



Instruction Bulletin

Subject: **SY/MAX™**
CLASS 8030 TYPE CRM-115
BUS EXPANDER/DRIVER INTERFACE MODULE
TYPE CRM-116 BUS EXPANDER/
TERMINATOR INTERFACE MODULE



DESCRIPTION

The Class 8030 Type CRM-115 and CRM-116 Bus Expander Interface Modules are used to expand a Model 300 Programmable Controller System from one to two I/O Rack Assemblies increasing the I/O capacity of the system up to the maximum of 128. The two modules operate as a two card set. The Type CRM-115 is the driver module and the Type CRM-116 is the terminator module. The ribbon cable used to connect the two modules is a permanently attached part of the Type CRM-116 Terminator Interface Module. No additional cable is required.

SPECIFICATIONS

Rated Module Current Draw
 On SY/MAX Power Supply... CRM-115..... 300mA
 CRM-116..... 100mA

Ambient Temperature
 Rating..... 0-60°C
 Humidity Rating..... 0-95% non condensing
 Weight (unpacked)..... CRM-115... 0.7 lb./0.32 Kg.
 CRM-116... 1.2 lb./0.54 Kg.

Modules Plug Into These
 Slots..... CRM-115..... Register Slot
 CRM-116..... CPU Slot

Modules Can Be Used
 With These Racks..... CRM-115: CRK-210
 CRK-300
 DRK-210
 DRK-300
 GRK-110
 GRK-210
 CRM-116: CRK-100
 CRK-200
 CRK-210
 CRK-300
 DRK-210
 DRK-300
 GRK-110
 GRK-210

CRM-116 Module Cable
 Length..... Approximately 40" (102cm)

APPLICATION CONSIDERATIONS

- The register slot (Type CRK-210, 300, Type DRK-210, 300 and Type GRK-110 and 210) contains factory installed keys allowing only the Type CRM-115 Driver Interface Module to be inserted. Do not remove these keys.
- Both the Type CRM-115 and CRM-116 Modules are required to complete the I/O rack assembly expansion.
- To minimize electrical noise pick-up, the CRM-116 module cable should be routed away from: 1. AC power wires, 2. AC and DC signal wires, and 3. SY/MAX power supply cables.
- Recommended maximum vertical distance between I/O rack assemblies is:
 Type CRK Racks: 18 inches (46 cm).
 Type DRK and GRK Racks: 15 inches (38 cm)
- The CRM-115/116 Bus Expander may only be used to connect two 4 function digital I/O racks together.
- A Type CRM-115 Series D and CRM-116 Series D must be used to address the register slot in the second rack assembly.

INSTALLATION INSTRUCTIONS

The Type CRM-115 module plugs into the *register slot* of the *first* I/O rack assembly. The Type CRM-116 module plugs into the *CPU slot* of the *second* I/O rack assembly.

When plugging in the modules, make sure they are firmly seated against the upper edge ball stud. Then, secure each module to its rack with the captive screw. See Figure 1 and 2.

After installing the module, the cable from the Type CRM-116 Terminator Interface Module must be connected to the Type CRM-115 Driver Interface Module. When attaching the cable, make sure it is inserted far enough into the socket on the front of the CRM-115 Driver Interface Module so that the socket retainers clamp over the plug. See figure 3. To remove the cable from the socket, first pull the socket retainers away from the cable, then pull the cable plug out.

