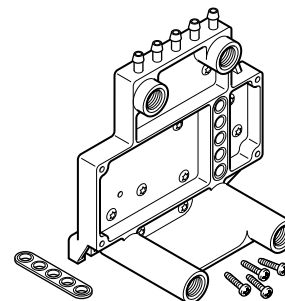


## Mounting Base General Instructions

### Application

The P541-BASE is a mounting base designed to permit stand-alone field-mounting of either the P541 (2341-501), direct acting — or the P541-RA (2341-502), reverse acting — three-input receiver-controller. It also provides for the mounting of up to two receiver-gauges and two pressure gauges.

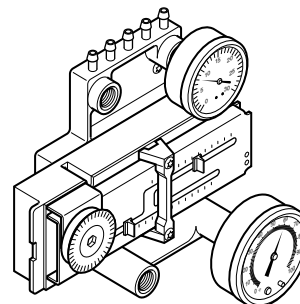
The compact size, versatility, and ample capability of a base-mounted P541 or P541-RA receiver-controller allows field-mounting of same for either new construction; additions or modifications to existing control systems; or the replacement of most existing receiver-controllers.



P541-BASE

### Features

- Features compact size and ample capacity when combined with a mounted P541 series receiver-controller
- Durable glass-filled nylon construction
- Barbed connections for 1/4 in. (6.8 mm) poly tubing
- Ports for gauges with 1/8 in. MNPT, center-back connections



P541-BASE  
with one P-541 Series Receiver-Controller,  
one 1-1/2" Pressure Gauge, and one 2"  
Receiver-Gauge mounted

### Applicable Literature

- P541, Receiver-Controller General Instructions, F-23895
- P341, Receiver-Controller General Instructions, F-23894
- Pneumatic Products Catalog, F-27383

# SPECIFICATIONS

**Construction:** : Glass-filled nylon.

**Maximum Air Pressure:** : 30 psig (207 kPa).

**Ambient Temperature Limits:** :

**Shipping and Storage,** , -40 to 140° F (-40 to 60° C).

**Operating,** , 35 to 140° F (2 to 60° C).

**Air Connections:** : Five barbed fittings for 1/4 in. (6.4 mm) poly tubing.

**Gauge Ports:** : Four ports for center-back gauges with 1/8 in. MNPT fittings.

**Mounting Dimensions (with P541 Series Controller and Gauges Mounted):** :  
5-3/8 H x 5-13/16 W x approx. 3-3/4 D in. (137 H x 148 W x approx. 95 D mm).

## ACCESSORIES

See Accessories Chart, Table-1.

**Table-1 Accessories Chart.**

Schneider Electric Model No.	Schneider Electric Uni-Line Model No.	Description
K541	22-171	Cover for P541 series receiver-controllers
N100-0010	21-038	Restrictor tee for 1/4 in. (6.4 mm) O.D. poly tubing, 1.0 SCFH (plastic, barbed, red)
N4-32	20-944	Restrictor tee for 1/4 in. (6.4 mm) O.D. copper tubing (brass compression type)
N100-2501	21-153	Restrictor, in-line, for 1/4 in. (6.4 mm) O.D. poly tubing, 1.0 SCFH (plastic, red)
A253-12	2422-003	Receiver-gauge, 2 in. diameter (0 to 100° F). Other ranges may be displayed with the selection of a 23-XX series adhesive receiver-gauge dial.
23-XX	NA	Series of adhesive receiver-gauge dials to fit A253-12 receiver-gauges, to indicate ranges other than 0 to 100° F (printed on dial face).
A201-02	2420-001	Pressure gauge, 0 to 30 psi scale, 1-1/2 in. diameter (Robertshaw logo)
AL-362	NA	Pressure gauge, 0 to 30 psi (0 to 200 kPa), 1-1/2 in. diameter (Barber-Colman logo)
M-101	20-983	1/8" MPT plug (for unused gauge ports)
MCS-G	22-133	Gasket (one is included with P541-BASE)
MCS-SCREW	22-134	No. 6, 1/2 in. (13 mm) long, Plastite double-helix screw, for attaching P541 or P541-RA receiver-controller to P541-BASE (four included with P541-BASE)

## TOOLS

Appropriate drill and drill bit for mounting screws

Appropriate screwdrivers and wrenches

# INSTALLATION

## Inspection

Inspect the package for damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the package and inspect the device for obvious damage. Return damaged products.

