# EXV CONTROLLER
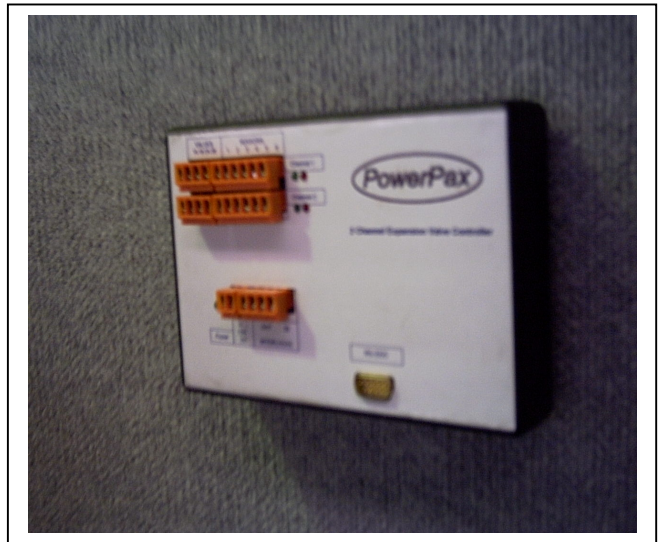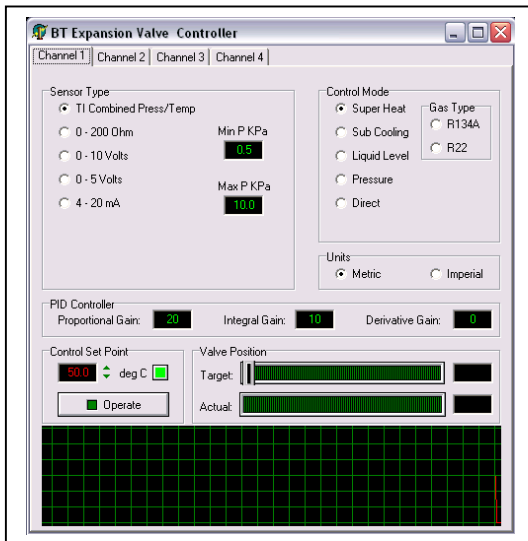




## DESCRIPTION

The *PowerPax* EXV controller provides control of up to four *PowerPax* EXV's in response to voltage, current loop, or resistance sensor signals.

Control of the valve(s) can be direct (position proportional to input signal) or By PID control algorithm to avhieve a set point value. Valves can be controlled by dedicated inputs or in pairs (2 valves behave as one to double capacity).

