

# Instructions for RS232 PONI Product Operated Network Interface Module

I.L. 17202B

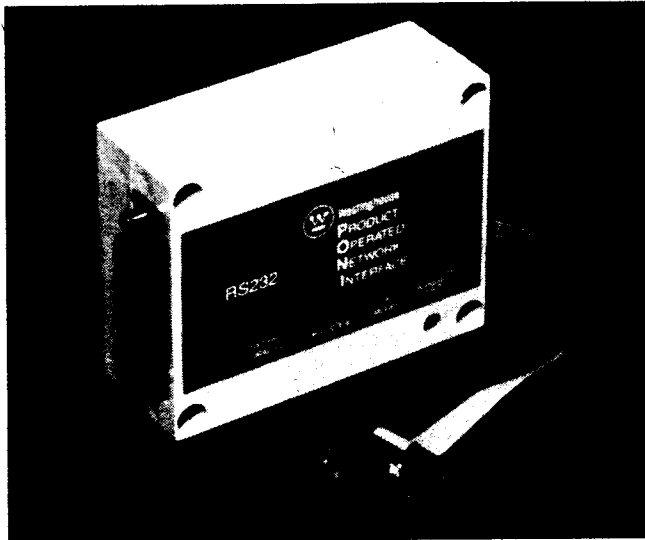


Fig. 1 RS232 PONI Module

## THE RS232 PONI MODULE

The RS232 Product Operated Network Interface (PONI) module is designed to communicate information from a solid-state control device through a single non-network (non-shared) RS232 communication channel to a computer control station.

The RS232 PONI module is powered by the product it is attached to and needs no other source of power.

The RS232 PONI module can operate with surrounding air at a temperature in the range of 0° to 70°C.

As the RS232 PONI module operates over a single point-to-point communication channel, it needs no address switches. A Light Emitting Diode (LED) is provided to indicate when communication is occurring.

The RS232 PONI card cannot be daisy-chain connected with multiple devices. If more than one RS232 interface is needed, INCOM PONI cards (I.L. 17158A) and one Master INCOM Network translator box (I.L. 17200) should be used.

## PONI RS232 LINE DEFINITIONS

The PONI RS232 module operates using a 3-wire cable at 1200 BAUD through a 25 socket "D" subminiature connector. See Figure 3.

Because of the wide variety in installation, the RS232 cable is user supplied.

## COMMUNICATION PROTOCOL

The RS232 PONI module communicates over a serial channel using the same ten byte ASCII message protocol used in the Master INCOM Network Translator known as MINT (I.L. 17200). The protocol is presented in the *Westinghouse INCOM Product RS232 Interface*