## Requirements

- Piping diagrams
- Tools (not provided):
  - Appropriate drill and drill bit for mounting screws
  - Appropriate screwdrivers and wrenches
- Training: Installer must be a qualified, experienced technician
- Other accessories as appropriate

---

**Caution:**

- Use a refrigerated air dryer, particulate filter, and a coalescing filter to provide the required clean, dry, oil-free air (refer to EN-123).
  - The compressor oil must be non-paraffin, mineral base or naphtha base. The use of synthetic or paraffin base oils will destroy pneumatic controls and void the warranty.
  - Make all connections in accordance with the piping diagram.
  - Avoid locations where excessive oil, dust, moisture, corrosive fumes or vibration is present.
- 

## Mounting

The mounting base provides for the mounting of one P541 or P541-RA receiver-controller and four gauges having 1/8 in. MNPT, center-back connections. Refer to Figure-1.

### Gauges

A selection of gauges may be installed onto the mounting base. Thread the desired gauges into the 1/8 in. MNPT fittings and tighten, using an appropriate wrench. Refer to Figure-1.

---

**Caution:** Do not overtighten when installing a gauge or plug onto the mounting base. Overtightening can cause the port to crack.

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The gauges, and the ports to which they may be mounted, are as follows:

- Two 2 in. diameter, 3 to 15 psig (21 to 103 kPa) receiver-gauges for the primary (S) and secondary (R) transmitter input ports.
- Two 1-1/2 in. diameter, 0 to 30 psig (0 to 207 kPa) pressure gauges for the branch output signal port (B) and the remote control-point adjustment, input signal port (C).

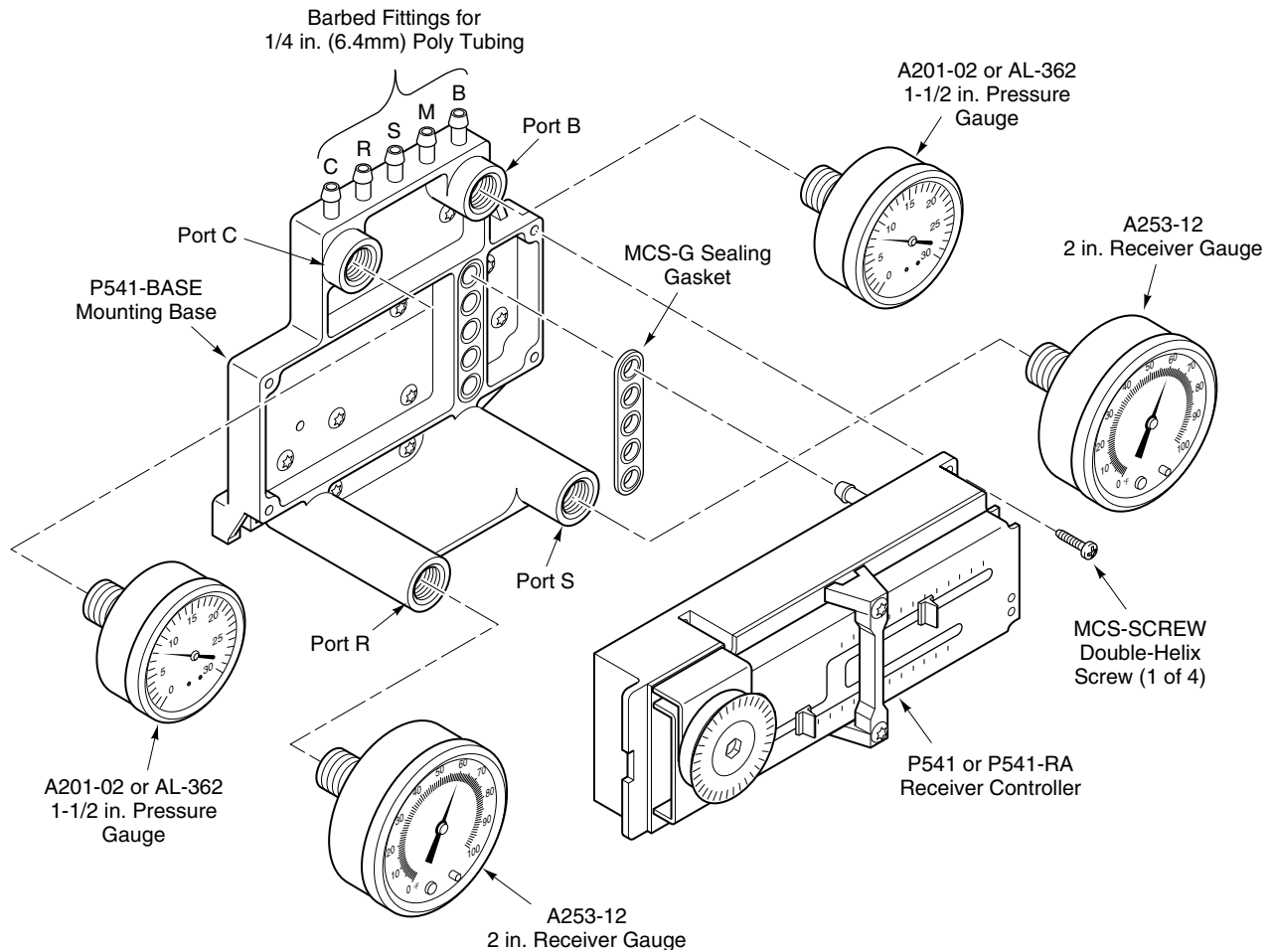


Figure-1 Installation of Receiver-Controller and Gauges on Mounting Base.

