Programmable Controller
IC690ACC901
Mini Converter Kit

GFK-0682E
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The Mini Converter Kit consists of an RS-422 (SNP) to RS-232 Mini Converter integrated into a 6 foot (2 meter) serial extension cable, and a 9-pin to 25-pin Converter Plug assembly. The 15-pin SNP port connector on the Mini Converter plugs directly into the serial port connector on the programmable controller. The 9-pin RS-232 port connector on the Mini Converter cable connects to an RS-232 compatible device.

Two LEDs on the Mini Converter indicate activity on the transmit and receive lines.

The Converter Plug is required to convert the 9-pin serial port connector on the Mini Converter to the 25-pin serial port connector on an IC647 computer, an IBM® PC-XT, or a PS/2® Personal Computer.

The IC640 industrial computer requires an additional adapter (not supplied – please contact your local PLC distributor) for use with the Mini Converter.

Tables 1 and 2 list the Mini Converter pinouts. The direction of signal flow is with respect to the Mini Converter.

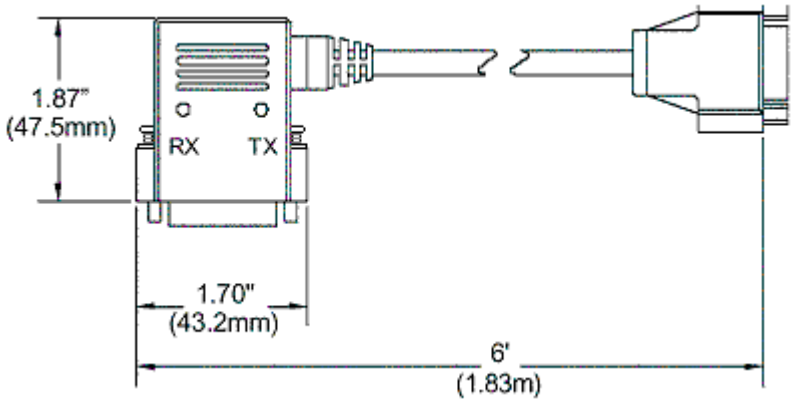

Figure 1. RS-422 (SNP) to RS-232 Mini Converter

Table 1. Mini Converter RS-422 Port

Pin	*Signal Name*	*Direction*
1	SHLD – Shield	n/a
5	+5 VDC – Power	Input
6	CTS(A') – Clear To Send	Input
7	GND – Ground	n/a
8	RTS(B) – Request To Send	Output
9	RT – Receive Termination	Output
10	SD(A) – Send Data	Output
11	SD(B) – Send Data	Output
12	RD(A') – Receive Data	Input
13	RD(B') – Receive Data	Input
14	CTS(B') Clear To Send	Input
15	RTS(A) – Request To Send	Output

Table 2. Mini Converter RS-232 Port

Pin	*Signal Name*	*Direction*
2	SD - Send Data	Output
3	RD - Receive Data	Input
5	GND - Ground	n/a
7	CTS - Clear To Send	Input
8	RTS - Request To Send	Output

Note: This datasheet applies to IC690ACC901 *versions C or later*.

System Configurations

The Mini Converter can be used in a point-to-point configuration as described above, or in a multidrop configuration with the host device configured as the master and one or more programmable controllers configured as slaves.

The multidrop configuration requires a straight-through (1-to-1) cable from the Mini Converter's RS-422 port to the first slave PLC's SNP port. Other slaves will require a daisy chain connection between slaves. A maximum of eight devices can be connected in an RS-422 multidrop configuration.

All of the devices must have a common ground. If ground isolation is required, you can use the Isolated Repeater/Converter (IC655CCM590) in place of the Mini Converter.

When using the Mini Converter with a modem connection, it may be necessary to jumper RTS to CTS (consult the user's manual for your modem).

Cable Diagrams (Point-To-Point)

When connecting the Mini Converter to IBM PC and compatible computers with hardware handshaking, the following cable connections should be used.

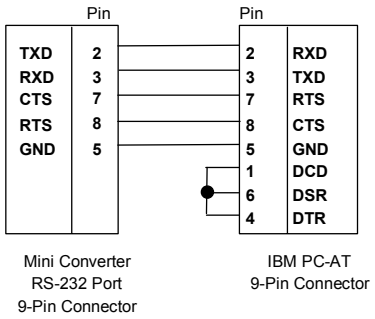

Figure 2. Mini Converter to PC-AT

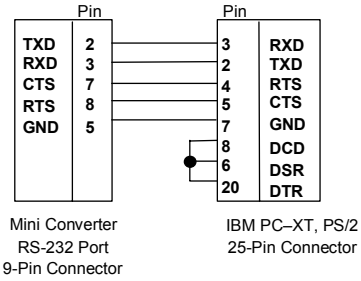

Figure 3. Mini Converter with Converter Plug to IC647 computer, PC-XT, PS/2

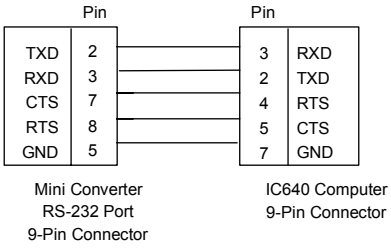

Figure 4. Mini Converter to 9-Pin IC640 Computer or PC-XT Computer (Additional Adapter Required)

Table 3. Mini Converter Specifications

Mechanical	
RS-422	15-pin D shell male for direct mounting to serial port on the programmable controller
RS-232	9-pin D shell female for connection to RS-232 serial port of an IC647 industrial computer or Personal Computer.
Electrical and General	
Voltage Supply	+5 VDC (supplied by PLC power supply)
Typical Current	100 mA
Operating Temperature	0° to 70°C (32° to 158°F)
Baud Rate	38.4K Baud maximum
Conformance	EIA-422 (Balanced Line) or EIA-423 (Unbalanced Line)
Ground Isolation	Not provided