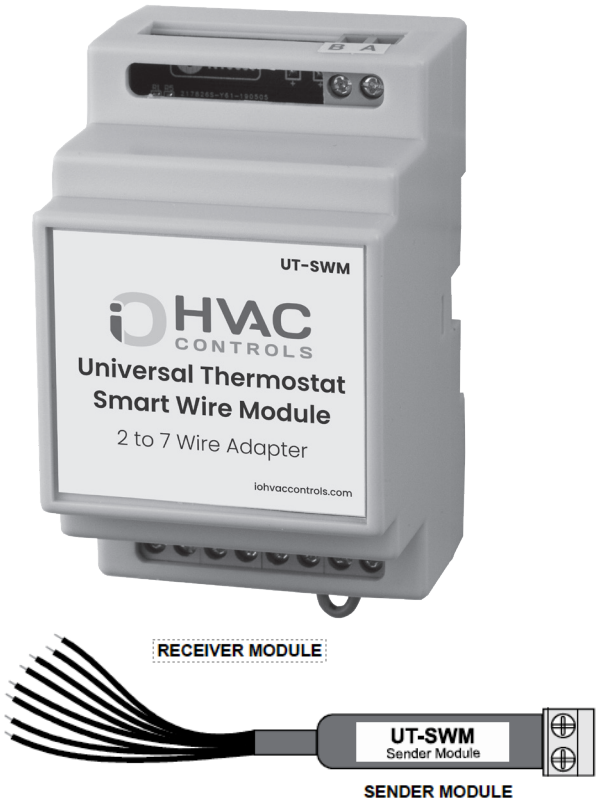
INSTALLATION INSTRUCTIONS

UT-SWM
UNIVERSAL THERMOSTAT SMART WIRE MODULE



INTRODUCTION:
The UT-SWM, Universal Thermostat Smart Wire Module is an innovative and low-cost solution for any application where you need to control up to seven outputs and only have a single pair of wires between two locations such as a thermostat and HVAC system. Today's communicating thermostats require a "common" wire to power the radio module and other electronics. On average, 30% of all homes do not have a common wire at the thermostat. The UT-SWM uses two advanced microprocessors; one located in the Sender Module and the other in the Relay Receiver Module. Signals from the device connect to the sender Module such as a thermostat are encoded along with checksum data to ensure accuracy and superimposed onto the 24 volt signal wires that transmit to the Relay Receiver Module. The Relay Receiver Module then decodes and verifies the binary data and turns relays on or off to match the Sender Module information.

IMPORTANT NOTE:
This product only works reliably with thermostats using mechanical relays. Thermostats that use Triacs are not recommended. Refer to specific thermostat specifications to confirm relay or Triac.

SENDER MODULE:
The Sender Module has been designed to be as small as possible and is sealed to protect its electronics. There are eight color coded, 6" lead input wires on one end and two screw terminals on the other end.

The Sender Module can be easily installed in the wall cavity behind the thermostat after wiring is completed. This prevents any heat generated by the module from affecting the thermostat's temperature accuracy.

NOTE - Because the Sender Module is intentionally small to facilitate ease of installation, care should be used to not bend the Module during installation.

RELAY RECEIVER MODULE:
The Relay Receiver Module receives its power by an external 24VAC source such as the HVAC equipment transformer. The Relay Receiver Module contains seven relays rated at 1 Amp maximum switching current. The relays mimic the switched inputs of the Sender Module.

