

BVR485R

Operating Instructions

Baldwin Boxall Communications Ltd.
Wealden Industrial Estate, Farningham Road
Crowborough, East Sussex, TN6 2JR

Telephone: 01892 664422

Fax: 01892 663146

Website: www.baldwinboxall.co.uk

Email: mail@baldwinboxall.co.uk

BALDWIN BOX▲LL
C O M M U N I C A T I O N S

BVR485R

RS485 Repeater/isolator module.

Typically a RS485 multi drop data communications link is limited to 1.2Km at 9600 baud using fire rated cable.

Using the BVR485R can extend the overall distance, provide galvanically isolated ports preventing earth potential problems and allow for ring topology to be employed.

The BVR485R is housed in a plastic DIN rail mounted module with screw terminations to accept installation cables on the front side P3 and P4. The local equipment is connected to P1 and P2 including the 24V DC power required as follows.

A battery maintained 24V must be connected with its 0V to the 2 appropriate terminals on P2, the current requirement is 20mA.

The local BVR20 or BVCOM RS485 serial port is connected + to A on P1, – to B on P1 and if the cable includes a screen connect to SC on P1.

Please note that connections A and B on P1 are in parallel with A and B on P3.

The RS485 incoming line is connected to P3 and it is important to ensure that A and B are not reversed.

The outgoing line is connected to P4 the electrically isolated port, again observe polarity.

When P3 is sending LED 1 will illuminate and when P4 is sending LED 2 will illuminate aiding fault finding.

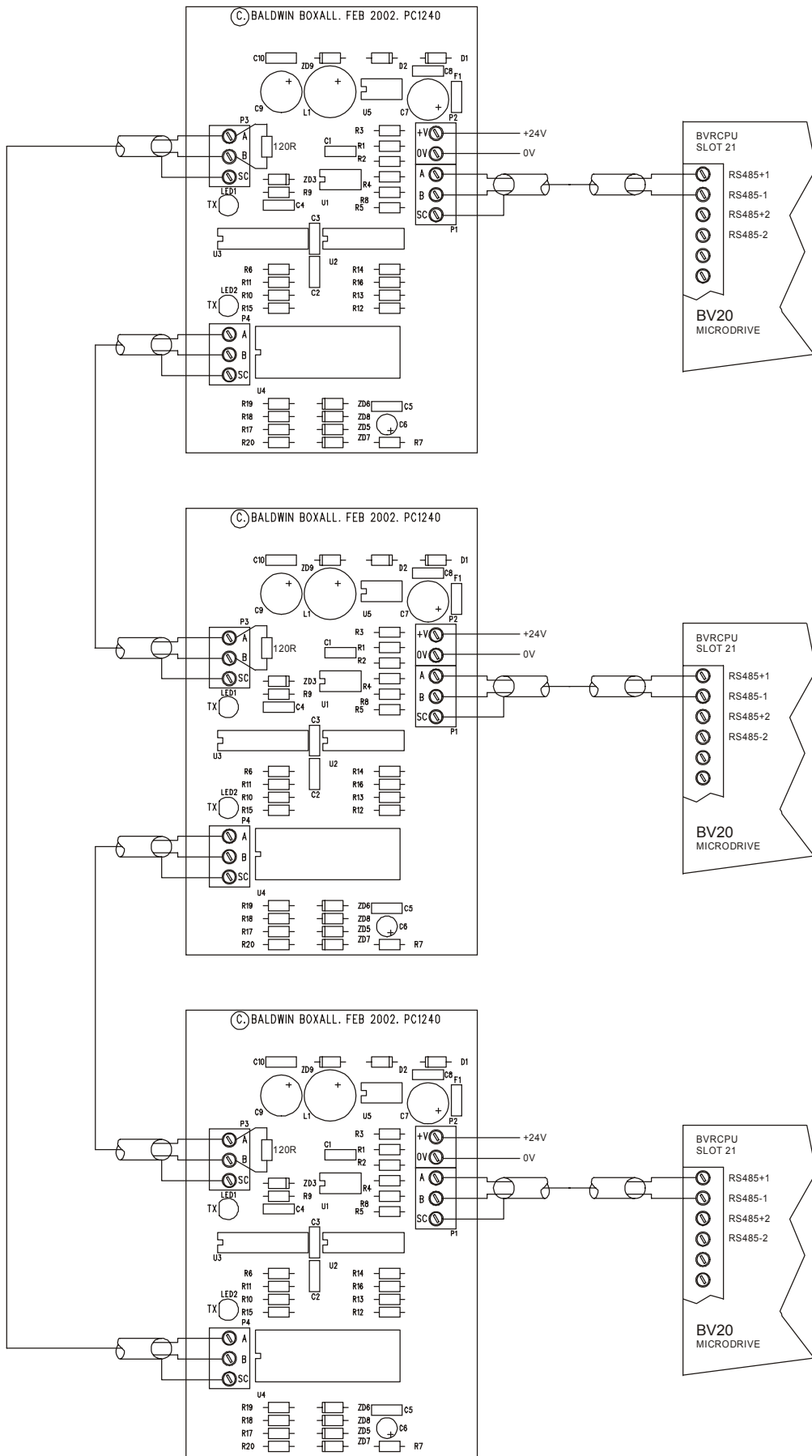
The 24V The DC input is converted to 5V using a switch mode techniques providing power for the line drivers etc.

As the system is half duplex the essential data direction switching is optimised for 9600 baud and data received at P3 is recovered and sent to the isolated port on P4.

Likewise data received on P4 is sent to the non-isolated port at P3.

In some installation where cable length is long it may be necessary to terminate the line with a 120 Ohm resistor across A and B of P3.

When the data link is wired as a ring a single break anywhere will not prevent communication and therefore ring configurations are recommended.



NOTE. Only three RS485 units shown, repeat wiring for full system
 Data must wire in and out of 485 isolator as shown.
 Data should be wired as a complete ring as shown.