This versatility allows the valves to be used for various applications such as

Refrigerant Expansion or
HOT gas modulation
In response to
Level
Superheat (algorithms for R134a and R22 provided)
Pressure
Or
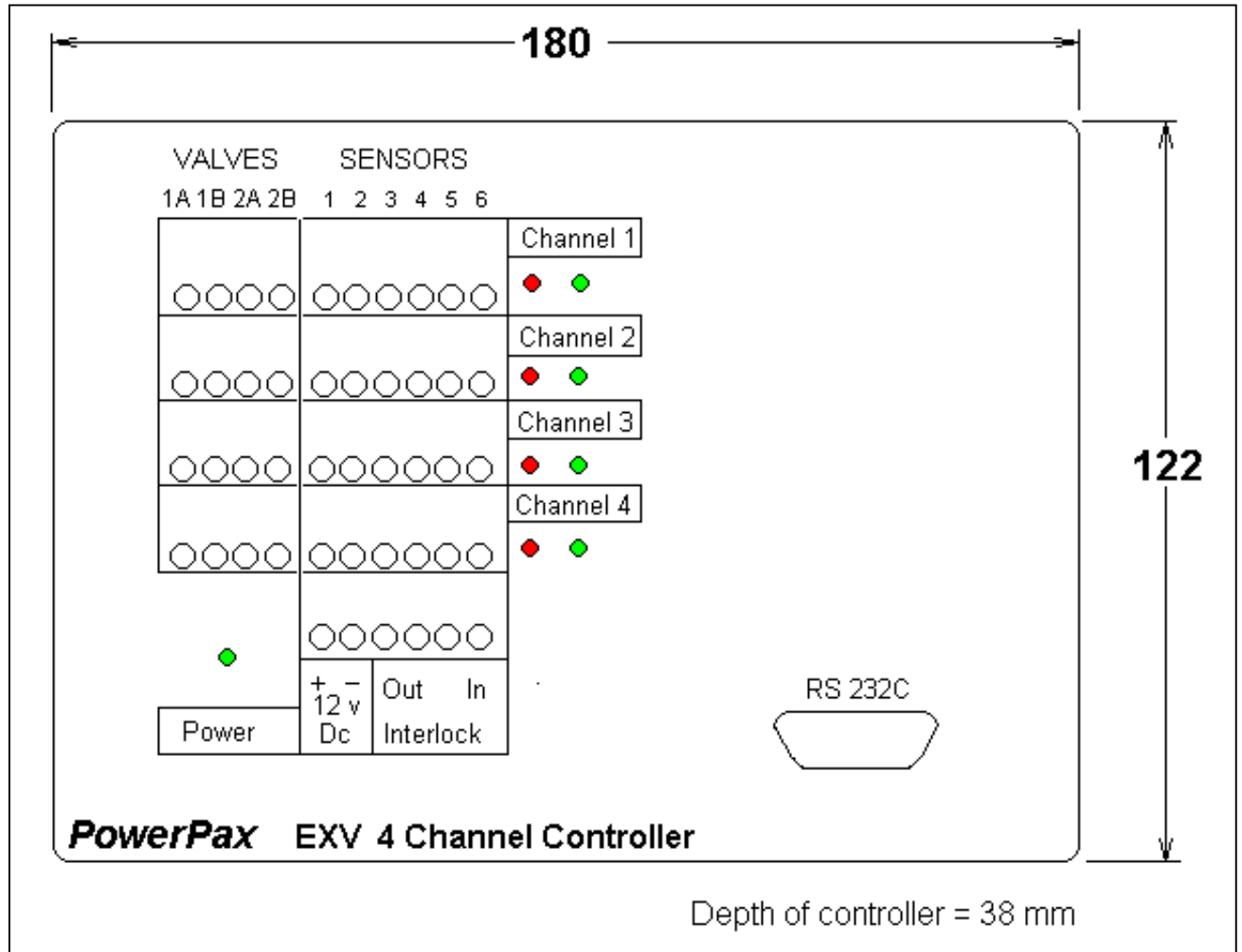in response to output from a third party controller.

## PART NUMBERS FOR ORDERING

| | |
|---|---|
| 2-Channel controller | **PPXC-02-01** |
| 4-Channel controller | **PPXC-04-01** |

## SEE ALSO

*PowerPax* Float chamber assembly for flooded coolers.  (PPFC-100-90)

RELEASE  02  MAR 2004

## DIMENSIONS and LAYOUT



PowerPax  EXV  4 Channel Controller

Depth of controller = 38 mm

## SPECIFICATIONS

| | |
|---|---|
| Power Input: | 12 v dc 100 va (min.) |
| Output: | Two bipolar pulse outputs per valve   12 VDC nominal 4 Watt (max.) |
| Control options: | Superheat     (Choice of R134a or R22)<br>Sub cooling<br>Pressure only<br>Level<br>Analog position in response to voltage or ma current loop. |
| Control Inputs: | Temperature and pressure   (TI combined sensor).<br>Pressure only<br>0 to 5vdc<br>4 to 20 ma current loop |
| Set point method: | Set point and control parameters are set using PC software via RS232a (serial port) interface. |
| Mounting: | DIN rail mounting |

