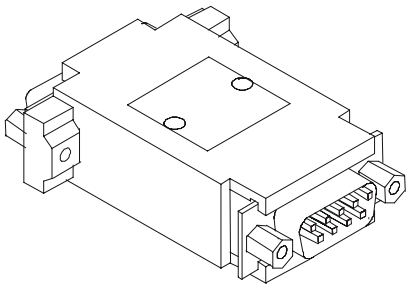
VersaMax RS-232 to RS-485 Interface Adapter

March 2000 GFK-1834



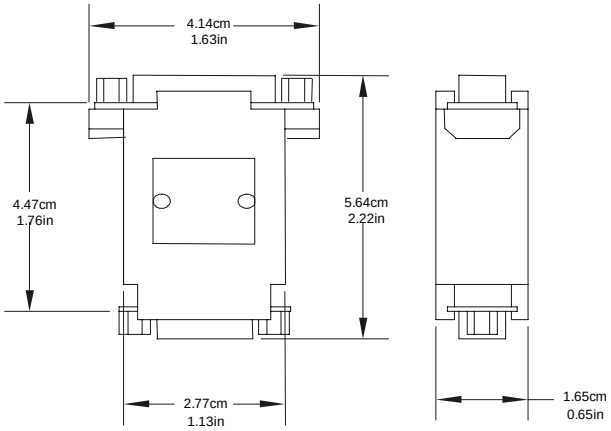
This adapter connects a VersaMax Nano PLC or VersaMax Micro PLC to an RS-485 communications bus. It supports RS-485 multi-drop connections.

In conjunction with an RJ45 to DB9 Female cable (IC200CBL500), the adapter converts from the RS-232 port (Port 1) on the Nano/Micro PLC to an RS-485 (15-pin D-sub female) connector.

Two LEDs on the adapter indicate activity on the transmit and receive data lines.

Power for this adapter is provided by the Micro/Nano PLC Port 1.

Dimensions of the Adapter are shown below.

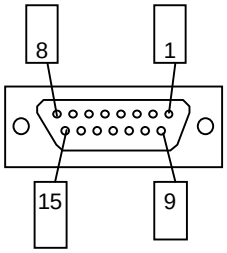


Specifications

Temperature Rating	0 to 55ºC
Storage Temp. Rating	-10 to 75ºC
Humidity	5 to 95%
Shock	MIL-STD 810C, 15G
Noise Immunity	Ansi/EE C37.90A 801.2 ESD L3 801.3 L3, 801.6 RF 801.4 Fast Transient L3 801.5 Surge EN55011 Emissions
Agency Approvals	UL (Class 1, Div 2), * CUL and CE

Adapter 15-pin RS-485 Port Connector

The adapter's RS-485 port is a standard SNP Port (15-pin D-sub female) connector. It supports EIA/TIA-485 (RS-485) compatible signal levels. The pin assignments of the RS-485 connector are shown below.



Adapter RS485 Port Pin Assignments

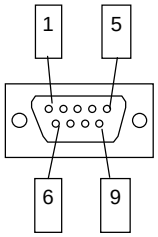
Pin	Function	Dir
1	Shield / Frame GND	-
2	N/C	
3	N/C	
4	N/C	
5	+5VDC	Out
6	RTS(A)	Out
7	GND	-
8	CTS(B')	In

Pin	Function	Dir
9	RT (RD Term)*	-
10	RD(A')	In
11	RD(B')	In
12	SD(A)	Out
13	SD(B)	Out
14	RTS(B)	Out
15	CTS(A')	In
[Shell]	Frame GND	

* RT pin is connected with a 120 ohm resistor to pin 11: RD(B') to provide a simple end-of-line termination through a jumper in the backshell between pin 10 and pin 9. Refer to the *VersaMax Nano/Micro PLCs User's Manual* (GFK-1645) for more details about RS-485 data cables and multi-drop networks.

Adapter 9-pin RS-232 (D-sub Male) Port Connector

The Adapter's RS-232 port matches the industry standard PC 9-pin male serial port. This port accepts the same cable (IC200CBL500) used to communicate directly from the Micro/Nano's RJ-45 jack to a PC. This port supports EIA/TIA-232 (RS-232) compatible signal levels. The +5VDC output from the Nano/Micro PLC is routed to pin 9 on this cable and is used to power the converter.



Adapter RS-232 Port Pin Assignments

Pin	Signal	Dir.	Function
1	DCD	Input	(No Connect)
2	RXD	Input	Receive Data
3	TXD	Output	Transmit Data
4	DTR	Output	(No Connect)
5	GND	--	0V/Gnd signal
6	DSR	Input	(No Connect)
7	RTS	Output	Request to Send
8	CTS	Input	Clear to Send
9	+5V	Input	+5VDC power in
SHELL	SHLD	--	Cable Shield wire connection