



Ducted Systems Technical Services Service Tips Letter

Letter: **ST-011-2018**

Date: June 25, 2018

To: All Ducted Systems Branch Service, Sales, and Training Managers
All Ducted Systems Distribution Service, Sales, and Training Managers

Subject: **Split System outdoor unit low voltage wiring harness colors/
terminal designators**

Product: All current production residential split system outdoor air conditioning units and heat pumps.

With the introduction of our new 2 stage outdoor split system air conditioning units and heat pumps, we have changed our low voltage wiring harness colors/terminal designators to better align with our indoor product offering. This change specifically is to align with air handling units as the residential gas furnaces have low voltage screw type connectors located on the integrated furnace controls regardless of model.

Previous outdoor unit models have used different wires colors for industry-wide thermostat terminal designators and have not been consistent. This can lead to confusion and sometimes a low voltage wiring error when an installer or service technician is wiring a unit they are not familiar with. For example, the previous generation 2 stage model heat pump unit uses BLACK for 24VAC common and BLUE for 24VAC Y2OUT but our indoor air handling unit models use BLUE for 24VAC common.

To become more consistent on our low voltage wiring harness colors and terminal designators we have changed some of the wire colors. This change is currently being implemented across all product lines and is included on the new 2 stage outdoor split system air conditioners and heat pump models. These models include YZT, YXT, HC20B, AC19B, HL20B, and AL19B. The new residential split system outdoor unit wiring harness colors and terminal designators are shown in the images below.

Low Voltage AC Harness	C	Blue
	R	Red
	Y1	Yel/Blk
	Y2	Yel/Red
	Y2OUT	Yel
	O	n/a
	W	n/a
	W1OUT	n/a
	W2OUT	n/a
Low Voltage HP Harness	C	Blue
	R	Red
	Y1	Yel/Blk
	Y2	Yel/Red
	Y2OUT	Yel
	O	Org
	W	Wht
	W1OUT	Wht/Brn
	W2OUT	Brn

These new wire colors and terminal designators will better align with our indoor products. Other current platform outdoor split system models will be changed to this new wiring scheme starting with outdoor models YHM, CH16, and TH16. Single stage heat pumps will also change. All single stage air conditioning models currently use BLACK for 24VAC common and a combination of wiring colors for 24VAC hot due to pressure switch options. We are currently reviewing whether or not to change the single stage air conditioner harness as there are only two wires that connect and reversal of field wiring at the outdoor unit is irrelevant for unit operation.

Models that allow for serial communication (COMM) will continue to use the same wires colors we have used since the introduction of COMM. The wire colors and terminal designators are shown in the image below.

Communicating (COMM) AC & HP	B-	Wht
	C	Blk
	R	Red
	A+	Green

This low voltage wiring color/terminal designator change also affects unit wiring diagrams and equipment literature. It would be nearly impossible to change all literature at the exact time a harness change takes place for multiple reasons including, literature is pre-printed, some models share common literature, etc. Fortunately, most of the literature does not call out specific low voltage wire colors, just terminal designators. Unit wiring diagrams, however, do show wire colors but are printed on demand during the equipment build/assembly process. Due to this fact, the printed unit wiring diagram on the equipment should always match the unit wiring harness that the unit is built with.

If you have any questions on this feel free to call Ducted Systems Technical Services at 1-877-874-7378 and speak with a technical support representative.



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