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# WIRING
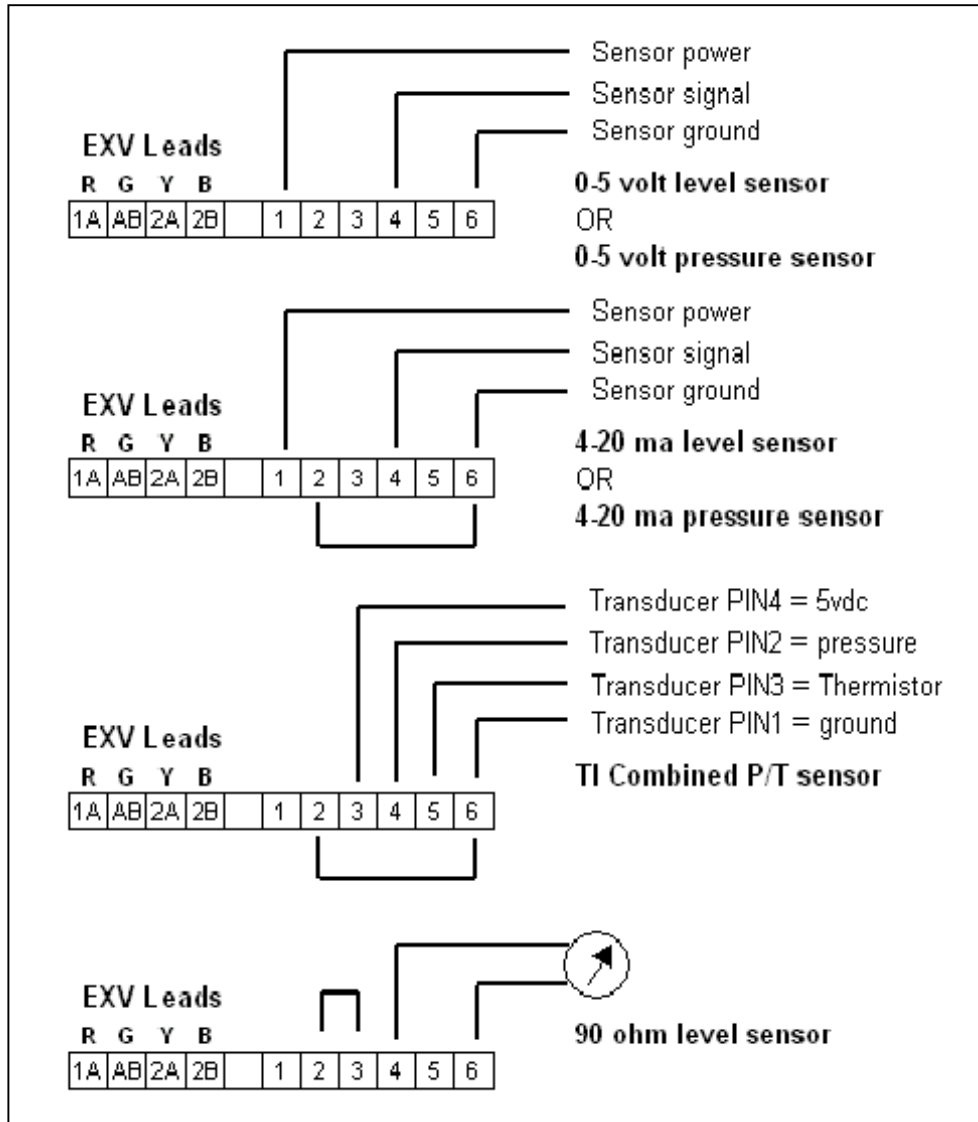
**SENSORS**



