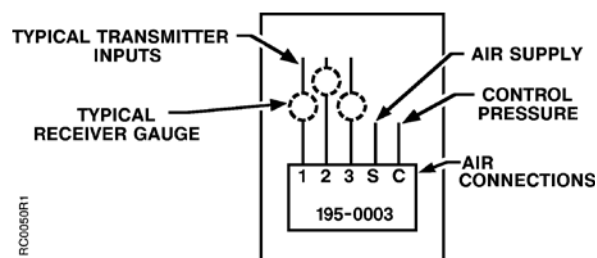
- Rugged proven design
- Plug-in air connections for ease of installation, calibration, and service
- Internal restrictors for transmitter inputs
- Stick-on scales included for setpoint dial in standard transmitter ranges
- Large, easy-to-read scales on all adjustments
- Calibration card for converting transmitter range to 3 to 15 psi (21 to 103 kPa) signal
- 0 to 30 psi (0 to 200 kPa) Pressure Gauge
- Retroline products for replacing competitive products

Applications

The 195 Multiple Input Receiver-Controller is commonly used when the setpoint needs to be automatically reset based on a separate input; can also be used as a single input device.

Example: Change hot water supply temperature setpoint based on outside air temperature.

Typical Connections



Temperature Transmitters

RETROLINE®

easily replaces:

- Barber-Coleman
- Johnson Controls
- Honeywell
- Robertshaw
- Seibe



184-0340 Room Temperature Transmitter.



184-0005 Temperature Transmitter with Remote Bulb.



184 Temperature Transmitter with Averaging Bulb.



184 Temperature Transmitter with Rigid Bulb.

Description

The 184 Temperature Transmitters are direct acting, one-pipe instruments that sense temperature and transmit a proportional 3 to 15 psi (21 to 103 kPa) pneumatic signal to a remotely located receiver gauge and/or receiver controller. Temperature Transmitters operate on the force-balance principle, using internal feedback for excellent linearity and accuracy.

Retroline transmitters easily replace any competitive model. Refer to the appropriate product to locate the Retroline replacement.

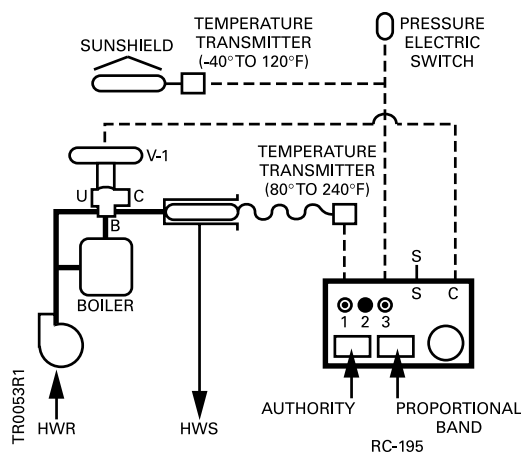
Features

- 1-pipe, direct acting
- Rapid response to temperature changes over their full range
- Available in a variety of sensing elements and temperature ranges
- Available with rigid bulb, remote averaging bulb, and room transmitter
- Internal feedback for excellent linearity and accuracy

Applications

The 184 Temperature Transmitters can be used for a variety of applications to monitor temperature and are ideal for those requiring indication with a receiver-controller.

Application Drawing



Hot water temperature setpoint reset.

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Controllers & Transmitters

Retroline® 184 Temperature Transmitters Specifications

Action Direct

Output Air Pressure 3 to 15 psi (21 to 103 kPa)

Ambient Temperature Range 40 to 120°F (4.4 to 49°C)

Input (supply) Air Pressure

Restrictor Size 40 scim (11 ml/s)

Calibration Pressure 22± 1.0 psi (152± 6.9 kPa)

Maximum 30 psi (207 kPa)

Thermal System

Room Bimetal

Rigid Bulb Rod and tube

Remote Bulb Liquid-filled

Air Consumption 35 scim (10 ml/s)

Air Connections 1/8" NPT (Except for room type)

Mounting

Room Wall terminal

Rigid Bulb Mounting flange

Remote Bulb Mounting flange or well bracket mounting kit

Averaging Bulb Mounting flange

Cover Finish

Room Desert Beige, plastic

Rigid, Averaging and Remote Bulb Gray

Dimensions

Room 2.16" W x 3.35" H x 1.59" D
(55 mm W x 85 mm H x 40 mm D)