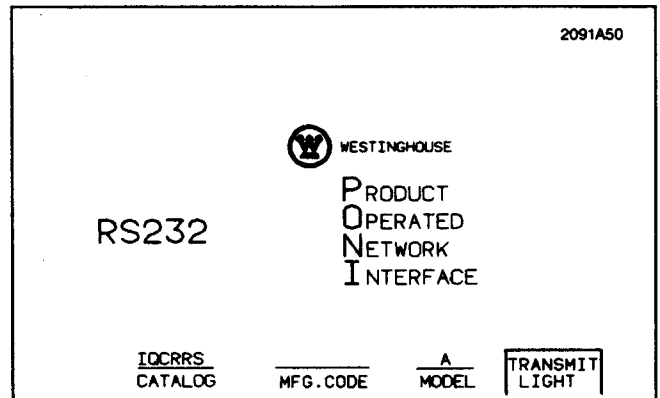


Fig. 2 RS232 PONI Nameplate

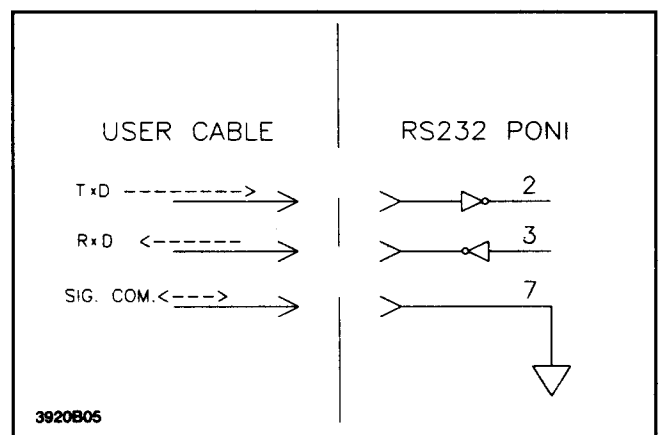


Fig. 3 RS232 Connector

*Manual* (T.D. 17198). Some network related fields are unused, but use of the total network protocol allows universal use of software and easy upgrading to INCOM network operation.

NOTE: Westinghouse software is available for IBM, PC, XT, AT, or clone applications. Contact your local Westinghouse representative for information.

## DATA FLOW CONTROL

RS232 data flow into and out of the RS232 PONI is controlled entirely by X-OFF (CONTROL-S) and X-ON (CONTROL-Q) characters. No hardware handshaking lines are provided.

If the RS232 device using the RS232 PONI must stop servicing the RS232 data flow out of the RS232 PONI, it may send an X-OFF character to the RS232 PONI. Data flow will cease until the RS232 PONI receives an X-ON character.

As an RS232 device using the RS232 PONI is able to control its transmission in response to a signal from

the RS232 PONI, the PONI provides relatively little buffering for incoming RS232 messages. Beyond one message, four additional bytes of the ten bytes of the next message are buffered if the last message has not been delivered to the product. If two of the four bytes are received, the RS232 PONI sends an X-OFF character to the RS232 device. As long as no more than two additional bytes are sent, no data will be lost. Bytes beyond four are lost. If an X-OFF character was sent, the RS232 PONI sends an X-ON character as soon as the buffer is free.

**TRANSMITTING DEVICE**

A PONI module can be used with any of the following Westinghouse products:

1. IQ-1000
2. IQ Data Plus
3. Assemblies Electronic Monitor
4. IQ Data
5. IQ Generator
6. Custom and future microprocessor based products

**MOUNTING HARDWARE**

Each PONI module includes the hardware needed to attach the PONI module to a variety of transmitting devices. Discard hardware not used.

Item	Qty.
Plug Lock Assembly	1
#8-32 x 1 1/8" Screw	2
#8-32 x 3 3/8" Screw	2
#6-32 x 1/4" Screw	4
#6 Flatwasher	4
#6 Lockwasher	4
Mounting Bracket for IQ-1000	1
Mounting Bracket for Custom Panels	1

**INSTALLATION**

These PONI industrial control modules are designed to be installed, operated, and maintained by properly

trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

**CAUTION:** During installation deenergize the device to which the PONI is being module connected, otherwise damage will result.

**MOUNTING TO IQ-1000**

Disconnect power to the IQ-1000. Mount bracket as shown in Figure 4, using the hardware indicated. Mount the PONI module to the bracket so that the LED and communication connector are on top and the ribbon connector to IQ-1000 is on the right. Insert the nine-pin connector attached to the PONI card ribbon cable into the matching receptacle on the IQ-1000. With the plug lock assembly in position, tighten the lock assembly screws. See Figure 5. Connect user-supplied RS232 cable.

