

PC485

RS232 to RS485 Converter

Operation and Instruction Manual



Mechanical installation

The PC485 is housed in a through connector with 25 way DIN connectors at each end. The female end connect directly to the computer serial port. The male end is the RS485 end which connects to the RS485 device being communicated with. Use low capacitance screened computer cables for connections to and from the PC485.

For two way communications between two computers an alternative converter, model PC422 is recommended to overcome timing problems between computers by using RS422 communications.

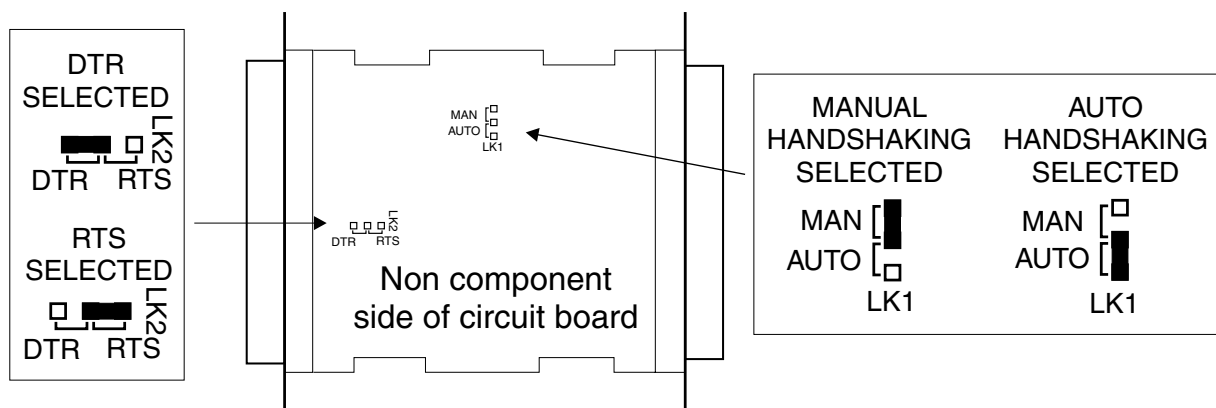
Electrical installation

Internal Link Settings

Internal links are fitted to the circuit board, if link settings need to be altered then disassemble the instrument. The case is held together by clips at the side of the housing. Alteration of a link involves unsoldering the existing link (or cutting the printed circuit track if applicable) and soldering a wire link across the required terminals. Make the link changes required then re assemble the instrument.

Default link settings are:

LK1 AUTO and LK2 DTR



LK1 - Auto/Manual Link

In auto mode the transmitter is automatically enabled when transmit data is present and is automatically switched off when data is complete. No timing is required by the host device. The auto mode will work at all baud rates, see "Specifications" section for available baud rates. In auto mode the command transmitted will be echoed back to the sender.

In manual mode the transmitter must be manually enabled and disabled, normally via the DTR or RTS line (pins 20 and 4, female end). One of these (the one selected by LK2) must be held high to turn the transmitter on and must go low to turn it off. The line must be level held until the stop bit of the last data byte is sent. This normally involves complex timing and the use of interrupts to ensure the timing requirements are met.

