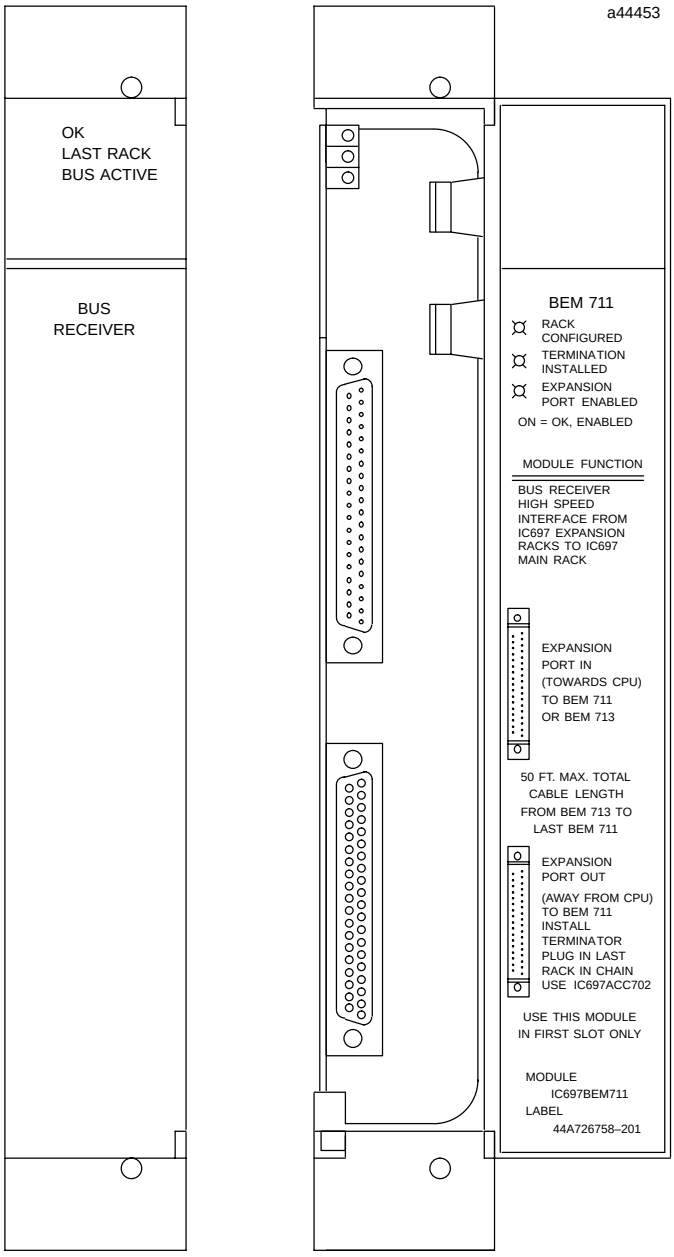
GFK-0162F
August 1997

Bus Receiver Module

Features

- High Speed Parallel Bus Expansion Interface
- Supports up to seven Expansion racks
- Supports Hold Last State
- System Fault Isolation
- Three LED indicators provide module, termination, and bus expansion port status
- No DIP switches to set, easy software configuration into PLC system



Functions

This Bus Receiver Module (BRM) permits expansion from the main rack to a maximum of seven additional IC697 PLC racks with up to 50 feet (15 meters) total of interconnecting cable.

The module occupies a single slot and has two connectors, one for attachment to the upstream or CPU rack and the other for a daisy chained arrangement to additional expansion racks. The Bus Receiver Module must always be installed in slot 1.

Three green LEDs provide status indication of module status, rack activity status and presence of the I/O Bus Terminator Plug (IC697ACC702) which is required in the last rack.

The Bus Receiver Module supports hold last state operation of the output modules in the event of loss of communications with the CPU. It also permits isolation and repair of a faulty module within a rack.

The BRM must be configured into the IC697 PLC system using the MS-DOS® or Windows® programming software configuration function.