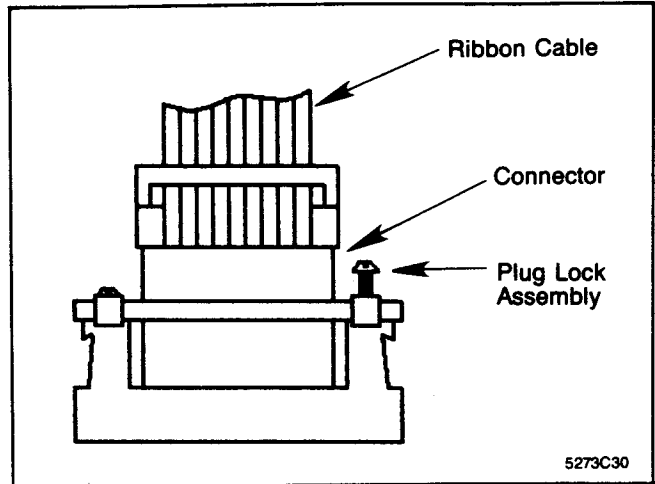


Fig. 5 Plug Lock Assembly

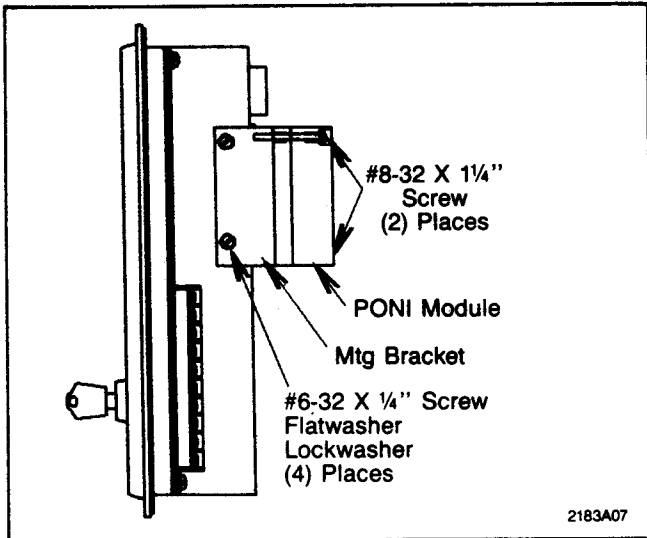


Fig. 4 IQ-1000 Mounting

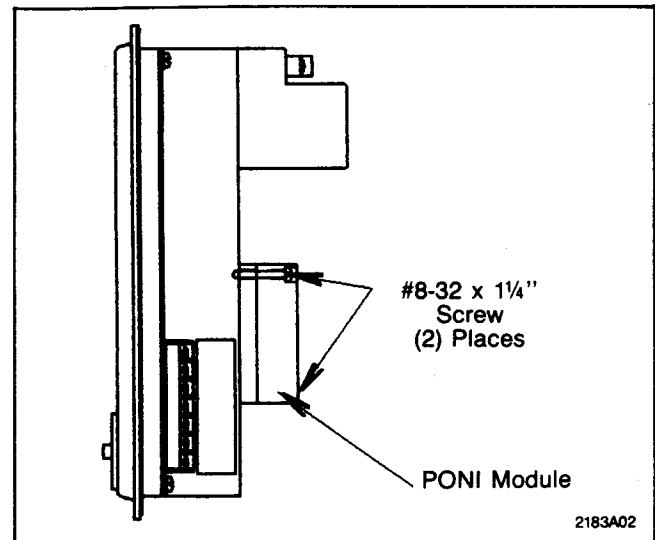


Fig. 6 IQ DATA PLUS without Power Module

**MOUNTING TO IQ DATA PLUS  
(without power module)**

Disconnect power to the IQ DATA PLUS. Mount PONI module assembly on the back of the IQ DATA PLUS as shown in Figure 6, using hardware indicated, so that the communication connector is on the left and the ribbon connector to the IQ DATA PLUS is on the right. Connect the ribbon cable from the PONI module to the receptacle of the IQ DATA PLUS and screw the plug lock assembly tight as shown in Figure 5.