Averaging Bulb/Remote Bulb 1.875" W x 3" H x 1.69" D
(48 mm W x 76 mm H x 33 mm D)

Shipping Weights

Room 0.83 lb. (0.38 kg)

Rigid Bulb 1.5 lb. (0.68 kg)

Remote Bulb 2.0 lb. (0.91 kg)

Averaging Bulb with Armored Capillary 3.0 lb. (1.36 kg)

Averaging Bulb 2.0 lb. (0.91 kg)

RETROLINE® Product Ordering

| Manufacturer Part No. | Description | Temperature Range | Part No. |
|-------------------------|--|-------------------------------|-----------------|
| Honeywell | | | |
| LP914A1003 | Rigid Bulb Transmitter 12" bulb (255 mm) | -40 to +160°F (-40 to +371°C) | 184-0120 |
| LP914A1052 | Rigid Bulb Transmitter 6" bulb (152 mm) | 40 to 240°F (4 to 116°C) | 184-0121 |
| TP974A2000 | Room Temperature Transmitter | 50 to 100°F (10 to 38°C) | 184-0126 |
| T5002-201 | Room Temperature Transmitter | 50 to 100°F (10 to 38°C) | 184-0127 |
| Johnson Controls | | | |
| T5210-1002 | Remote Bulb Transmitter 1/4" x 7-5/8" bulb (6.4 mm x 194 mm) w/ 8" (203 mm) capillary | 0 to 100°F (-18 to 38°C) | 184-0123 |
| T5210-1004 | Remote Bulb Transmitter 1/4" x 7-5/8" bulb (6 mm x 194 mm) w/ 8" (203 mm) capillary | 40 to 240°F (4 to 116°C) | 184-0122 |
| T5210-1007 | Averaging Bulb Transmitter 3/32" x 18-3/4" bulb (2.4 mm x 5.7 m) w/ 12" (0.305 m) capillary | 50 to 150°F (10 to 38°C) | 184-0129 |
| T5210-1009 | Averaging Bulb Transmitter 3/32" x 18-3/4" bulb (2 mm x 5.7 m) w/ 12" (0.305 m) capillary | 0 to 100°F (-18 to +38°C) | 184-0125 |
| T5210-1113 | Remote Bulb Transmitter 1/4" x 7-5/8" bulb (6 mm x 194 mm) w/ 50" (1.27 m) capillary | -40 to +160°F (-40 to +71°C) | 184-0124 |
| Robertshaw | | | |
| 2220-053 | Room Temperature Transmitter | 50 to 90°F (10 to 32°C) | 184-0128 |

Accessories & Service Kits

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Room and Duct Humidity Transmitters



186-0043 Room Humidity Transmitter.



186-0089 Duct Humidity Transmitter.

Description

The 186 Room and Duct Transmitters are one-pipe, direct acting pneumatic instruments that sense space humidity and transmit a 3 to 15 psi (21 to 103 kPa) pneumatic signal to a remote receiver gauge and/or receiver-controller to read percent relative humidity.

Features

- Inorganic sensing element for rapid response to humidity changes
- Bimetal temperature compensation minimizes temperature effects
- Cover included with Room Transmitter
- Available for room mounting (vertical) and duct mounting that is at least 6-inches (152 mm) high and 6-1/2-inches (165 mm) deep

Applications

The 186 Room and Duct Humidity Transmitters operate on a force-balance principle with internal feedback to obtain linearity to accurately sense relative humidity.

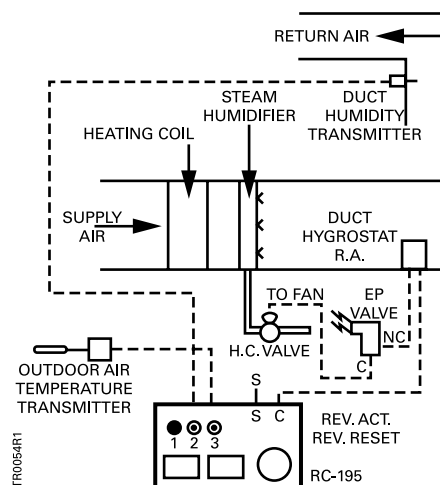
The transmitter output can be sent to a receiver-controller for control of an air conditioning or process control system

Recommendation

Room: Air velocity must be at least 30 FPM (0.15m/s) and the transmitter should be located where it senses actual *room conditions* (away from doors, equipment, etc.).

