



Pressure Control Quick Reference Guide

SD-378/72013

Controller v. A



The Sporlan Pressure Control should be installed only by a qualified professional. All other system components (valves and sensors) should be supplied by Sporlan to ensure compatibility and proper operation. There are no user-serviceable components inside the Pressure Control. Opening the case will void the warranty.

 **Use caution when working around high voltage components. Safety covers should be used for personal safety on high voltage panels.**

Tools required:

- Small flat screwdriver for terminals
- Cordless screwdriver
- Phillips and flat screwdrivers
- Needle-nose pliers
- Wire cutters
- Two #8 x 1/2" self tapping screws to mount DIN rail

1. INSTALLATION

Reference diagrams on the back of this guide.

Maximum torque on screw terminals is 3.5 in.-lbs.

1. Mount the controller in a rain-tight, protected location using the supplied DIN rail. To leave enough working space, the suggested mounting area is 10 inches (254 mm) high and 5 inches (127 mm) wide. The minimum depth is 3 inches (76 mm).
2. Attach the pressure transducer cable to terminals 33, 34 and 35, matching the colors shown in the wiring diagram.
NOTE: Pressure transducer location is determined by the application. See diagrams on back or Bulletin 100-50-5.5.
3. For Evaporator Pressure Regulating applications, mount the optional suction vapor temperature sensor (T1) to the suction line. Connect the sensor wires to terminals 31 and 32. This sensor may be used to monitor and view superheat.
4. For liquid pressure applications, mount the optional Liquid Outlet temperature sensor, (T2) to the tube feeding the expansion valve(s). Connect the sensor wires to terminals 29 and 30. This sensor may be used as a high temperature cut out.
5. For condenser holdback pressure applications, mount the optional Liquid Inlet temperature sensor, (T3) to the tube leaving the condenser, "drop leg." Connect the sensor wires to terminals 27 and 28. This sensor may be used to monitor and view subcooling.

6. Connect terminals 25 and 26 to a digital input. A short or closed contact from an external relay will enable pumpdown and drive the valve to 0% or 100% based upon *Pdd*.
7. Connect the Sporlan electric valve wires to terminals 5, 6, 7 and 8, matching the colors shown in the wiring diagram.
8. Connect power wires to terminals 1 and 2. Transformer requirements are 24 volts AC at 40VA, Class II.
9. Remove the protective clear film cover from the front of the Pressure Control.

2. SETUP

NOTE: The refrigeration or air conditioning system must be off until setup has been completed.

Once powered up, the controller will display the firmware version and then prompt for four system variables to be set. The electric valve is closed upon startup, and the system will not operate until completing setup:

1. Set *APPL*, Control Application. Press and then turn the SELECT knob to set the application. For low side applications, select *EP_r*, Evaporator Pressure Regulator. For high side applications, select *Cond* for Condenser Pressure Regulator (Holdback), *rEC* for Receiver Pressure Regulator or *LP_r* for Liquid Pressure Regulator. Press the SELECT knob to save the value. The next variable is displayed.
2. Set *Prr_g*, Pressure Transducer Range. Select the correct pressure range for the transducer being used. Press the SELECT knob to save the value.
3. Set *PSP*, Pressure Setpoint. Select the desired pressure setpoint for the system.
4. Set *StEP*, Valve Steps. Select the

correct number of steps for the electric valve being used. Press the SELECT knob to save the value.

Setup is complete. The Pressure Control will begin controlling based on default values, and is now displaying System Pressure, *P-rE5*. The controller is now in the Process Values Menu. Rotate the knob to view values.

3. OPERATION

For further system setup or system tuning, adjust parameters through the Setpoint Menu as described below. See the Pressure Control Installation and Operation Manual, Bulletin 100-50-5.5, for a complete list of setpoint parameters and definitions.

1. Enter the Setpoint Menu: Press the SELECT knob for 5 seconds. Enter the password and press the SELECT knob again. (The controller's default password is '111'.)
2. To view a parameter, rotate the SELECT knob to the desired parameter and press the knob. The default value will be displayed.
3. Turn the SELECT knob to change the value and then press the SELECT knob to enter the value and return to the Setpoint Menu.
4. After all the desired parameters are set, turn the SELECT knob to "*ESC*" and press the knob to save and implement all changes. Observe the system for proper operation.

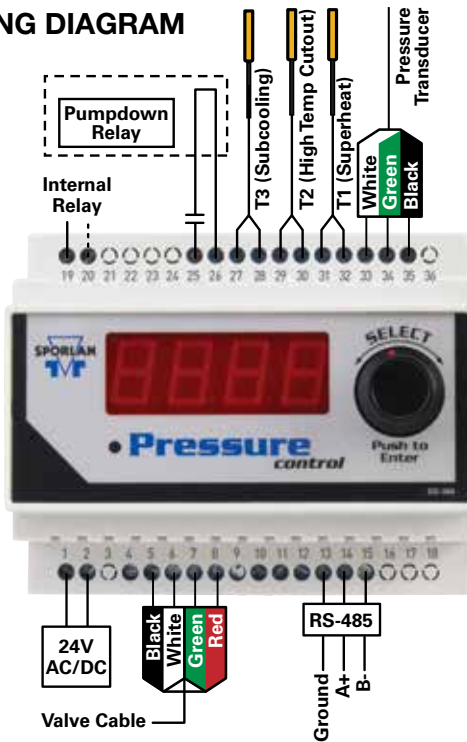
Sporlan Pressure Control Installation and Operation Manual



For detailed instructions, scan this QR code or go to www.sporlanonline.com/electronic-controls and download Bulletin 100-50-5.5.

Typical Wiring Diagram and System Schematic

WIRING DIAGRAM



NOTE: Use caution when working around high voltage components.

For safety information, see the Safety Guide at www.parker.com/safety or call 1-800-CPARKER.

SYSTEM SCHEMATIC EXAMPLE

