

# Universal Two-Stage Furnace Control for PSC Blower Motors

21M51U-843

Simplifies stocking, installation and ensures peak system performance



## Universal Replacement Kit

Replaces most White-Rodgers **50A51**, **50M51**, and **50M61** two-stage HSI controls with 80V or 120V ignitor.

### Kit Includes:

- Ignition control 50M51-843
- HotRod™ Universal Ignitor Kit 21D64-2
- Trane ignitor mounting bracket
- Installation instructions and cross references



## Easy Installation

Cover allows flexibility during mounting  
Added dipswitches to trial for ignition and blower delays  
Additional blower motor wire extensions



Now replaces  
50A51 applications

# Universal Two-Stage Furnace Control for PSC Blower Motors

## FEATURES:

- 120 VAC ignitor output
- 120 VAC two-speed inducer output
- 120 VAC humidifier output
- 120 VAC electronic air cleaner output
- 2-stage gas valve output
- 120 VAC 3-speed PSC blower motor output
- Fuse protection—3 amp
- Tri-Color LED and status codes
- Selectable W2 delay when used with Single Stage thermostat
- Selectable Trial for ignition timing
- Pushbutton fault recall
- YLO, Y, W1, W2, R, G, C, O, Twin terminals
- Flame current test pads
- Cover for additional mounting options
- Blower motor wire extensions

## SPECIFICATIONS:

### Electrical Ratings [ @ 77°F (25°C) ]

Input Voltage: 120 VAC, 60 Hz  
(Class II transformer required)

### Max. Input Current @ 24 VAC

800mA + MV

### Flame Current Requirements

Minimum current to ensure flame detection:

0.3  $\mu$ A DC\*

\*Measuring with a DC voltmeter (1 VDC = 1 $\mu$ a)

### Operating Temperature Range

-40° to 176°F (-40 to 80°C)

### Humidity Range

5% to 95% relative humidity (non-condensing)

### Gases Approved

Natural, Manufactured, Mixed, Liquid Petroleum, and LP Gas Air mixtures are all approved for use

### Dimensions

BOARD: 4.82" W x 8" H x 1.25" D

COVER: 5.12" W x 9.13" H x 1.45" D

### Agency Approval

CSA

### 1 Year Limited Warranty

## TIMING SPECIFICATIONS (All times are in seconds unless noted otherwise)

Pre-purge	Ignitor warm-up	Retries	Post-purge	Lockout time	Heat ON delay	Heat OFF delay	Cool ON delay	Cool OFF delay	W2 delay	Trial for Ignition	Auto reset
15	17	2 times	15	300	30/45*	90*/120/150/180	5	0/60*	Off*/10m/Auto/20m	4*/7	60 minutes

\* Denotes factory default

## CROSS REFERENCE

<b>Amana/Goodman</b>	PCBBF115	L42-300	21M51-495	D340021P01	50A51-243
10207708	PCBBF115S	L42-301	50A51-405	D341418P01	50M51-242
10207712	PCBBF116	L42-302	50A51-495	D341418P02	542767
10207713	PCBBF116S	<b>Lennox Industries</b>	50M51-495	D344301P01	67298
20300001	PCBBF120S	100869-03	50M61-495	KIT15943	872670
20300003	PCBBF125	18M3401	CNT01308	KIT17858	S1-03101290000
50A51-215	<b>Armstrong</b>	39M26	CNT02184	X13650839010	S1-03101909000
50A51-225	43207001	46M9901	CNT03077	<b>White-Rodgers</b>	S1-03102954000
50A51-235	44957001	50M61-120	CNT05122	21M51U-843	S1-03103009000
50M61-288	50A51-210	63W26	CNT06424	50M61-843	S1-03109117000
50M61-289	50A51-211	83L9301	CNT07566	<b>York International</b>	S1-03109168000
PCB00114	R43207001	Y4151	CNT1308	18381	S1-33102954000
PCB00115	R44957001	<b>Trane/</b>	CNT2184	18384	S1-33103009000
PCB00116	<b>Johnstone</b>	<b>American Standard</b>	CNT6424	265903	S1-33109117000
PCBBF114	L39-373	1006225	D330934P01	449573	S1-33109168000
PCBBF114S	L39-376	1148167	D330937P01	50A51-242	

## THE WHITE-RODGERS MOBILE APP:

Answers at your fingertips, with your smartphone or tablet.

- ✓ Latest cross reference
- ✓ Installation instructions
- ✓ Spec sheets
- ✓ Product selection



R-4838-1 (2/22)

©2022 Emerson Electric Co. • White-Rodgers and Emerson are trademarks of Emerson Electric Co. All rights reserved • Customer Service or Technical Help: 888-725-9797 • [Emerson.com/White-Rodgers](http://Emerson.com/White-Rodgers)