Duct: Duct transmitters should be used whenever possible in the return air duct.

Application Drawing



Typical Application of Return Air Duct

186 Humidity Transmitters Specifications

Action Direct
RH Range 20 to 80% RH
Maximum Operating Temperature 135°F (57°C)
Supply Pressure
 Maximum 30 psi (207 kPa)
 Normal Operating 22± 1.0 psi (152± 6.89 kPa)
Effect of 10°F (5.6°C)
Temperature Change Shift of 1% RH
Air Consumption 35 scim (9.6 ml/s)
Output Pressure 3 to 15 psi (21 to 103kPa)
Air Connections 1/8" (3 mm)

Mounting

Room Wall terminal
 Duct Duct at least 6" H x 6.5" D
 (152 mm H x 165 mm D)

Standard Room Cover Finish Desert Beige, plastic

Duct Box

Material Galvanized Steel

Air Connections 1/4" (6 mm) barbed connection

Dimensions

Room 2.06" W x 3.19" H x 1.37 D
 (53 mm W x 81 mm H x 35 mm D)

Duct 4.5" W x 5.87" W x 6" D
 (114 mm W x 149 mm W x 152 mm D)

Shipping Weights

Room 0.84 lb. (0.38 kg)

Duct 3.14 lb. (1.42 kg)

186 Humidity Transmitters Product Ordering

| Description | Part No. |
|---------------------------|----------|
| Duct Humidity Transmitter | 186-0089 |
| Room Humidity Transmitter | 186-0043 |

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Low Differential Pressure Transmitters



141 Low Differential Pressure Transmitter.

Description

The 141 Low Differential Pressure Transmitter is a compact, direct acting, one-pipe device that converts a differential pressure input into a proportional air signal. The input can be either static or velocity pressure differentials of a positive or negative type.

Features

- 1-pipe
- Two input ports (HI and LO)
- One supply pressure port (SIG)
- Rugged construction

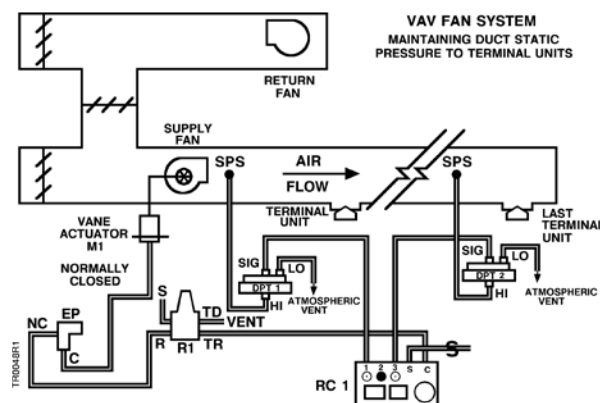
Applications

The 141 Low Differential Pressure Transmitter operates on the force-balance principal and can be used to indicate and/or control static or velocity differential pressures in ducts, across fans, coils, filters, and between any two reference points; can also indicate velocity pressure in duct work. The output signal can be sent to a remotely located, receiver-controller, receiver gauge, and/or sensitive switching pneumatic relay and pressure switch.

Recommendation

Use both of the HI and LO ports for differential pressure applications; either the HI or LO port can be used for static pressure applications.