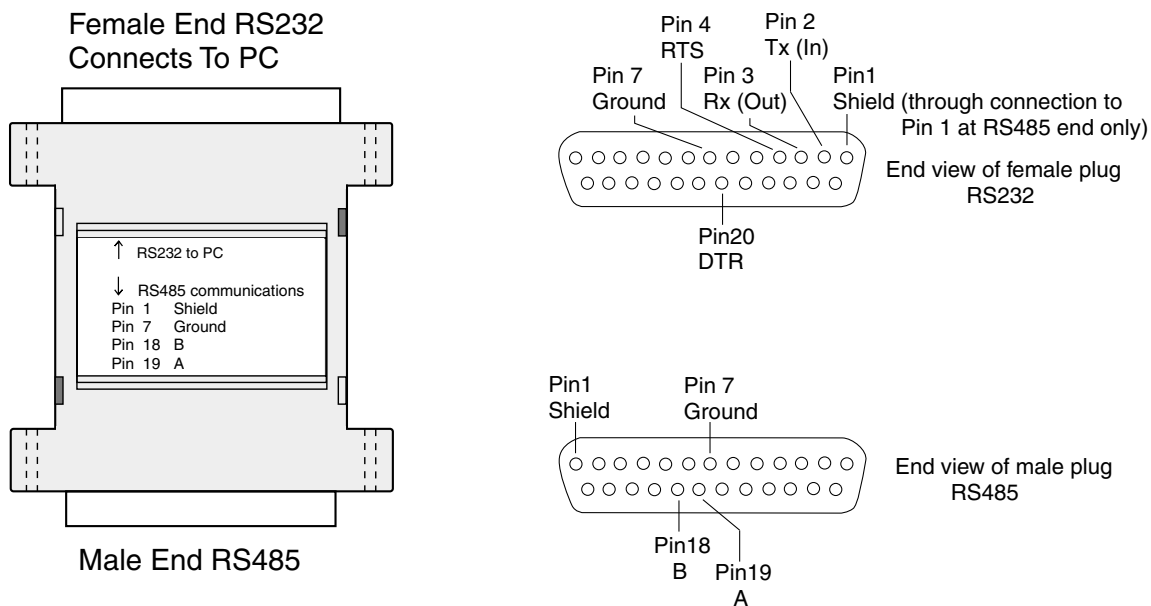
The transmitter must be turned off before another device on the line starts to transmit.

LK2-RTS/DTR

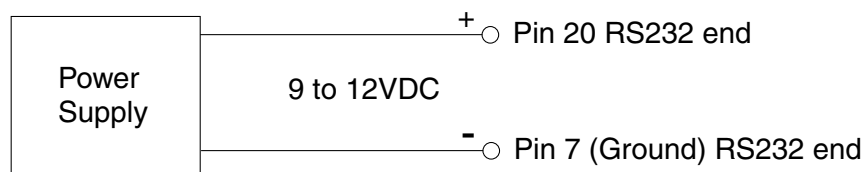
Selects either RTS or DTR as the control input for RS232. The control input is used when "MAN" is selected at LK1.

External Connections

Electrical Connections



The PC485 is normally powered from the computer port via 9 to 12V at pin 20 at the RS232 end. If required the PC485 may be externally powered. Connections for externally powering the PC485 are shown below.



Note: Power supply must be regulated maximum voltage permitted is 12VDC

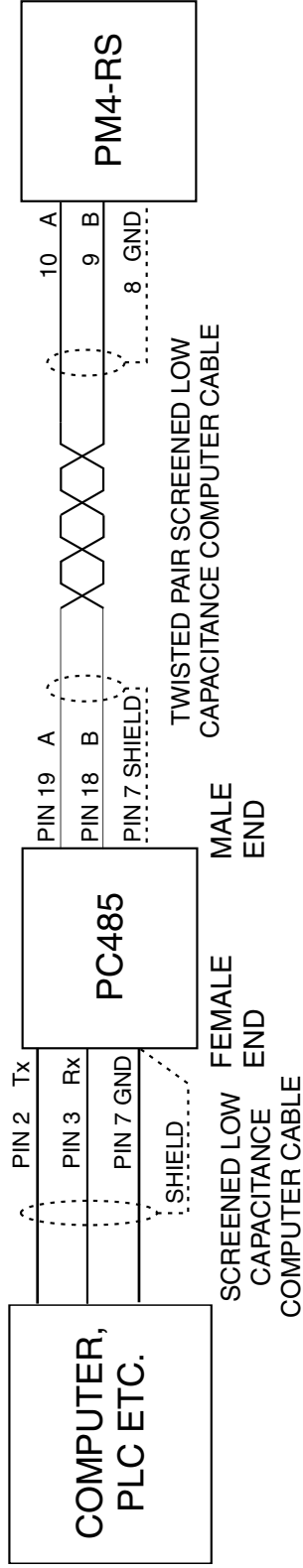
RS232 End

- Pin 1 - Shield - This connects to Pin 1 at RS485 end only.
- Pin 2 - Tx(in) - Transmit data from RS232 device to RS485/RS422.
- Pin 3 - Rx(out) - Receive data from RS485/RS422 to RS232 device.
- Pin 4 - RTS - Request To Send control line. See LK2 link details.
- Pin 7 - GND - Signal ground.
- Pin 20 - DTR - Data Terminal Ready control line. See LK2 link details.