**MOUNTING TO IQ DATA PLUS  
(with power module)**

Disconnect power to the IQ DATA PLUS. Early production IQ DATA PLUSes require removing two #8-32 x 1" screws holding the power module to the IQ DATA PLUS. Subsequent units are assembled with

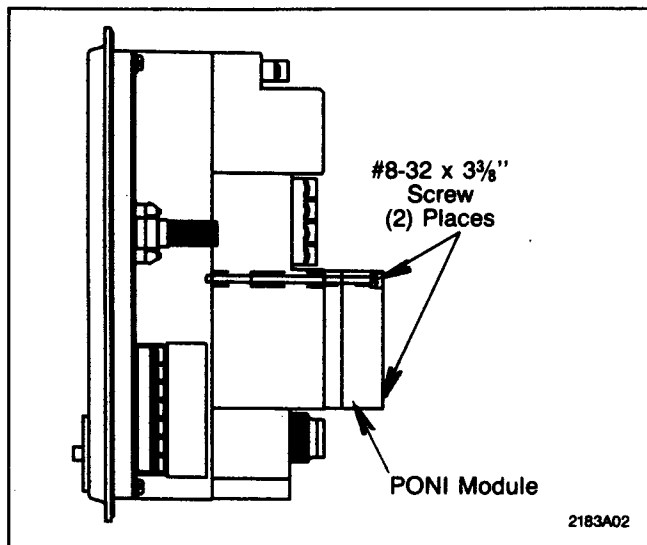


Fig. 7a IQ DATA PLUS with Power Module

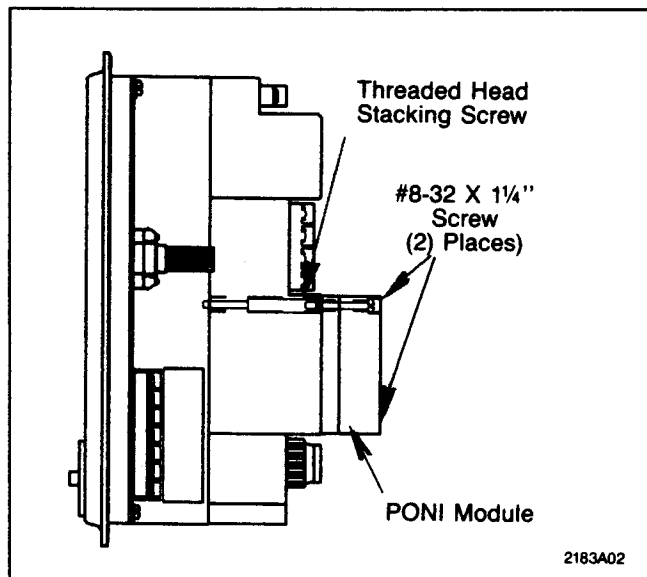


Fig. 7b IQ DATA PLUS with Power Module

stacking screws. Remount the power module with the PONI module in tandem using the hardware indicated in Figure 7a or 7b depending on the hardware on hand. Mount the PONI module so that the communication connector is on the left and the ribbon connector to the IQ DATA PLUS is on the right. Connect the ribbon cable on the PONI module to the receptacle of the IQ DATA PLUS and screw the plug lock assembly tight as shown in Figure 5.

**MOUNTING TO ASSEMBLIES  
ELECTRONIC MONITOR**

Disconnect power to the Assemblies Electronic Monitor (AEM). Mount the RS232 PONI module to the back of the AEM as shown in Figure 8, using the hardware indicated, so the communication connector is on the left and the ribbon connector to the AEM is on the right. Connect the ribbon cable for the RS232 PONI module to the receptacle on the AEM and screw the plug lock assembly tight as shown in Figure 5.

