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SERIES SIX

PROGRAMMABLE CONTROLLERS

I/O RECEIVER MODULE

GEK-83512C

GENERAL DESCRIPTION

The Input/Output (I/O) Receiver module is utilized in all I/O racks (except for the first I/O rack in a Remote I/O station) to provide an interface for address, data, and control signals between the Series Six CPU and I/O modules; it also provides a link in a daisy chain to other I/O racks. The I/O Receiver module features and benefits are summarized in Table 1.

The I/O Receiver module monitors three types of error conditions: Daisy-chain power and continuity of I/O racks downstream (CHAIN OK); parity of data output by CPU (LOCAL PARITY); parity of CPU output data, driven by an I/O Transmitter module, as detected by other I/O Receiver module(s) downstream (CHAIN PARITY).

Corresponding LED indicators, visible through the module faceplate, turn off when the module detects errors and function as troublshooting aids.

The module comes from the factory configured for installation in all intermediate I/O racks in the daisy chain; however, the user is instructed to reconfigure this module to ensure proper termination of the I/O Bus if the module is to be installed at the end of the I/O station daisy chain. (Refer to NOTE on this page,)

The module also adds parity bits to bytes of data generated by resident I/O modules and transfers parity bits generated by I/O modules downstream.

Refer to Figure 1 (next page) for I/O Receiver module specifications.

NOTE

I/O Receiver module Model IC600BF800B differs from Model IC600BF800A with regard to the module configurations described above. With the 800A model, users were instructed to remove a pair of DIP-shunts from all modules to be installed in intermediate (non-terminating) I/O racks. In the 800B model, however, a jumper-pack is installed at the factory for use in intermediate racks and a pair of DIP-shunts are provided for installation in the terminating, or last, I/O rack.

The user should also note that these models are electrically compatible and can be utilized in the same I/O station.

TABLE 1. FEATURES AND BENEFITS

FEATURES	BENEFITS
Error detection lights.	Simplifies troubleshooting.
Contains parity detection/generation circuitry.	I/O data integrity protected.
Provides DIP-shunts for I/O Bus termination.	Flexibility in I/O station set-up.
Usable in all Series Six t/O stations.	Reduced spare-parts inventory.

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- Dimensions:

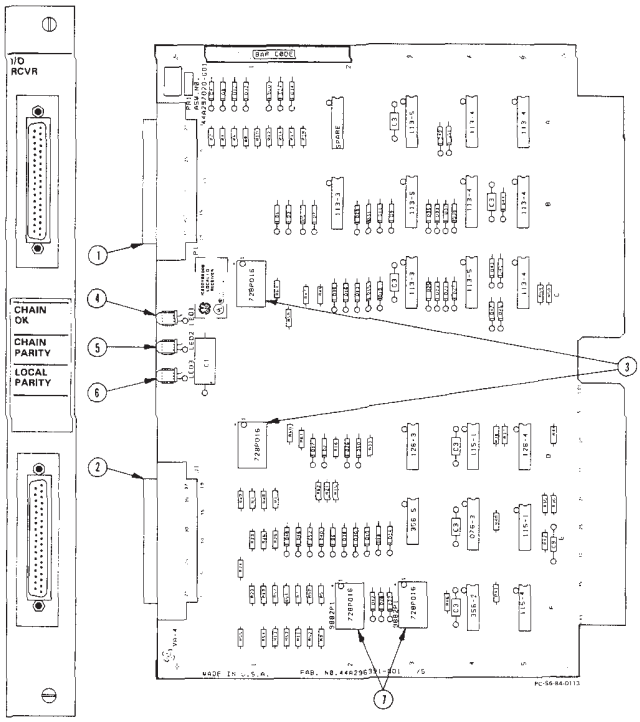
  Circuit Board:
  8.15 x 11.0 x 1.20 (inches)
  208 x 280 x 31 (mm)

  Faceplate:
  12.46 x 1.175 (inches)
  317 x 30 (mm)

- Power Requirements: 5V DC, 750 mA maximum.
  Supplied by I/O power supply.

- Operating Temperature: 0° - 60°C (at the outside of the rack)
- Storage Temperature: -20° to + 80°C
- Humidity: 5% - 95% (non-condensing)

FIGURE 1. SPECIFICATIONS



① P1: D-Type 37-Pin Connector to Upstream I/O Receiver, I/O Transmitter, I/O Control, or Remote I/O Receiver Module.

② J1: D-Type 37-Pin Connector to Downstream I/O Receiver Module.

③ Locations C1 and D1:
Jumper-pack or DIP-shunts are installed in these locations. (Refer to Figure 3.)

④ CHAIN OK Light:
On: Power is OK in this and all downstream racks and stations, and continuity is OK to all downstream points.
Off: At least one of these conditions is not met.