### Receiver-Controller

The P541 and P541-RA are both three-input controllers. The choice of a direct- or reverse-acting controller is normally determined by the action and use of the final control devices (valves, dampers, PE switches, etc.). Refer to **P541, Receiver-Controller General Instructions, F-23895**, for more detailed information regarding the P541 or P541-RA controller.

The mounting base is provided with a sealing gasket (MCS-G) and four double-helix screws (MCS-SCREW). Mount the receiver-controller onto the mounting base as follows:

1. Install the sealing gasket over the barbed fittings on the back of the controller and push gasket down to rear surface of controller. Refer to Figure-1.
2. Install the controller onto the mounting base so that its barbed fittings are inserted into the five sockets on the base. Internal ports within the base connect the installed controller to the five fittings at the top of the mounting base and to the four gauge ports.
3. Secure the receiver-controller to the mounting base, using the four double-helix screws.

## Replacement of P341 Receiver-Controller

A P541 or P541-RA receiver-controller, mounted onto a P541-BASE mounting base, may replace an existing P341 receiver-controller. When doing so, note the following:

- The bottom mounting foot position of the mounting base matches that of the P341.
- A new hole must be drilled in the mounting surface, for the upper mounting foot.
- If an existing P341 (or P340) and reversing-relay combination was originally used for reverse-acting operation, a P541-RA controller, alone, may be used to replace both devices. Refer to **P341, Stand Alone Receiver-Controller General Instructions, F-23894**, for more detailed information regarding the P341 controller.

## Connections

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*Note:* It is not necessary to cap unused barbed fittings or to plug unused gauge ports if the corresponding barbed fitting is not used.

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The mounting base features five barbed connections for 1/4 in. (6.4 mm) poly tubing. Refer to Figure-1. The identification letters and functions of these connections are:

- C Input from a remote Control point adjuster, if used
- R Reset input from a secondary transmitter, if used
- S Input Signal from a primary transmitter
- M Main air
- B Branch output

---

*Note:* Identification letters for the R and S gauge terminals are repeated at the gauge port locations.

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## MAINTENANCE

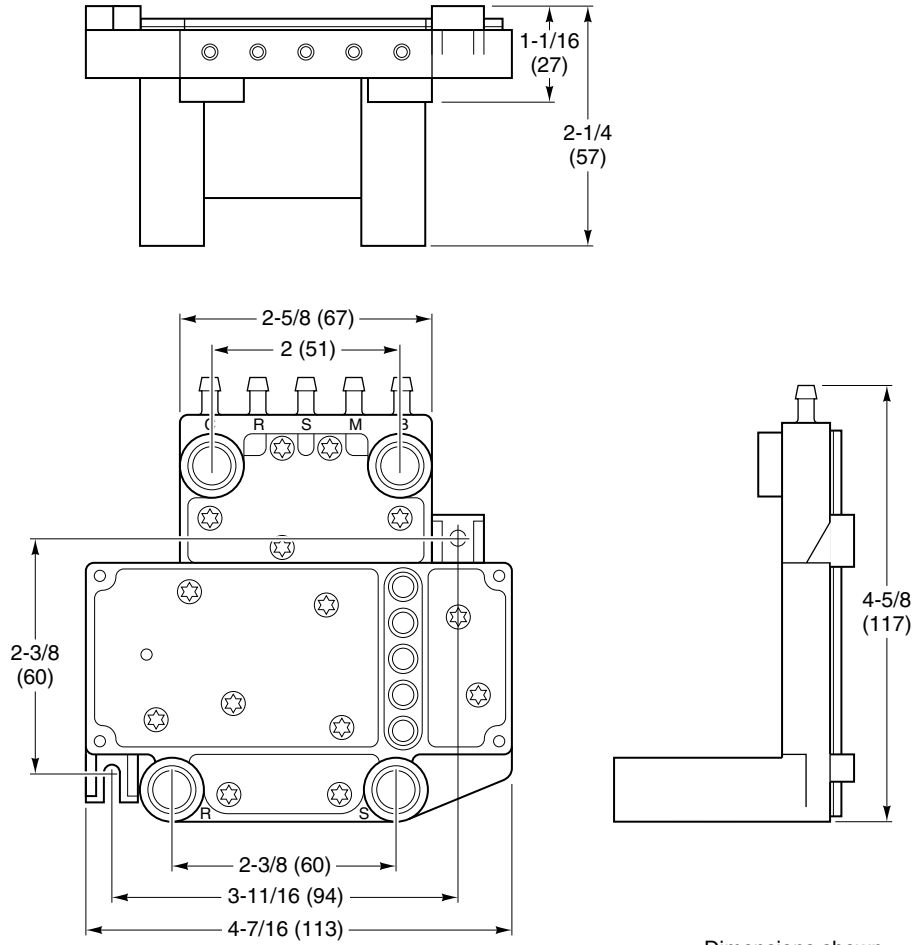
The mounting base requires no maintenance.