Application Drawing



Typical Application of Duct Static Pressure Control

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Controllers & Transmitters

141 Specifications

| | |
|--|-----------------------------|
| Action | Direct |
| Input (Supply) Air Pressure | |
| Normal..... | 20 psi (138 kPa) |
| Maximum..... | 30 psi (207 kPa) |
| Overpressure in HI and LO Ports | 30" W.G. (7.5 kPa) |
| Output Pressure¹ | 3 to 15 psi (21 to 103 kPa) |
| Air Consumption | 35 scim (9.6 ml/s) |
| Operating Ambient Temperature | |
| Minimum..... | 40°F (4°C) |
| Maximum..... | 140°F (60°C) |

1. Linear for differential pressure inputs. Nonlinear for velocity. Refer to the velocity conversion chart on the following page for more details.

| | |
|------------------------------------|--|
| Calibration | Zero adjust |
| Accuracy | |
| Full Range..... | ±5% full scale |
| Mid Range..... | ±2% full scale |
| Air Connections | |
| Sensing Line..... | 3/8" (10 mm) OD polyethylene |
| Supply Air | 1/4" (6 mm) OD polyethylene |
| Maximum Sensing Line Length | |
| 1/4" (6 mm) OD polyethylene..... | 200 ft. (61 m) |
| 3/8" (10 mm) OD polyethylene..... | 500 ft. (152 m) |
| Materials | ABS plastic body and rubber diaphragm |
| Mounting | Horizontal only |
| Dimensions | 2.69" H x 5.31" W x 5.56" D (68 mm H x 135 mm W x 141 mm D) |
| Shipping Weight | 0.5 lb. (0.23 kg) |

141 Product Ordering

| Differential Input Pressure | Part No. |
|--------------------------------------|-----------------|
| -0.05 to +0.2" W.G. (-12 to +50 Pa) | 141-0590 |
| -0.5 to +0.5" W.G. (-125 to +125 Pa) | 141-0591 |
| 0 to 3" W.G. (0 to 750 Pa) | 141-0592 |
| 0 to 10" W.G. (0 to 2.5 kPa) | 141-0593 |

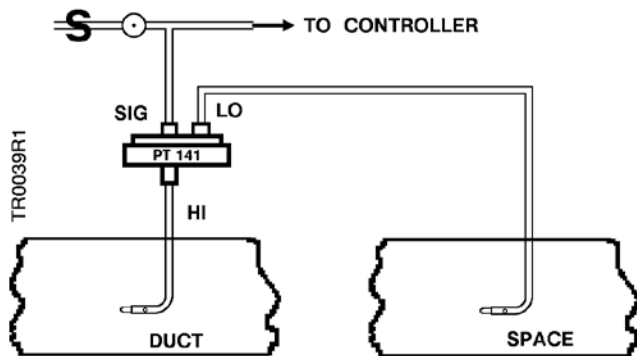
141 Accessories Product Ordering

| Control Symbol | Description | Part No. |
|----------------|--|-----------------|
| DPT1 | 141 Low Differential Pressure Transmitter 0 to 10" W.G. (0 to 2.5 kPa) | 141-0593 |
| DPT2 | 141 Low Differential Pressure Transmitter 0 to 3" W.G. (0 to 750 kPa) | 141-0592 |
| SPS | Static Pressure Sensor (2 required) | 269-062 |
| RC1 | 195 Receiver-Controller | 195-0003 |
| G2 | 2-1/2" Receiver Gauge - 0 to 3" W.G. | 142-0266 |
| M1 | Fan Vane Actuator | as req. |
| R1 | Multi-purpose (reversing) Relay | 243-0009 |

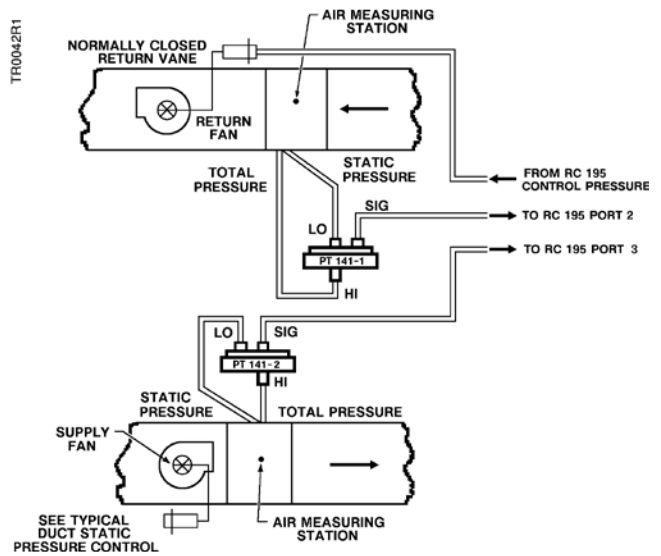
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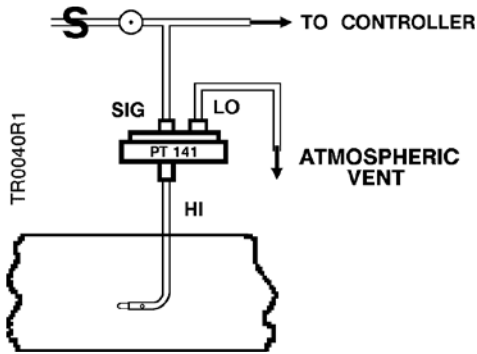
Typical Static Pressure Differential Control