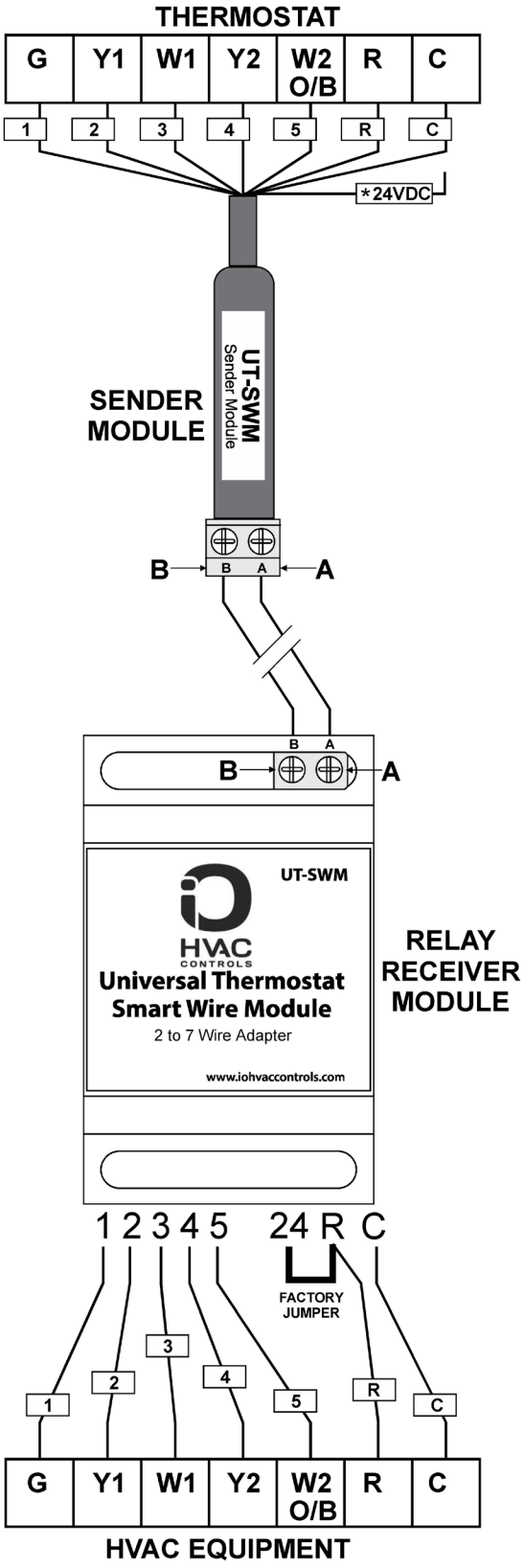
The 24VAC used to power the Relay Receiver Module is also transmitted down two wires to power the Sender Module.

DO NOT power high current draw devices such as actuators and valves directly from this device as it has been designed to provide a maximum of 0.5A to power field devices that are 500mA max. When switching higher voltages or currents, proper rated isolation relays are required.

The Relay Receiver Module should be installed in a cool, dry environment wherever possible. Although the electronics are coated to protect against moisture and dust, they are not water resistant and should be protected from a harsh environment.

The process of decoding and verifying the binary data creates a very short delay in relay response time.

TYPICAL WIRING



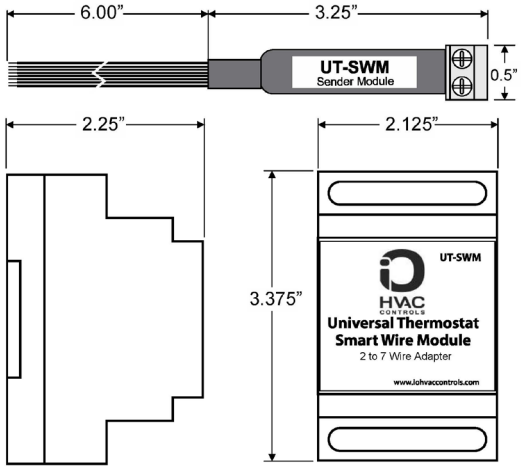
SENDER MODULE TAG NUMBERS AND COLOR CODE DESIGNATIONS

TAG	COLOR	DESIGNATION
1	GREEN	G - FAN
2	YELLOW	Y1 - 1ST STAGE COOL
3	WHITE	W1 - 1ST STAGE HEAT OR AUXILIARY EMERGENCY HEAT
4	PURPLE	Y2 - 2ND STAGE COOL
5	BROWN	W2 - 2ND STAGE HEAT OR REVERSING VALVE
R	RED	24 VAC (HOT)
C	BLACK	24 VOLT (COMMON)
*24 VDC	ORANGE	24 VDC (HOT)

*** Do not use the 24VDC (Orange) wire with smart thermostats like ecobee.**

When using the Honeywell T4 or Honeywell FocusPro line of thermostats, it may be necessary to disconnect the C (Common) wire from the thermostat subbase and allow it to run on battery power.

DIMENSIONS



SPECIFICATIONS

Power Supply	24VAC +/- 20%
Power Consumption	0.15mA (No Relays)
	0.45mA (All Relays)
Maximum Load Current	0.5 Amp @ 24VAC
Relay Switching Current	5 x 1 Amp (Volt Free)
Maximum Range	250 Feet
Transmission Lag	Up to 5 seconds
Temperature	122° F (150° F Storage)
RH	95% (Non Condensing)
Recommended Cable	18-2 Shielded
LED Display (Relay Module)	Green - Power ON
	Yellow (Blinking) Data
Warranty	1 Year

HVAC CONTROLS

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