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Installation

- Installation should not be attempted without referring to the applicable *Programmer Controller Installation Manual* (see reference 3).
- Make sure rack power is off.
- Insert label inside module access door (see figure 2).
- Install in slot 1 of the rack.
- Select expansion rack ID on rack with BERG jumpers (see figure 1).
- Turn on power.

Rack Number Jumpers

When the Bus Receiver Module is installed the remote rack ID must also be set up. This is done with the BERG jumpers located behind the power supply as shown in figure 1. For more details, see Chapter 3 of the *Programmable Controller Installation Manual*.

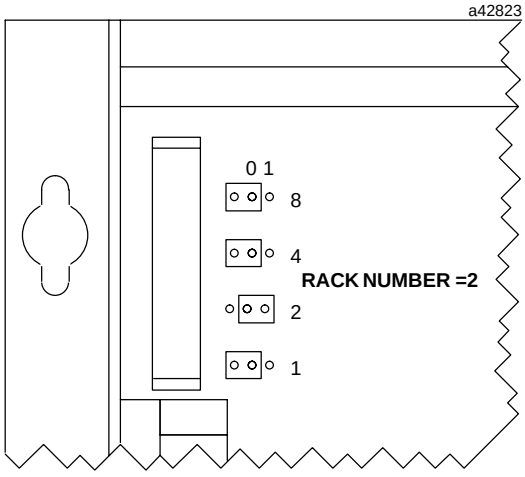

Figure 1. Rack Number Jumpers (Rack 2 Selected)

Terminator plug

The terminator plug which is supplied with each BRM is only required in the last BRM in the chain as shown in figure 2. It may be discarded or saved as a spare if this BRM is not at the end of the chain.

If this BRM is at the end of the chain, the terminator plug is installed in the lower expansion port, which is labeled EXPANSION PORT OUT. The plug should be secured with its attached screws.

Module Mechanical Keying

This module includes a mechanical key that prevents inadvertent substitution of one module type for another in a given slot. The key fits a uniquely shaped area on the board below the connector. The key is included with each module.

When the module is first installed, the key latches onto the backplane center rail. When the module is extracted, the key remains in the center rail, configuring the slot to accept only identical module types.

Expansion Rack Attachment

Using cable IC600WDxxxA (where xxx is length in feet as shown in figure 2) a Bus Transmitter Module (BTM) in the CPU rack connects to a BRM in an expansion rack. Additional expansion racks are added by daisy-chaining cabling between BRMs.

Removing a Module

The instructions below should be followed when removing a module from its slot in a rack.

- Grasp the board firmly at the top and bottom of the board cover with your thumbs on the front of the cover and your fingers on the plastic clips on the back of the cover.
- Squeeze the rack clips on the back of the cover with your fingers to disengage the clip from the rack rail and pull the board firmly to remove it from the backplane connector.
- Slide the board along the card guide and remove it from the rack.

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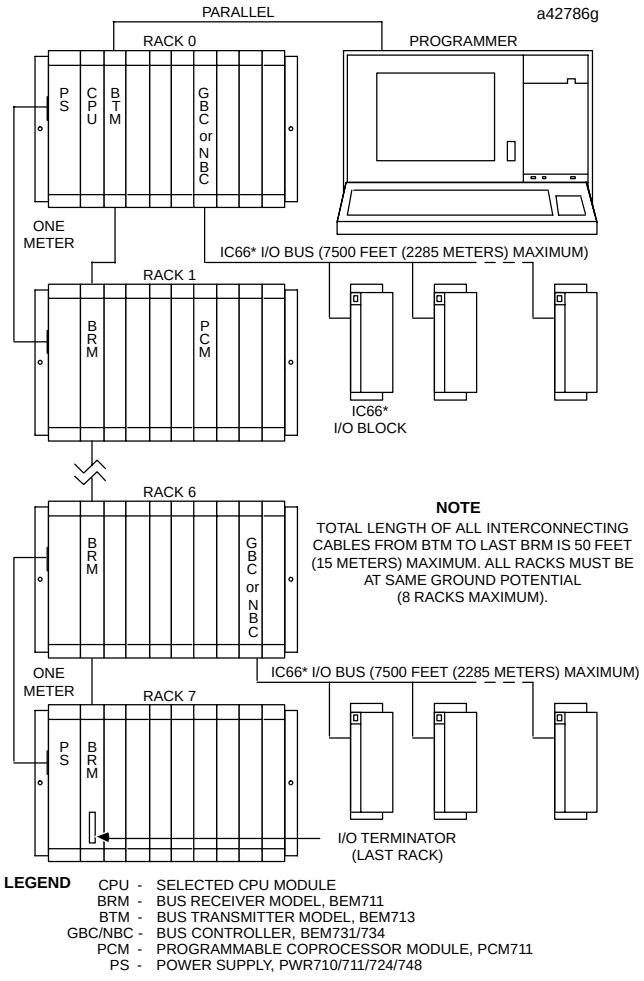