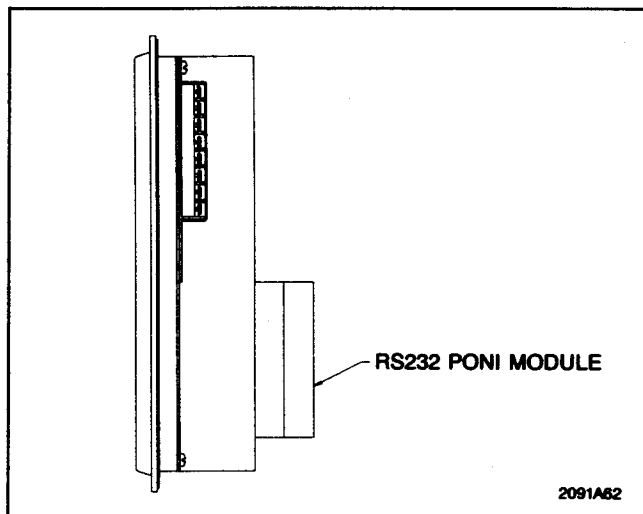


Fig. 8 Assemblies Electronic Monitor

**MOUNTING TO CUSTOM PANEL (EXAMPLE)**

Disconnect power to the panel. Attach bracket as shown in Figure 9, using the hardware that supports the panel. Mount the PONI module to the bracket with two #8-32 x 1/8" screws, in the orientation shown in Figure 8. Connect the ribbon cable from the PONI module to the receptacle of the panel and screw the plug lock assembly tight as shown in Figure 5.

**OPERATION CHECK**

After the IMPACC/INCOM system has been installed, check the operation of each RS232 PONI module by applying power to the parent unit and issuing an INCOM command through its communication channel. If the product responds to the command and its communication indicating LED flashes during the test, then all connections are correct. If response fails or the LED does not indicate, replace the RS232 PONI module and consult the Westinghouse Customer Support Center for

# RS232 PONI MODULE

I.L. 17202B

Industrial Controls using the toll-free telephone numbers shown below.

## TROUBLE-ASSIST NUMBERS

Region	Phone Number
Northeast .....	1-800-356-1247
Southeast .....	1-800-356-1248
Midwest .....	1-800-356-1245
Pacific .....	1-800-356-1243

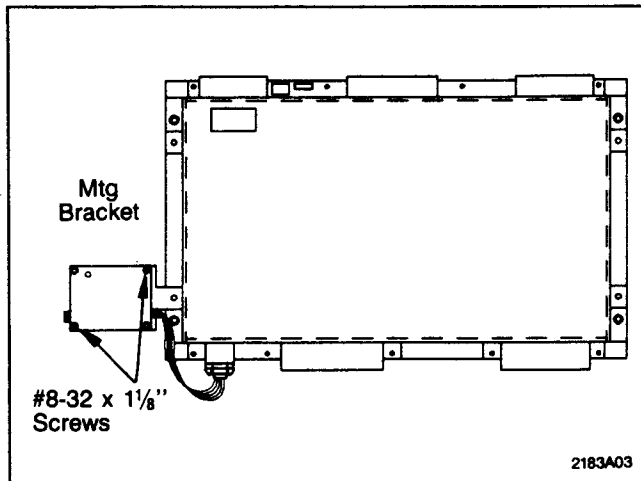


Fig. 9 Typical Custom Panel Mounting

n, 8, 2  
Ack/Neck

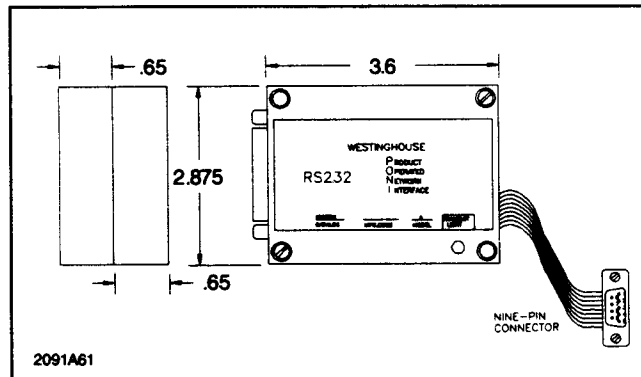


Fig. 10 Outline Dimensions (Dim. in inches)

Effective 9/90  
Supersedes 17202A (3/89)

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Printed in USA