

7. Wiring diagram check points for diagnosis

The table below applies to both the the Direct Vent Indoor models and Outdoor models.

Check-point	Part and Description	Color of wires	Normal range
A	120V Power supply	White – Black	108 to 132 VAC
A1, A2	120V Power supply	Black - White	108 to 132 VAC
B	Igniter	Purple - Purple	108 to 132 VAC
B1	Heater	Yellow - Yellow	108 to 132 VAC
C	Gas valves	Light blue - blue at COM (MV)	93 to 120 VDC (during operation) / 1.35 to 1.65 k Ω
		Green - blue at COM (SV1)	93 to 120 VDC (during operation) / 1.35 to 1.65 k Ω
		Orange - blue at COM (SV2)	93 to 120 VDC (during operation) / 1.35 to 1.65 k Ω
		Red - blue at COM (SV3)	93 to 120 VDC (during operation) / 2.07 to 2.53 k Ω
C1	Hi-limit switch	Blue - Blue	Less than 1 VDC and less than 1.0 Ω
C2	Overheat cutoff fuse	Blue - Blue	Less than 1 VDC and less than 1.0 Ω
D1, D2	Easy-link connectors 540 (T-H3) models only	Black - White	15 VDC (during Easy-link operation)
E1	Outlet thermistor	Black - Black	See table on p. 18
E2	Inlet thermistor	Black - Black	
E3	Heat exchanger thermistor 540 (T-H3) models only	Black - Black	See table on p. 19

Check-point	Part and Description	Color of wires	Normal range
F	Remote controller	White – Black	11 to 25 VDC
G	Fan motor	Red - Blue	132 to 192 VDC
		Yellow - Blue	13 to 17 VDC
		Orange - Blue	2.0 to 6.5 VDC
H1	Gas proportional valve	White - red	1.0 to 15 VDC (during operation) and 20 to 40 Ω
H2	Flow sensor	Red - Black	4.0 to 5.5 VDC
		White - Black	1.0 to 4.0 VDC (pulse) 1,080 pulse / min (more than 18 Hz)
I	Air-fuel ratio rod	Yellow - AFR rod (Between the AFR rod and the computer board)	More than 1 μA (during operation)
	Flame rod	Orange - Flame rod (Between the flame rod and the computer board)	More than 1 μA (during operation)
J	Flow adjustment valve	Red - Black	7.0 to 16 VDC and 0.09 to 0.2 kΩ
J1	Bypass valve 540 (T-H3) models only	Brown - Red	3.0 to 11 VDC and 50 to 85 Ω
K1	Exhaust thermistor	White - White	See table on p. 19
K2	Hi-limit switch for exhaust	White - White	Less than 1 VDC and less than 1.0 Ω
L	Temperature controller	White – Black	11 to 25 VDC