Typical Differential Velocity Pressure Control



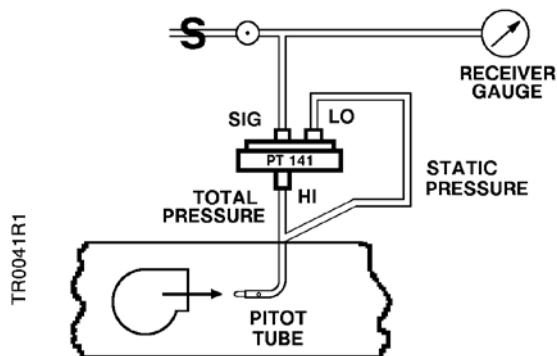
Typical Static Pressure Control



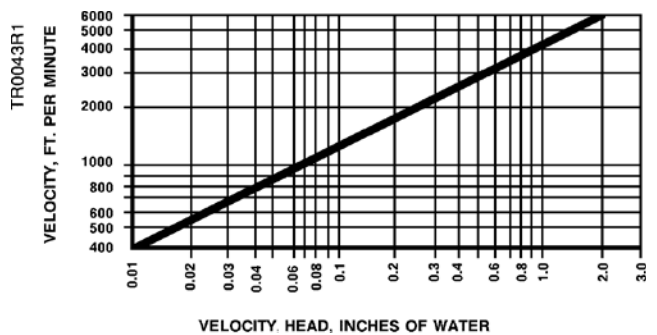
Velocity Pressure Control is recommended when the supply fan does not exceed 25,000 CFM (11,800 l/s) and the downturn ratio (min./max. return fan CFM) does not exceed 0.5 (0.2 l/s).

Example: If the return fan CFM varies from 8,000 to 20,000 CFM (3,776 to 9,440 l/s), the turndown ratio is 0.4 (0.2 l/s). The 141 Velocity Pressure Transmitter, with square root extractor, is recommended for these conditions.

Typical Velocity Pressure' Indication



Standard Pitot Tube



VELOCITY PRESSURE = TOTAL PRESSURE - STATIC PRESSURE

This chart illustrates the relationship between velocity and velocity head for standard air.

1. Allow 10 duct diameters of straight duct before (and 4 duct diameters after) the pitot tube to provide laminar air flow.

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Receiver Gauges



142 Pneumatic Receiver Gauges.

Description

Used for visual indication of the value of a variable required to report system or functional operating status, Receiver Gauges are available as 1-1/2-inch (38 mm), 2-1/2-inch (64 mm), and 3-1/2-inch (89 mm) diameter gauges with a barb fitting for 1/4-inch (6 mm) OD polyethylene tubing.

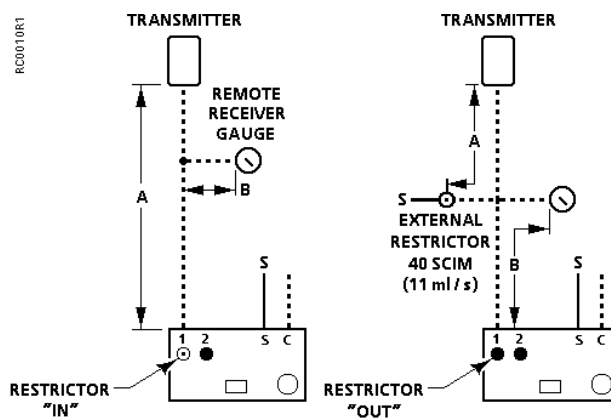
Features

- Easy-to-read dials
- Available in variety of control ranges

Applications

Receiver Gauges are mounted on a central control panel and respond to pneumatic signals from a remotely located transmitter used to measure temperatures, humidity, and pressures of mechanical equipment.

