

ISO-6XAVR

Specifications

Digital Inputs

There are six 24VAC inputs I1 – I6 that are used to control relays. The current program has them assigned as follows:

I1	-	Not implemented
I2	-	Low speed fan ON
I3	-	High speed fan ON
I2+I3	-	Medium speed fan ON
I4	-	External Fan or internal single speed fan
I5	-	Reversing Valve
I6	-	Compressor

Compressor Lockout

There is a lockout time of about 4 minutes after compressor has turned off before it can come on again. A push button overrides this condition for testing.

Analog Inputs

There are four analog inputs for temperature measuring thermistors. Only two are implemented at present.

TH1	-	De-ice and over-temperature sensor
TH2	-	Over-temperature sensor

Both sensor are standard 10K thermistors.

De-ice commences when TH1 senses a temperature at or below -3°C . The inside fan will turn off, reversing valve will alter state and compressor will continue. When the TH1 temperature rises to $+10^{\circ}\text{C}$ normal operation will resume.

If *either* TH1 or TH2 senses a temperature of $+64^{\circ}\text{C}$ or greater, the compressor and fans will turn off. The sensed temperature on *both* TH1 and TH2 must be below $+52^{\circ}\text{C}$ before normal operation will resume.

DIP switches

A four way DIP switch modifies program operation.

SW1	-	Not implemented
SW2	-	Defeat compressor lockout when ON
SW3	-	If ON, compressor also turns on RV
SW4	-	If ON, compressor also turns on Input 4. This feature used if only one fan speed available, and the indoor fan is re-assigned to I4 and RY4

Relay Outputs

Six 30A relays control external machinery. The outputs are on two, 4 way barrier strips. The allocation of outputs is:

RY1	-	Low Speed Fan
RY2	-	Medium Speed fan
RY3	-	High Speed fan
RY4	-	External fan or internal single speed fan
RY5	-	Reversing Valve
RY6	-	Compressor

All relay contacts are protected by metal oxide varistors.

RS232 Communications

Data is transmitted on J2 at 9600,N,8,1. This shows temperatures of sensors. The connections are

1	Common
2	Transmit data
3	Receive data (not used)
4	+5V for external device

Power Supply

The unit is powered by a 24VAC supply. A 0.9A rated plug pack is adequate and also supplies up to 500 mA to external devices such as the thermostat. This output is fused at 500 mA. A spare M205 fuse is provided on the board.