⑤ CHAIN PARITY Light:
On: Output parity is OK at all downstream stations which are connected through an I/O Transmitter in this rack.
Off: There is an output parity error at one (or more) of these stations.

⑥ LOCAL PARITY Light:
On: Output parity is OK at this module.
Off: This module has detected an output parity error.

⑦ Locations F3 and F4:
DIP-SHUNTS and JUMPER-PACK Holders:
(Refer to Figure 3.)

FIGURE 2. USER ITEMS

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INSTALLATION

Before installing the I/O Receiver module in an I/O rack, determine if the module is to be situated at the end of the I/O station daisy chain. If it is, remove the jumper-pack from its factory-installed location and insert DIP-shunts in locations C1 and D1. (Refer to Figure 3.)

The I/O Receiver module is normally installed in the left-most slot of the I/O Rack; however, it could be placed in any slot in the I/O Rack if need be.

NOTE

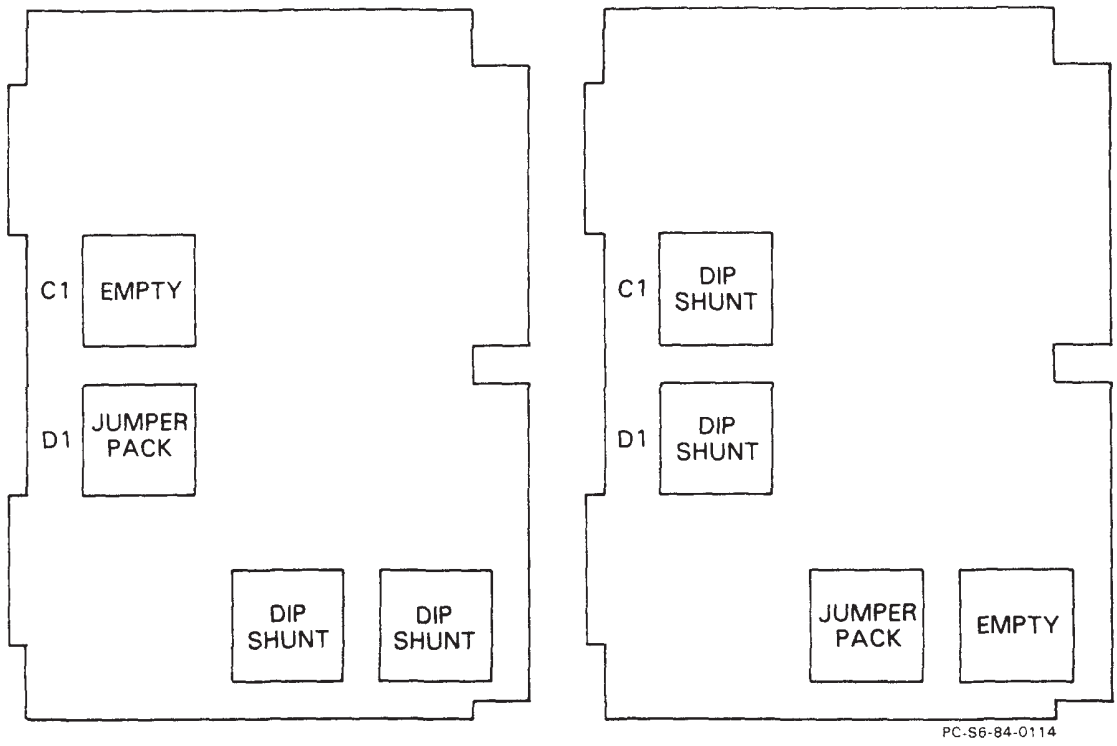
Turn off the LOGIC POWER switch on the I/O Rack before inserting this module in the I/O Rack. This puts the CPU in the Stop mode.

Use the extraction/insertion tool furnished with the CPU to remove or install the circuit board. With the board in the rack, ensure that the faceplate is slipped over the circuit board so that proper contact is made; then secure the faceplate to the rack using the thumbscrews at the top and bottom.

Connect an I/O cable from the upper front-panel connector (P1) on this module upstream to an I/O Receiver (or Remote I/O Receiver) in the same I/O station, to an I/O Transmitter in another I/O station, or to the I/O Control (or Auxiliary I/O) module in the CPU. If the module is not to be installed at the end of the daisy chain, connect an I/O cable from the lower front-panel connector (J1) downstream to another I/O Receiver in the same I/O station; then secure all connectors using the furnished screws.

NOTE

When the LOGIC POWER switch is turned back on, the CPU will automatically restart.



Intermediate I/O Rack Installation
(As shipped from Factory)

Last I/O Rack in Daisy-Chain

FIGURE 3. I/O RECEIVER MODULE CONFIGURATIONS

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