Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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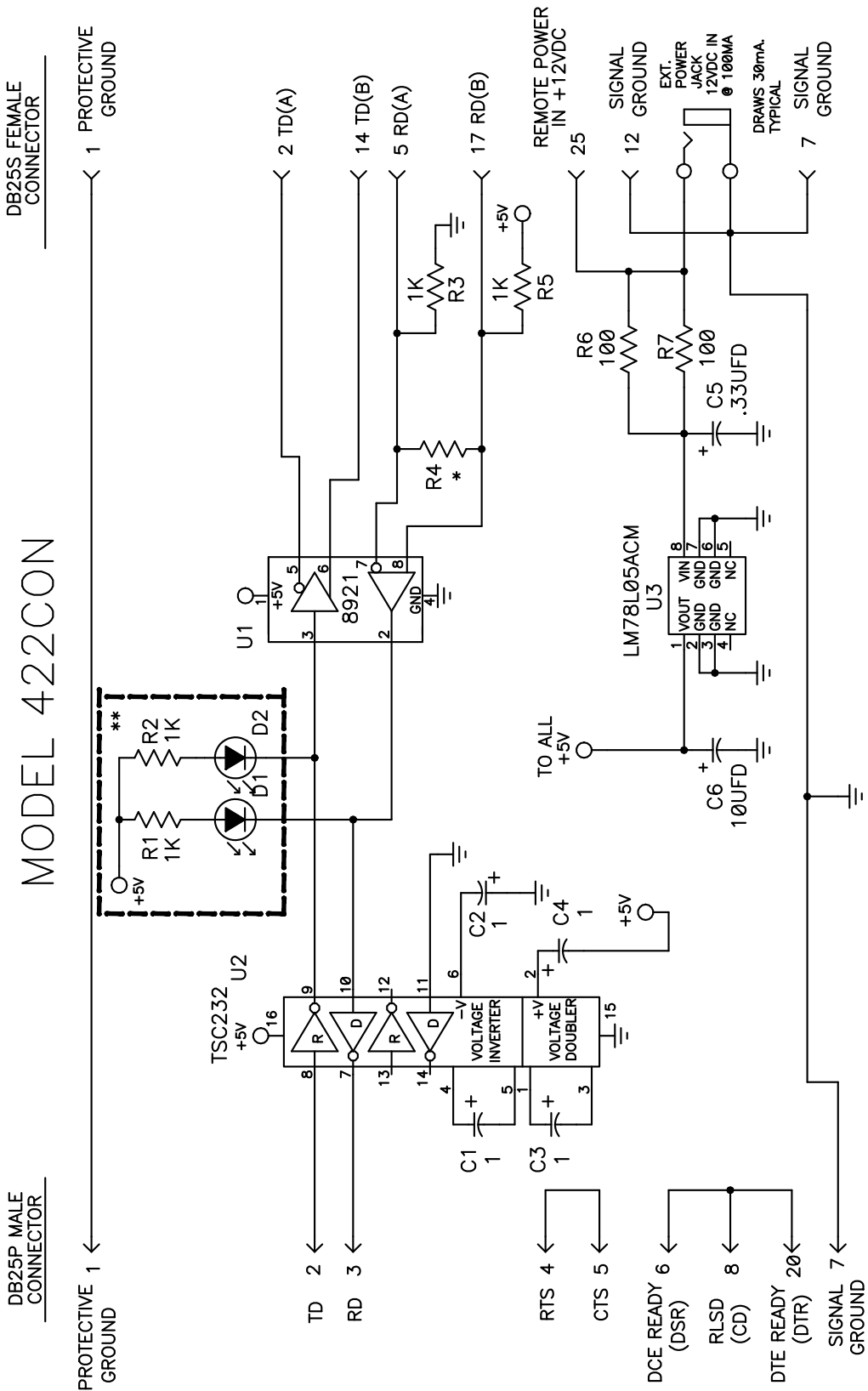
RS-232 To RS-422 Converter CE
Model 422CON

This RS-232 to RS-422 converter converts unbalanced RS-232 signals to balanced RS-422 signals. The RS-422 Standard uses a balanced voltage digital interface to allow communications of 90K bits per second on cable lengths of 4000 feet. Ten receivers can be connected to any one driver for use in multi-drop systems.