Regular maintenance of the total system is recommended to assure sustained, optimum performance.

## FIELD REPAIR

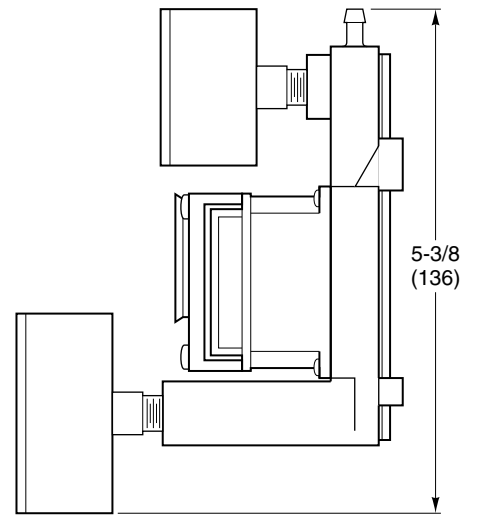
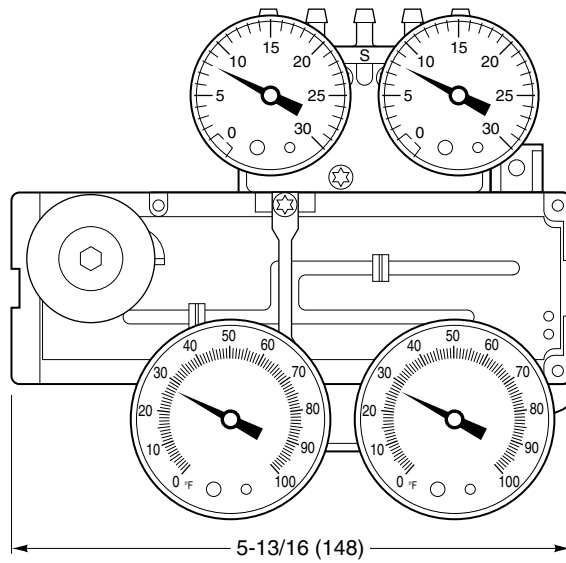
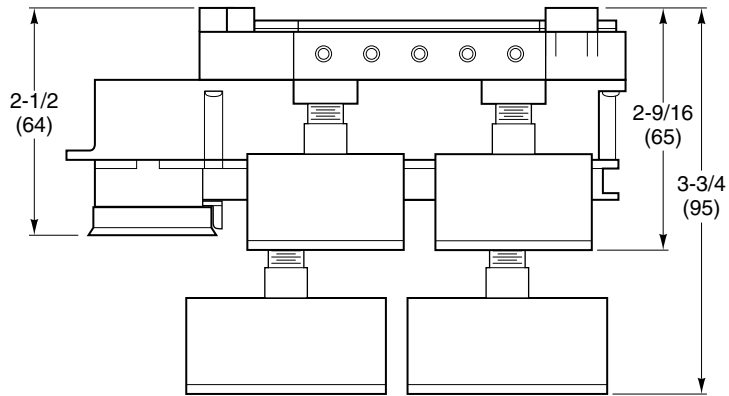
None. Replace a damaged mounting base with a functional unit.

# DIMENSIONAL DATA



Dimensions shown  
are in inches (mm).

Figure-2 Dimensions of P-541-BASE.



Dimensions shown are in inches (mm).

Figure-3 Dimensions of P541-BASE with Controller and Four Gauges mounted.

On October 1st, 2009, TAC became the Buildings business of its parent company Schneider Electric. This document reflects the visual identity of Schneider Electric, however there remains references to TAC as a corporate brand in the body copy. As each document is updated, the body copy will be changed to reflect appropriate corporate brand changes.

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