Application Drawing



DISTANCE "A" NOT TO EXCEED 300 FEET (92 m)
DISTANCE "A" + "B" NOT TO EXCEED 1000 FEET (306 m)

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Controllers & Transmitters

Static Pressure and Liquid Level Regulators



269 Static Pressure and Liquid Level Regulator.

Description

The 269 Static Pressure and Liquid Level Regulator is a direct acting, pneumatic differential controller that measures static or head pressure, and is used to directly control inlet vanes, damper actuators, or similar devices.

Features

- Removable restriction for ease of servicing
- Integral mounting bracket for horizontal mounting
- Adjustable setpoint
- Many models available covering a wide range of pressures

Applications

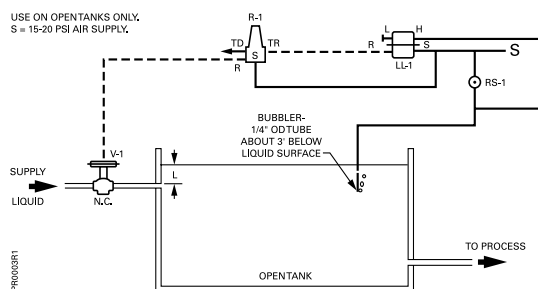
269 Static Pressure Regulator

The 269 Static Pressure Regulator can be used to control velocity, static, or differential pressure to pneumatically control a damper or similar device.

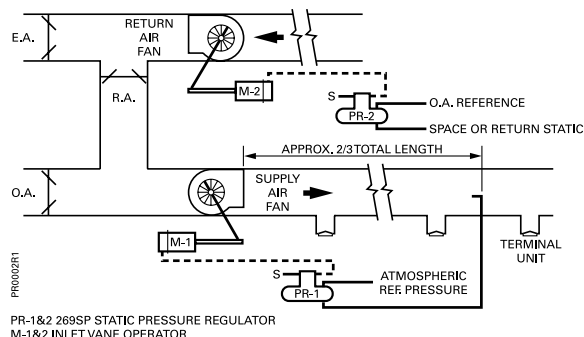
269 Liquid Level Regulator

The 269 Liquid Level Regulator is used to maintain liquid level in an industrial process by pneumatically controlling a valve.

Application Drawings



Typical Application of Liquid Level Regulation



Typical Application of Static Pressure

269 Regulators Specifications

Control Action Direct

Supply Pressure

Normal 20 psi (140 kPa)

Maximum 30 psi (207 kPa)

Maximum Ambient Temperature 120°F (50°C)

Maximum Allowable Pressure

“H” and “L” Port 10" W.G. (2.5 kPa) Differential

Number of Turns for Setpoint Change of 1" W.G.

269-1066 approx. 6 turns

269-1067 approx. 1/2 turn

269-1068 approx. 6 turns

269-1069 approx. 1/4 turn

Response

269-1066, 269-1067, 269-1068 0.005" W.G. (1.2 Pa)

269-1069 0.01" W.G. (2.5 Pa)

Air Connections Barb fitting for 1/4" (6 mm) OD polyethylene tubing

Dimensions 3.125" H x 3.25" W x 3.31" D
(79 mm H x 83 mm W x 84 mm D)

Shipping Weight 1.5 lb. (0.07 kg)

269 Regulators Product Ordering

| Differential Range | Sensitivity (Fixed) | Mounting Position | Part No. |
|--|----------------------------------|-------------------|-----------------|
| 0.05 to 1.00" W.G. (12 to 249 Pa) | 2.25 psi/0.01" W.G. (6.2 kPa/Pa) | Upright | 269-1066 |
| 0.20 to 1.00" W.G. (50 to 249 Pa) | 40 scim restrictor | Upside Down | |
| 0.05 to 3.00" W.G. (12 to 746 Pa) | 1 psi/0.01" W.G. (2.8 kPa/Pa) | Upright | 269-1067 |
| 0.20 to 3.00" W.G. (50 to 746 Pa) | 40 scim restrictor | Upside Down | |
| 0.05 to 1.00" W.G. (12 to 249 Pa) | 2.25 psi/0.01" W.G. (6.2 kPa/Pa) | Upright | 269-1068 |
| 0.20 to 1.00" W.G. (50 to 249 Pa) | 80 scim restrictor | Upside Down | |
| Liquid Level ¹ 1.00 to 8.00" W.G. (250 to 1990 Pa) | 1 psi/0.1" W.G. (0.3 kPa/Pa) | Upright | 269-1069 |
| | 40 scim restrictor | Upside Down | |