**POWER
And
INTERLOCKS**
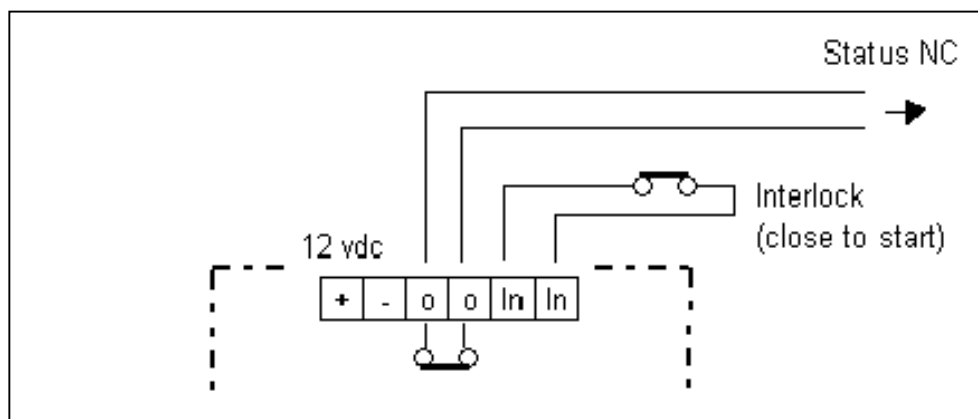
# CONTROLLER SCREEN
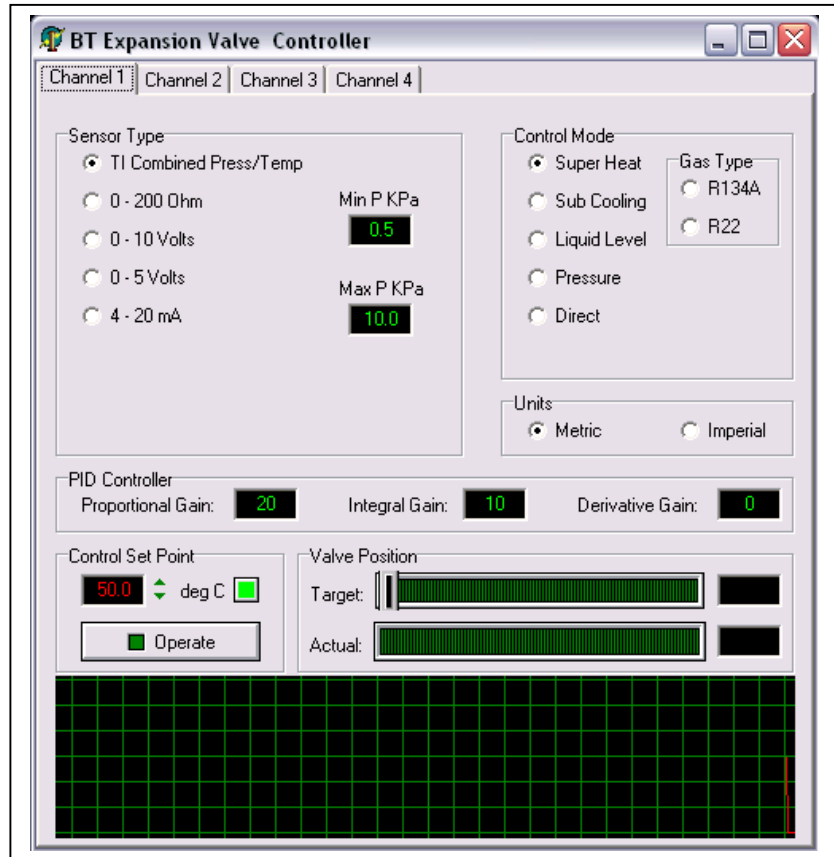


## PROGRAM SETUP

Select        the channel to set up
              the sensor type
              the control mode
              Gas type (if superheat or subcooling)
              Set the control set point value
              Set the PID terms (suggested start values are: P=500,I=500,D=0)
              Select OPERATE

Repeat for other channels which are used.


Note: If channel #2 is slaved off channel #1  (or Ch#4 off ch#3) you must still set up the PID terms and select OPERATE.  In this case the Control mode is "slave".