

**ER-110 Independent Valve Operation
APP- 037**

THEORY

There is a new version of software for the ER-110. ER-110 Independent EEV ver 2.68 This is a different hex file than the normal ER-110 and is available on the web site. This new software allows the two EEV valves to operate totally independent of each other. One can be in standby and the other could be in Refrigeration.

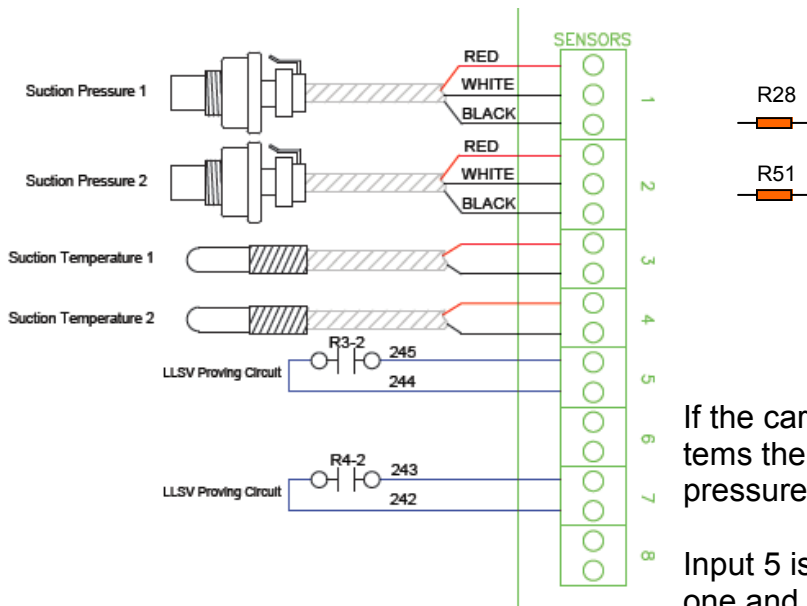
OPERATION MODES

LED MODES		VALVE A	VALVE B
○ ○ ○ ○	0	Standby A	Standby B
● ○ ○ ○	1	Refrig A	Standby B
○ ● ○ ○	2	SP sensor fail A	Standby B
● ● ○ ○	3	ST sensor fail A	Standby B
○ ○ ● ○	4	Standby A	Refrig B
● ○ ● ○	5	Refrig A	Refrig B
○ ● ● ○	6	SP sensor fail A	Refrig B
● ● ● ○	7	ST sensor fail A	Refrig B
○ ○ ○ ●	8	Standby A	SP sensor fail B
● ○ ○ ●	9	Refrig A	SP sensor fail B
○ ● ○ ●	10	SP sensor fail A	SP sensor fail B
● ● ○ ●	11	ST sensor fail A	SP sensor fail B
○ ○ ● ●	12	Standby A	ST sensor fail B
● ○ ● ●	13	Refrig A	ST sensor fail B
○ ● ● ●	14	SP sensor fail A	ST sensor fail B
● ● ● ●	15	ST sensor fail A	ST sensor fail B

Xbase

This application requires a special inf file for Xbase. The name of the file is ER-110INDEEV.inf and is available on the web site.

Sensor Wiring:

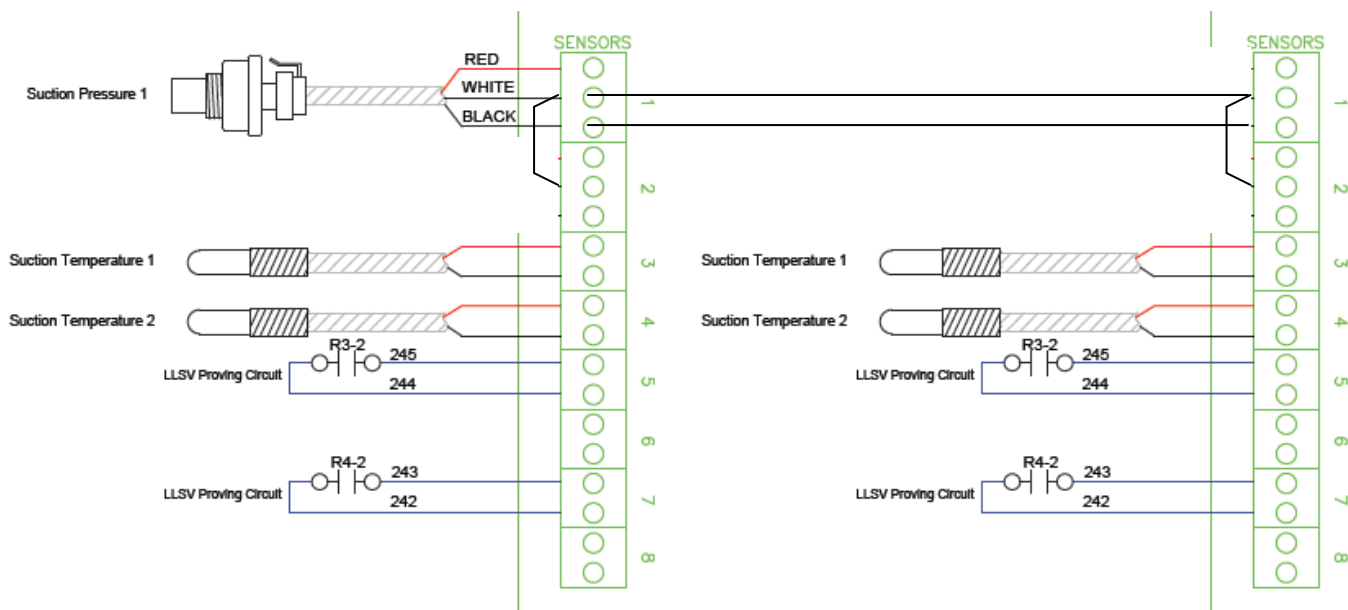


Resistors R28 and R51 are located directly behind each of the suction transducers. These resistors are only used if using as temperature inputs. It is a good idea to cut these two resistors out of the circuit. This is particularly true if using only one transducer for both inputs.

If the card is controlling two independent systems then each system will need its own pressure and temperature sensor.

Input 5 is used for LLSV proving on system one and input 7 is used on system 2.

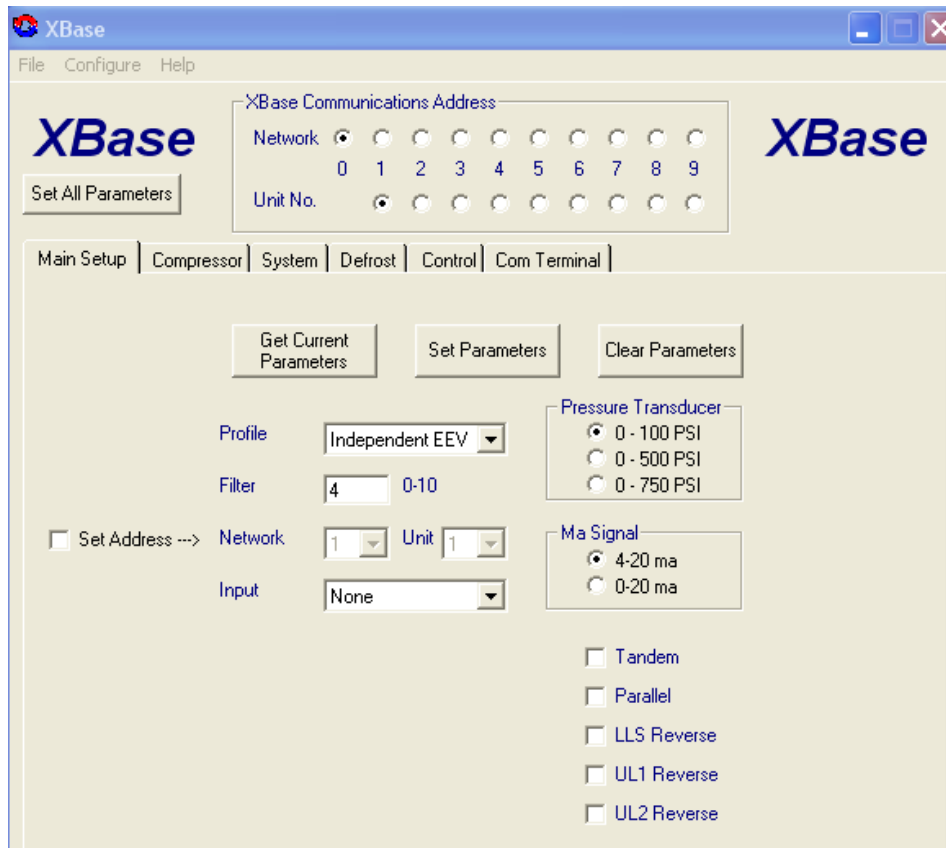
Connecting two cards with one transducer