The RS-232 port uses a male DB25 type of connector with pins 2(TD input) and 3(RD output) supported. Protective ground (pin 1) and Signal Ground (pin 7) are also connected. The RS-422 port uses a female DB-25 type of connector with the Send Data outputs on pins 2 and 14, and the Receive Data inputs on pins 5 and 17. Protective Ground (pin 1) and Signal Ground (pin 7) are connected through to the RS-232 connector.

Interconnection of the converter with another RS-422 device:

1. The polarity of the two RS-422 lines must be correct. With no data being sent the RS-232 line should be negative and the RS-422 "A"terminal should be negative with respect to the "B" terminal. If your equipment uses a + and - naming scheme, in most cases the A line will be connected to the "-", and the B line will be connected to the "+".

2. The wire recommended in the RS-422 Standard is number 24 AWG copper conductor, twisted-pair telephone cable with a shunt capacitance of 16 pF per foot.

3. For long runs and/or high data rates it is recommended that the wires be terminated with a resistor at the receive end. The twisted pair usually used has an impedance of about 100 ohms, therefore a 100 ohm resistor is normally used for the termination. The RS-422 side of the converter requires more power as the transmission line is increased and as the termination resistor value is reduced, therefore it may be necessary to use a termination resistor that is larger than 100 ohms.

4. The RS-422 driver has the ability to drive 10 RS-422 receivers connected in parallel. A system of multiple receivers may require some experimentation with location and size of termination resistors, line lengths, grounding, etc.

5. The RS-422 Standard recommends that Protective Ground (pin 1) be connected to a good "green wire" ground. This may be already connected in your RS-232 equipment. Protective Ground and Signal Ground should be connected through to each end of the system and be connected to each other using a 100 ohm 1/2 watt resistor at one end only. If a shielded twisted pair is used the shield should be connected to Protective Ground.

DECLARATION OF CONFORMITY

Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Numbers:	422CON
Description:	RS-422 Converter
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 50082-1 (IEC 801-2, IEC 801-3, IEC 801-4) EN 50081-1 (EN 55022, IEC 1000-4-2) EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11) ENV 50204 EN 55024

Robert M. Paratore, Director of Engineering   CE

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PRODUCT INFORMATION

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PRODUCT INFORMATION

MODEL 422CON

DB25S FEMALE CONNECTOR

1 PROTECTIVE GROUND
2 TD(A)
14 TD(B)
5 RD(A)
17 RD(B)
25 REMOTE POWER IN +12VDC
12 SIGNAL GROUND
EXT. POWER JACK 12VDC IN @ 100MA
DRAWS 30mA. TYPICAL
7 SIGNAL GROUND

U1 8921
+5V 1
5
6
7
8
GND 4
3
2

R3 1K
R5 1K
+5V
R4 *
R6 100
R7 100
C5 .33UFD

LM78L05ACM U3
VOUT 1
GND 2
GND 3
NC 4
VIN 8
GND 7
GND 6
NC 5

TO ALL +5V
C6 10UFD

** R2 1K D2
D1
R1 1K
+5V

TSC232 U2
+5V 16
R 9
8
D 10
7
R 12
13
D 11
14
-V VOLTAGE INVERTER 6
4
5
+V VOLTAGE DOUBLER 2
1
3
15

C2 1
C4 1
+5V
C1 1
C3 1

DB25P MALE CONNECTOR

PROTECTIVE GROUND 1
TD 2
RD 3
RTS 4
CTS 5
DCE READY (DSR) 6
RLSD (CD) 8
DTE READY (DTR) 20
SIGNAL GROUND 7

* OPTIONAL TERMINATION RESISTOR
** OPTIONAL LEDS FOR MODEL 422LCON

B&B ELECTRONICS