

1.0 Scope

This document describes settings for the B3000-B on RTC, GBT and FurnacePros IR furnace installations. The B3000-B is a serial brain designed as a modern drop-in replacement for the B-3000. The B3000-B has the same functionality as the B3000 for use with LCM4 controllers on IR furnaces Note: If your new B3000-B is a drop-in replacement for an existing B-3000-B or B-3000, the new B-3000-B should be set to match the original device settings, provided the furnace control software has not been changed.

2.0 Power Requirements

The following table lists power supply requirements for B3000-B racks as well as preferred and acceptable voltage ranges. Power supply size is dependent upon size and number of racks. Generally the power supplies for the B3000 and B3000-B racks should be independent of the power supply connected to the LCM4 or Classic controller.

| Furnace | Preferred Voltage | Power |
|---------------------|-------------------|--|
| 1 rack or brick | 5.1 Vdc | 20-25 W |
| 2 racks or bricks | 5.1 Vdc | 30 W |
| 3-4 racks or bricks | 5.1 Vdc | 50 W |
| 4+ racks or bricks | 5.1 Vdc | Use multiple power supplies to power individual racks or pairs of racks. |

If power supply is adjustable, adjust to Preferred Voltage or slightly above Preferred Voltage in the above table. If power supply is not adjustable (PS5), verify the output voltage is within range. If not, replace power supply.

3.0 Baud Rate settings

The following tables list standard settings on IR furnace applications. Verify settings are correct. If not, turn rotary switch to indicated setting.

| Parameter | Switch Position | Setting |
|-----------|-----------------|---------|
| Baud | D | 115200 |

4.0 Termination Switch Settings

Termination switches are set depending on the position of the device in the serial cable. For the B3000-B at the physical end of a RS-485 2-wire cable, use Last Device settings in the following table. For all other B3000-B positions, termination switches should be set to match First Device settings in the following table. Note: Previous model B3000 devices were set with jumpers.

| Termination Switches | Switch Position- | |
|----------------------|------------------------------|-----------------------------|
| | First Device on serial cable | Last Device on serial cable |
| IRQ | OFF (left) | ON (right) |
| RX | OFF (left) | OFF (left) |
| TX/RX | OFF (left) | ON (right) |

5.0 Address Settings

Each B3000-B must have its addresses properly set so the controller can communicate with rack. Addresses are determined and configured in the furnace software at the factory. Verify that the rotary switches are set on each B3000-B hardware to match the factory software settings. Note: Previous model B3000 devices were set with jumpers.

Typical B3000-B IR Furnace Address Settings

| Addresses | First Device on serial cable | Last Device on serial cable |
|---------------|------------------------------|---|
| Upper Address | 0 | 0 or other (verify factory prescribed address- see below) |
| Lower Address | 0 | 4, 8, or C or other (verify factory prescribed address - see below) |

Address Settings for typical Software Base Addresses

| Software Base Address | 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 |
|-----------------------|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Upper Address | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| Lower Address | 0 | 4 | 8 | C | 0 | 4 | 8 | C | 0 | 4 | 8 | C | 0 | 4 | 8 | C |

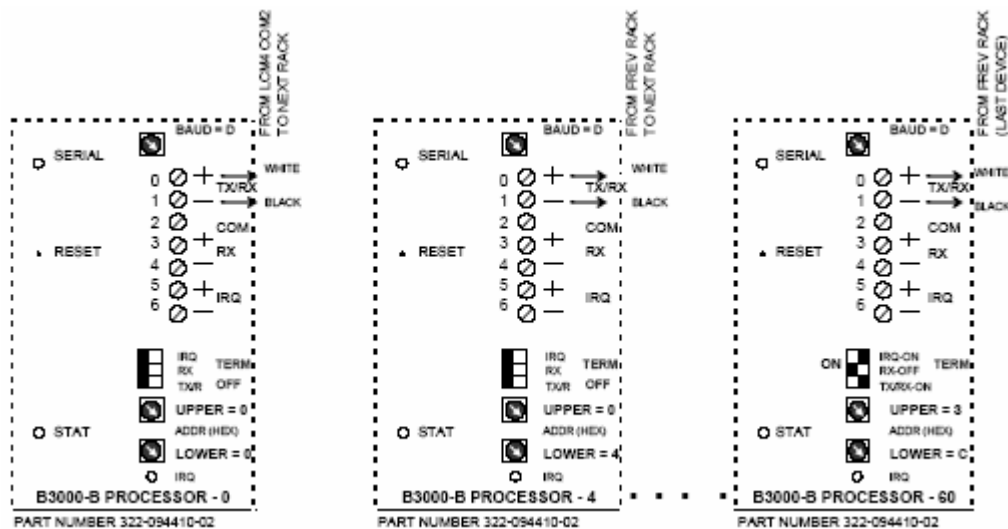
6.0 Serial Connection

If the device is replacing an existing B3000-B or B3000, use existing RS-485 (2-wire) connector to make the connection to the LCM4 or G4IOR.

For reference, only the top 2 connections are used. Wire as follows to the serial connector:

TX/RX + : White wire

TX/RX - : Black wire



Typical B3000-B Settings and connections