Ordering Note

1. This is not a differential range; “H” and “L” ports are internally connected.





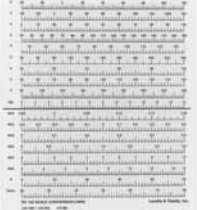
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Controllers & Transmitters

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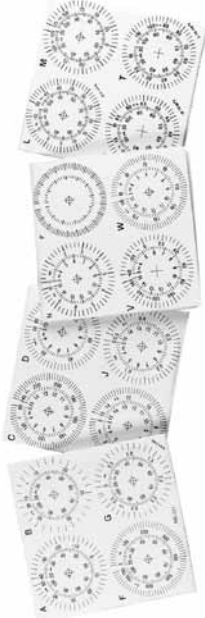





Accessories & Service Kits

| | Description | Product Group | Quantity | Part No. | |
|---|---|---------------------------------|----------|----------------|----------------|
| Direct Mount Controller | | | | | |
|  | Immersion Well. 1/2" NPT x 6" long | Direct Mount Controllers | 1 | ARG150U | |
| All Pneumatic Products | | | | | |
|  | Pneumatic Spring Clamp. | All | 1 | 531-833 | |
| 185/195 Receiver-Controllers | | | | | |
|  195-098 | 185/195 Receiver-Controller Simulator. Used for setup and calibration. Comes complete with a carrying case and the following parts: | | | | |
| | | • One gauge/switch assembly | 185, 195 | 1 | 195-098 |
| | | • Two gauge/switch assemblies | 185, 195 | 1 | 195-099 |
| | | • Three gauge/switch assemblies | 185, 195 | 1 | 195-100 |
|  | Receiver-Controller Calibration Slide Rule. Used to calculate proportional band and control point authority. | 185, 195 | 1 | 153-054 | |
|  | Calibration Card. Shows transmitter pressures for various analog ranges to assist in calibration. | 185, 195 | 1 | 144-022 | |

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Controllers & Transmitters












Accessories & Service Kits

| | Description | Product Group | Quantity | Part No. |
|--|---|---------------------|----------|-----------------|
| 185/195 Receiver-Controllers | | | | |
|  <p>Ordering Notes</p> <ul style="list-style-type: none"> • Add Scale ID as suffix to Part No. • Indicate English or Metric units. | Setpoint Dial Sheets. Direct Acting and Reverse Acting. | 195 | 4 Sheets | 195-130 |
| | English Units | Metric Units | | Scale ID |
| | -40 to +120°F | -40 to +50°C | | A |
| | 50 to 100°F | 10 to 38°C | | B |
| | 80 to 240°F | 26 to 117°C | | C |
| | 20 to 80% RH | -18 to +38°C | | D |
| | 0 to 100°F | 1 to 58°C | | E |
| | 35 to 135°F | 0 to 750 Pa | | F |
| | 0 to 3 W.G. | 0 to 3.75 kPa | | G |
| | 0 to 15 W.G. | 20 to 80% RH | | H |
| | 0 to 0.5 W.G. | 0 to 125 Pa | | J |
| | Blank 10 divisions | Blank 9 divisions | | K (DA) |
| | Blank 16 divisions | Blank 11 divisions | | K (RA) |
| | -0.05 to ±0.2" W.G. | -12.5 to +50 Pa | | L |
| | -0.5 to +0.5" W.G. | -125 to +125 Pa | | M |
| | 0 to 10" W.G. | 0 to 2.5 kPa | | N |
| | Blank 20 divisions | Blank 15 divisions | | P |
| 0 to 50 psi | 0 to 345 kPa | | R | |
| 50 to 150°F | 10 to 66°C | | S | |
| 40 to 240°F | 4 to 116°C | | T | |
| -40 to +160°F | -40 to +71°C | | V | |
| 30 to 190°F | -1 to +88°C | | W | |
|  | Receiver-Controller Restriction Kit. Includes three input restriction plates, one pilot relay restriction plate, gaskets, and two screws. | 195 | 1 Kit | 195-066 |
|  | Receiver-Controller Connector Kit. Includes two plug-in connector assemblies, one 3-barb input connector assembly. | | | |
| | • Multiple-Input | 195 | 1 Kit | 195-067 |
|  | Termination Strip. For numbered ports 1 through 10, straight through connections for 1/4" (6 mm) OD polyethylene tubing. | 195 | 1 | 195-082 |
|  | Pressure Gauge. Dual Scale 0 to 30 psig (0 to 200 kPa) 12" NPT male thread (back) | 184, 195 | 1 | 142-0373 |
|  | In-Line Air Filter. | 195 | 1 | 908-033 |