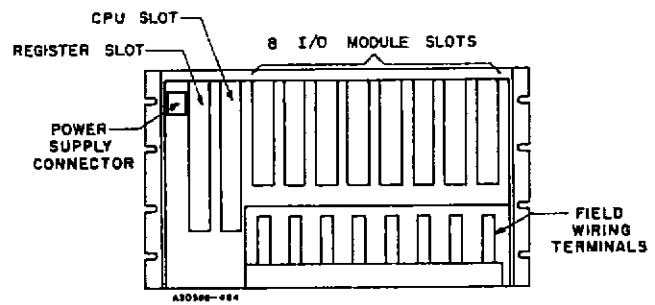


Figure 1 — Register/CPU Slot Locations

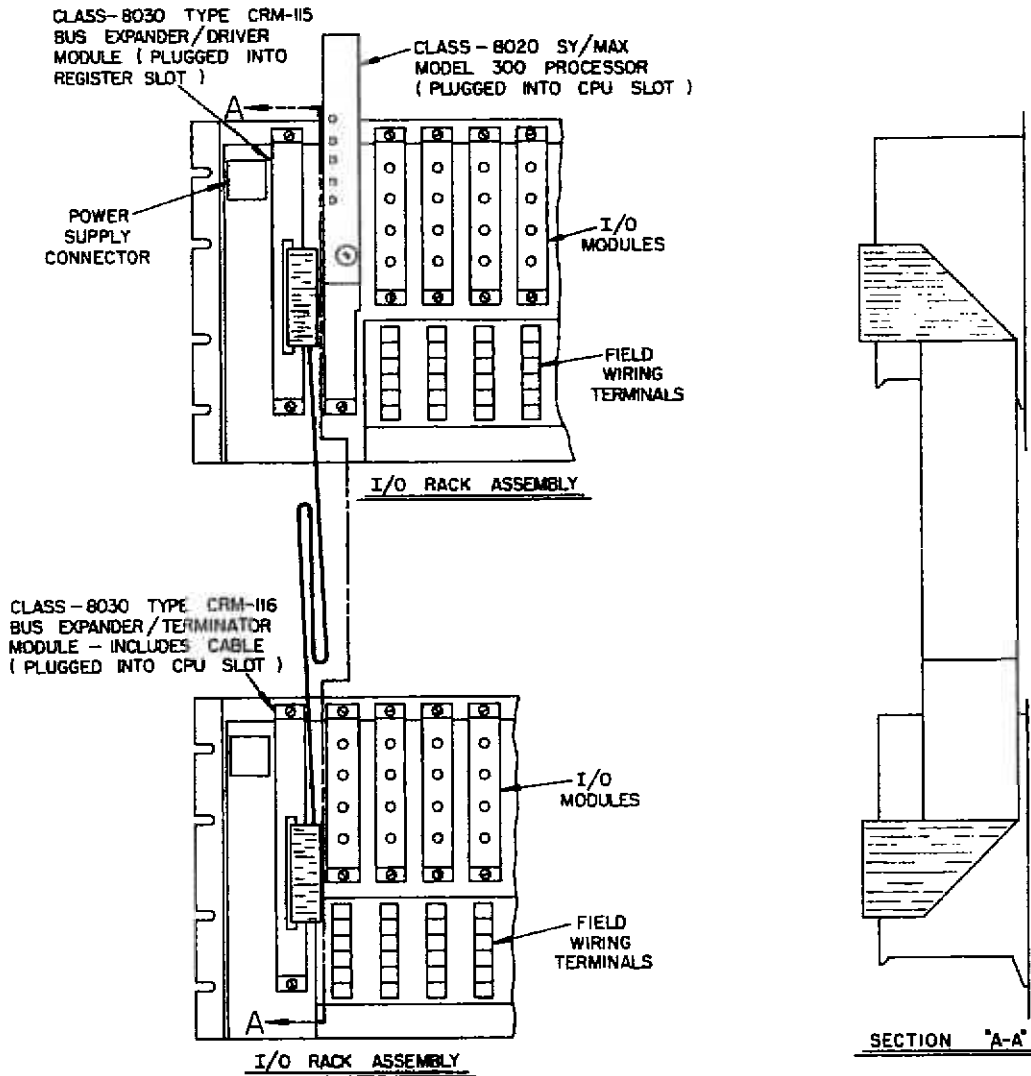


Figure 2 — Two I/O Rack System

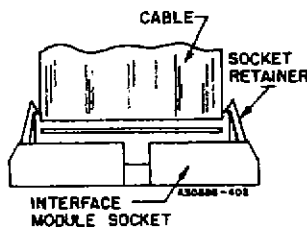


Figure 3 — Cable Insertion

NOTE: The cable plug and socket are mechanically keyed to prevent incorrect insertion. This polarity must

be observed. Do not attempt to force a connection. Power must be removed from the processor before connecting or disconnecting the cable.

Recommended cable routing is to fold the cable over to the right side of the Type CRM-116 module. Then 90° fold the cable and route it up between the CRM-116 and the first I/O module in that I/O rack assembly. Route the cable up between the CRM-115 and the Model 300 processor. Now 90° fold the cable up to the connector on the CRM-115 module. Any cable slack should be taken up by "S" bundling and securing with a wire tie. See Figure 2