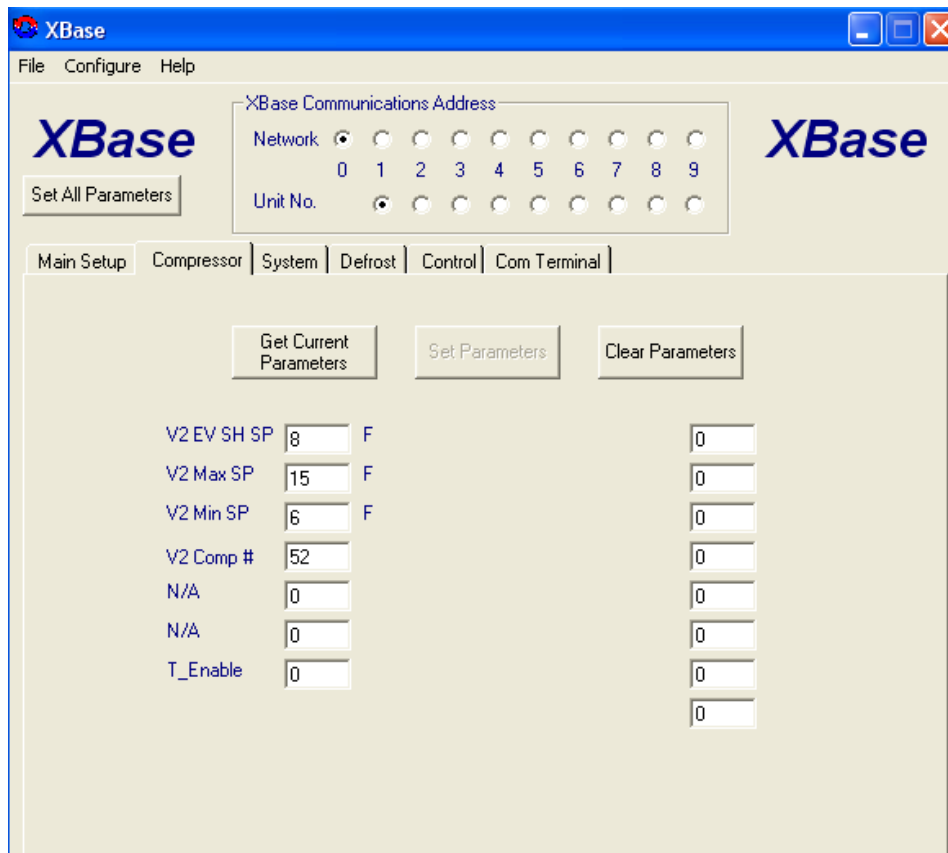


Above shows how to connect two cards with one transducer. If using a common power supply for both cards, make sure the power wires are wired exactly the same on both cards.

Xbase Independent Valve Setup

The Xbase independent valve setup requires a special inf file. The file is available on the web site and is ER-110INDEEV.inf



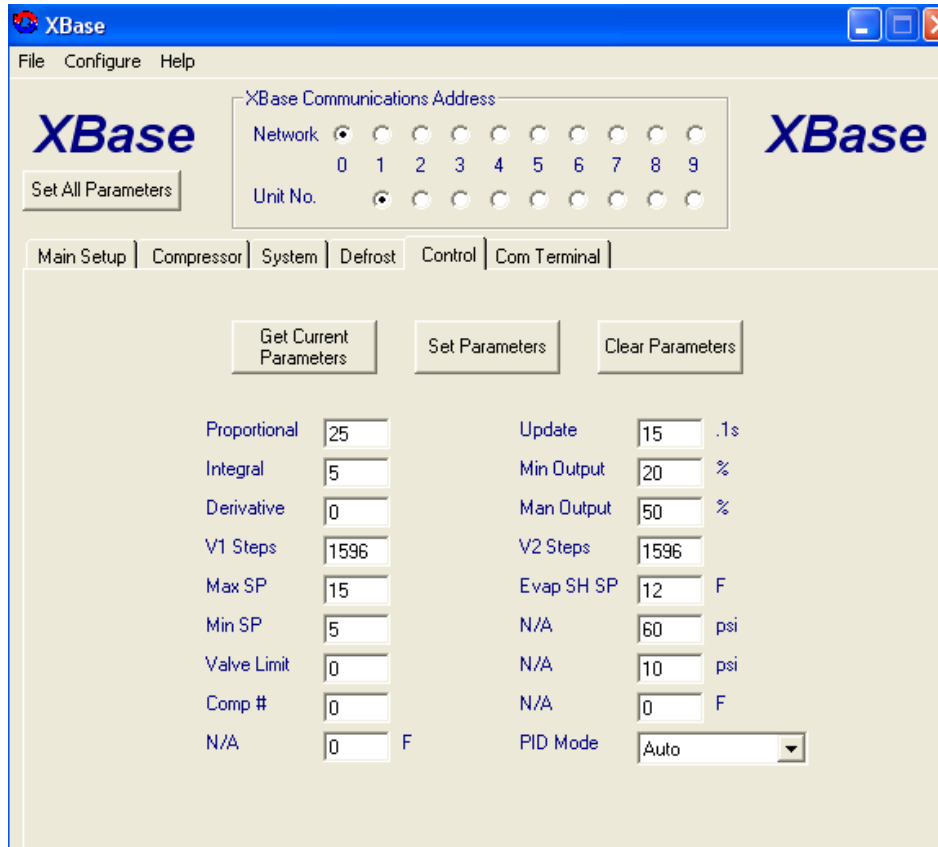


V2 EV SH SP is a new parameter for the independent valve. It is the superheat setpoint for valve 2. This setpoint can automatically change according to the superheat of the compressor.

V2 Max SP is the max value the superheat setpoint could automatically change to.

V2 Min SP is the minimum value the superheat setpoint could automatically change to.

V2 Comp # this is the compressor number for which V2 is associated with.



Max SP and Min SP are referring to valve 1. The Comp # and Evap SH SP is also for valve 1.