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Controllers & Transmitters




Accessories & Service Kits

| | Description | Temperature Range | | Part No. |
|---|---|------------------------------|-----------------|-----------------|
| 184 Temperature Transmitters | | | | |
|  | Rigid Bulb Transmitter. Bulb 1/4" Dia. x 9" L (6 mm Dia. x 229 mm L) | 35 to 135°F (2 to 57°C) | | 184-0001 |
| | | 50 to 100°F (10 to 38°C) | | 184-0002 |
| | | 80 to 240°F (27 to 116°C) | | 184-0003 |
| | | 0 to 100°F (-18 to +38°C) | | 184-0028 |
|  | Remote Averaging Bulb Transmitter. 3/32" Dia. x 20' L (2 mm Dia. x 6.1 m L) with 12" (305 mm) Capillary | 35 to 135°F (2 to 57°C) | | 184-0004 |
| | | 0 to 100°F (-18 to +38°C) | | 184-0048 |
|  | Remote Bulb Transmitter. 1/4" Dia. x 4" L (6 mm Dia. x 102 mm L) 3' (0.92 m) Capillary | -40 to +120°F (-40 to +49°C) | | 184-0005 |
| | | 50 to 100°F (10 to 38°C) | | 184-0018 |
| | | 80 to 240°F (27 to 116°C) | | 184-0014 |
| | | 0 to 100°F (-18 to +38°C) | | 184-0036 |
| | | -10 to +65°F (-23 to +18°C) | | 184-0015 |
| | | 35 to 135°F (2 to 57°C) | | 184-0034 |
| | | 30 to 190°F (-1 to +88°C) | | 184-0041 |
| | Description | Product Group | Quantity | Part No. |
|  | Remote Bulb Transmitter. 1/4" Dia. x 4" L (6 mm Dia. x 102 mm L) 3' (0.92 m) Armored Capillary | 184 | 1 | 184-0006 |
|  | Room Transmitter. With cover and wall plate (180-443) | 184 | 1 | 184-0340 |
|  | Restrictor Tees. 40 scim for 1/4" (6 mm) OD plastic. Required for 195 Receiver-Controller only when total transmitter line is greater than 300' (91 m) long. | 184 | Package of 5 | 184-114 |
|  | In-line Restrictors. 40 scim (11 ml/s) | 184 | Package of 5 | 184-117 |
|  | Well Mounting Bracket Kit. | 184 | 1 | 184-105 |
|  | Copper Well. 1/4" D x 4" L (6 mm D x 102 mm L) | 184 | 1 | 184-119 |
|  | Stainless Steel Well. 1/4" D x 4" L (6 mm D x 102 mm L) | 184 | 1 | 184-118 |
|  | Outdoor Bulb Shield. 9" (229 mm) L | 184 | 1 | 134-084 |

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Controllers & Transmitters

Accessories & Service Kits

| | Description | Product Group | Quantity | Part No. |
|---|---|---------------|--------------|----------------|
| 141 Air Velocity Transmitters | | | | |
|  | Restrictor Tees. 40 scim for 1/4" (6 mm) OD plastic. Required for 195 Receiver-Controller only when total transmitter line is greater than 300' (91 m) long. | 141 | Package of 5 | 184-114 |
|  | Static Pressure Sensor Probe. | 141 | 1 | 269-062 |
|  | Static Pressure Probe Kit. | SW269 | 1 | 189-142 |