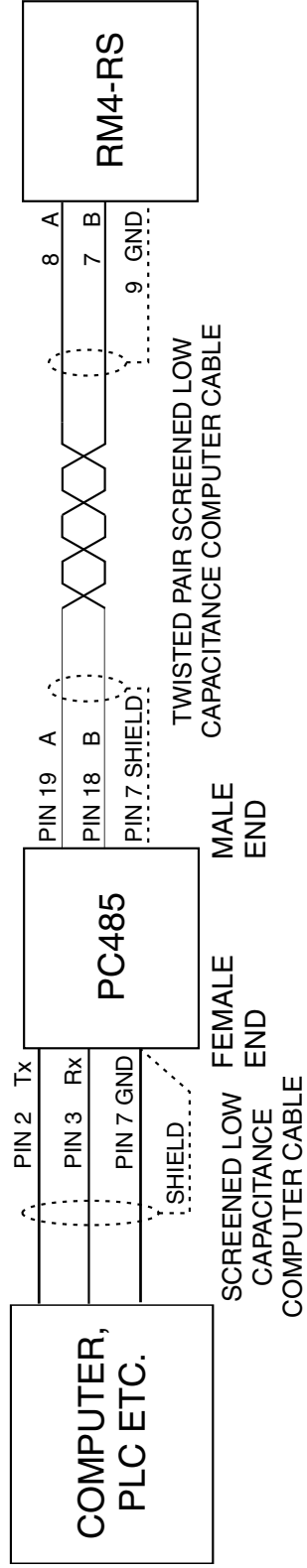
RS485 End

- Pin 1 - Shield - This connects to Pin 1 at RS232 end only.
- Pin 7 - Ground.
- Pin 18 - B - RS485 B.
- Pin 19 - A - RS485 A.

RS485 communication to panel meter model PM4-RS



RS485 communication to DIN rail meter model RM4-RS



Specifications

Maximum number of drivers:	32
Maximum number of receivers:	32
Maximum cable length (RS485):	1220 m
Maximum cable length (RS232):	15 m
Baud range (RS232 limited):	300 to 38400 baud
Power supply:	Powered from the PC serial port via Pin 20 (+12V) and Pin 7 (Gnd) or may be externally powered (9-12V).
Dimensions:	63mm (h) x 56mm (w) x 16mm (d)
Temperature range:	-40 to 60°C (5 to 95% humidity)

Guarantee & service

The product supplied with this manual is guaranteed against faulty workmanship for a period of 2 years from the date of dispatch.

Our obligation assumed under this guarantee is limited to the replacement of parts which, by our examination, are proved to be defective and have not been misused, carelessly handled, defaced or damaged due to incorrect installation. This guarantee is VOID where the unit has been opened, tampered with or if repairs have been made or attempted by anyone except an authorised representative of the manufacturing company.

Products for attention under guarantee (unless otherwise agreed) **must be returned to the manufacturer freight paid** and, if accepted for free repair, will be returned to the customers address in Australia free of charge.

When returning the product for service or repair a full description of the fault and the mode of operation used when the product failed must be given.

In any event the manufacturer has no other obligation or liability beyond replacement or repair of this product.

Modifications may be made to any existing or future models of the unit as it may deem necessary without incurring any obligation to incorporate such modifications in units previously sold or to which this guarantee may relate.

This document is the property of the instrument manufacturer and may not be reproduced in whole or part without the written consent of the manufacturer.

This product is designed and manufactured in Australia.

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