# BCU-370                                                          RM7840

| BCU-370 | Signal | RM7840 |
|---|---|---|
| 1 | L1 (HOT) | 4 |
| 2 | L2 (NEUTRAL) | L2 |
| 3 | BLOWER MOTOR | 5 |
| 4 | MAIN GAS VALVE | 9 |
| 5 | PILOT GAS VALVE | 8 |
| 6 | DELAYED MAIN VALVE | 7 |
| 7 | AIR INTERLOCK | 7 |
| 13 | | F |
| 14 | | G |
| 15 | | 22 |
| 16 | IGNITION TRANSFORMER | 10 |
| 20 | ALARM RELAY | 3 |
| 21 | OPERATING CONTROL | 6 |
| 24 | LIMITS COMPLETE | 6 |

FOR UV USE KROMSCHRODER UVS1 (PN 84315010), UVS6 (PN 84315100), UVS8 (PN 84333120), OR UVD1 (PN 84320100). WIRE AS SHOWN ON BCU 370 DRAWING FOR EITHER UV OR FLAME ROD.

BCU 370 Installation Notes:

1. If burner start switch (call for heat) is to remain in limit circuit, jumper BCU terminals 21 to 24. If the burner start switch is to be commanded separately, wire the switch to BCU terminal 21.

2. External ignition transformers are to be wired to terminal 16. The transformer is pre-wired when the BCU370 is ordered with an integral ignition transformer.

3. If UV is used, a Kromschroder UV scanner must be used for proper BCU operation.

4. Use BCU 370 output pin 4 if burner is direct-spark ignited (there is no pilot). Use output 5 and 6 for piloted burners.

5. If the existing RM7895 is implemented with relight (JR2 is intact), configure the BCU for re-light after flame fail (after flame proving period) if relight operation is required (BCU parameter 8).

6. The BCU370 is designed for all three flame detection methods: Flame rod, UV, and UV self check. Wire The BCU according to desired detection method.

7. If blocking valve is to be wired independent of the main fuel valve and pilot valve, the valve can be wired on BCU terminal 4. If not, wire both the blocking valve and the main valve to terminal 6.

8. Set pilot flame establishing period (per JR1 configuration) using BCU parameters 12 and 13.

9. Adjustments can be made for the Delayed Valve using BCU parameter 13

10. Follow flame detector wiring practices for the BCU.

| Thermal Products & Solutions LLC.(TPS) Kent, Ohio | Drawn By: W.P.D. Date: 05/21/10 | Rev. By: N/A Rev. Date: N/A | Drawing Title: BCU 370 FROM HONEYWELL RM7890 | Drawing No. BCU370-RM7890 Page 1of2 | Rev. 0 |

N
L2

L1

|—— 120 VAC ——|

GND.

BCU-370

F1
① F1 ②
F2
F3 ③

I

AIR PRESS SWITCH
⑦
⑧

S1  V1
V1  ④   see installation note 4   MAIN GAS VALVE
C
S1  V2  ⑤   see installation note 4   PILOT GAS VALVE
V3  ⑥   see installation note 4   MAIN GAS VALVE

⑨
⑩

μC

⑰
r1 ▷
⑱   FLAME RELAY MAX. 1A, 253V

⑲   TO L1
S   ⑳   ALARM RELAY MAX. 1A, 253V

see box at bottom of drawing
for flame rod installation

⑪

see installation note 3 for UV
installation

⑫

V1
C
S1
S
L
A
Z
M
V2
V3
R

UV SCANNER
C
① ⑬  ◁
BURNER  ② ⑭  230V
③ ⑮

⑤
⑥
⑦
⑧

see note 2

C
⑯  ⊳|
r
90°→0°
0°→90°

⑤

OPERATING CONTROL (CALL FOR HEAT)
⑳①
see installation note 1

⑳②

⑳⑨

⑳⑩

REMOTE RESET
⑳③

N IGNITION TRANSFORMER

⑳①

LIMITS COMPLETE
⑳④
see installation note 1

N

⊜

N

GND.

FLAME ROD
OPERATION
BURNER   I
⑮

⑬
Z   TO IGNITION TRANSFORMER
NOTE: BURNER SHOULD BE GROUNDED TO
GROUNDING BAR IN BCU FOR PROPER
OPERATION

L1

| Thermal Products & Solutions LLC.(TPS) Kent, Ohio | Drawn By: W.P.D. Date: 05/21/10 | Rev. By: N/A Rev. Date: N/A | Drawing Title: BCU 370 FROM HONEYWELL RM7890 | Drawing No. BCU370-RM7890 Page 2of2 | Rev. 0 |