Figure 2. Typical PLC System Configuration

Status Indications

The three green LEDs provide status information as shown in figure 3. The top LED is ON when power is applied, the rack is configured, there are no fatal faults present in the rack and communications are established with the CPU, and there is at least one other module in the rack. The middle LED indicates the presence of the terminator plug: ON is plug present. The bottom LED is on when the CPU is in run mode and has communicated with this rack within the last 500 milliseconds, otherwise it is off. When this light is out the output modules go to their configured fault state (either On or Hold Last State)

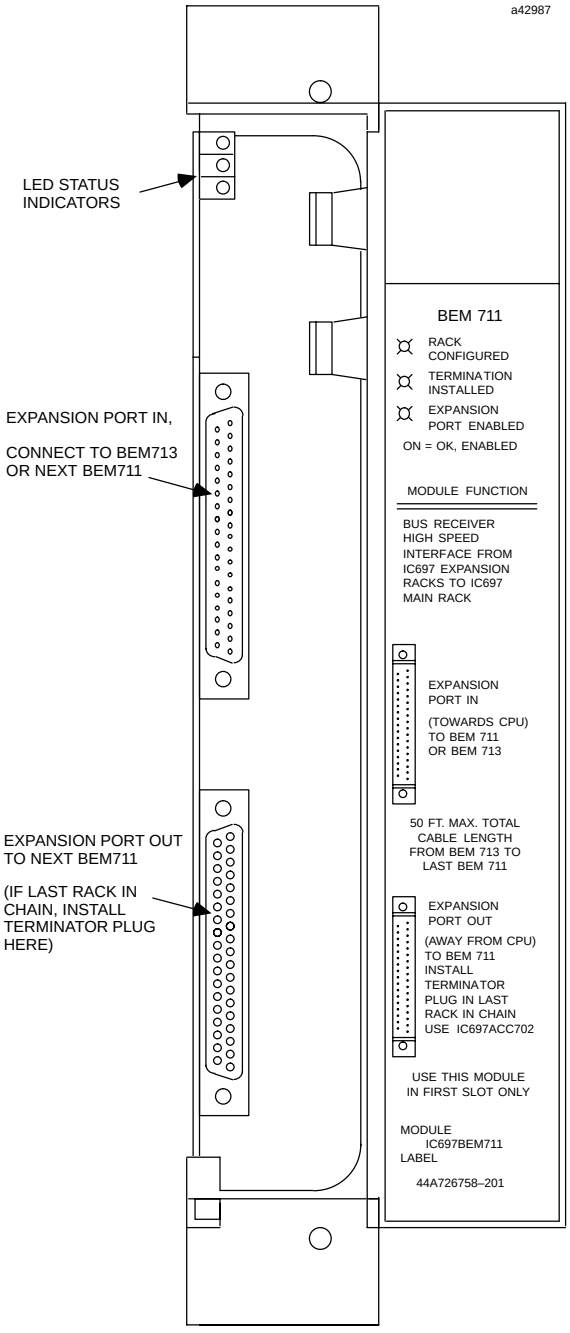

Figure 3. Bus Receiver Module - User Details