

# RB12

## Single-channel RS422 Buffer

The RB12 contains a differential RS422 receiver input with selectable termination, and two differential RS422 line driver outputs. Each output is capable of driving one RS422 input with 100 ohm termination or two RS422 inputs with input termination of 200 ohms each.

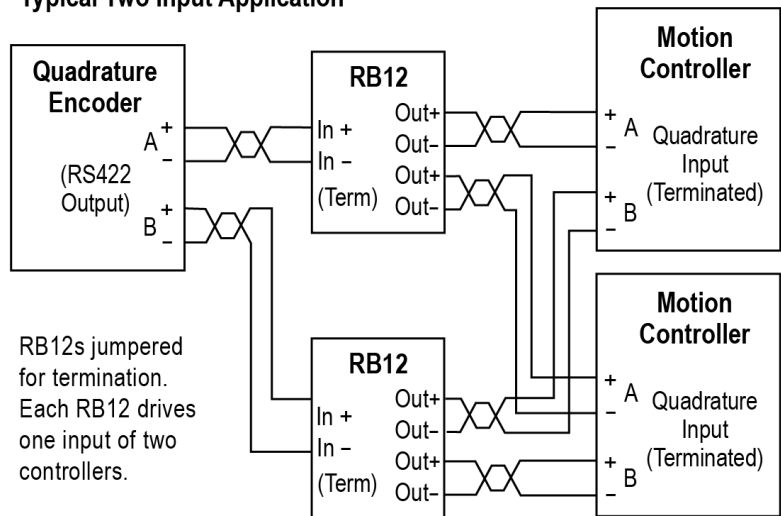
Use two RB12s to buffer the RS422 signals from a quadrature encoder (one RB12 for A and one for B) to allow a gearing encoder to be used with multiple motion controllers.

Simply snap off the side panel of the RB12's DIN rail mount enclosure to access the termination jumper.

### Features

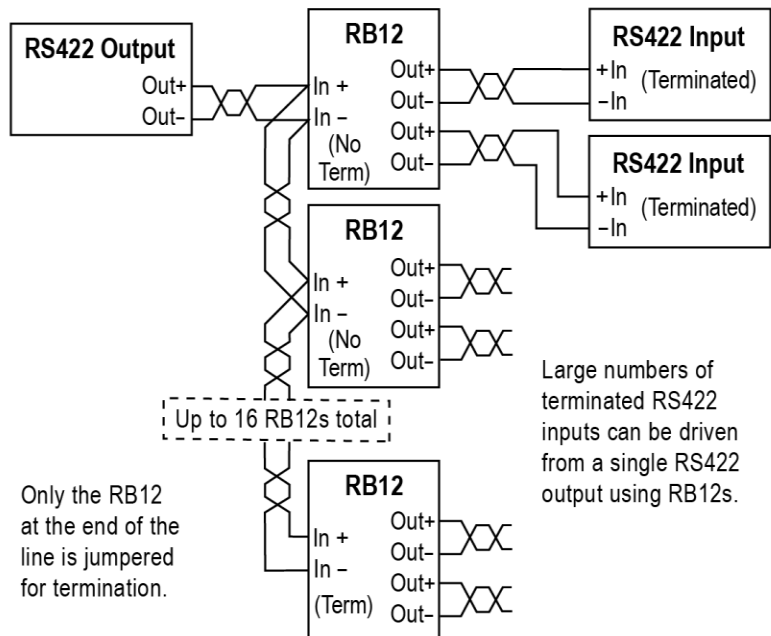
- Connect multiple motion controllers to one encoder for gearing applications
- RS422 differential transceivers for high noise immunity
- Selectable termination on RS422 input—high impedance or 220 ohm
- Compact DIN-rail mount
- Single +5VDC  $\pm 5\%$  power supply
- Low current draw—30mA typical (varies with termination impedance of RS422 load(s) on the RB12 outputs)

### Typical Two Input Application



RB12s jumpered for termination. Each RB12 drives one input of two controllers.

### General RS422 Buffer Application



Only the RB12 at the end of the line is jumpered for termination.

Large numbers of terminated RS422 inputs can be driven from a single RS422 output using RB12s.



# RB12

## Specifications

<b>Buffer</b>	Number of Inputs	1
	Input Type	RS422 differential receiver (MAX490 or equivalent)
	Input Impedance (From Input + to Input -)	Selectable--High (>6 kohms) or Low (220 ohms $\pm$ 7%)
	Input Differential Threshold Voltage	-0.2 to +0.2 Volts
	Number of Outputs	2
	Output Type	RS422 differential line driver (MAX490 or equivalent)
	Output Drive	Drives 100 ohm to 250 ohm RS422-type input(s)
	Speed	2.5 Mbps (see MAX490 datasheet for details)
<b>Power Supply Requirements</b>	Power Supply	Single +5VDC $\pm$ 5%
	Current Requirements	30mA typical (varies with impedance driven by RB12—RB12 draws less than 3mA unloaded)
	Isolation	Not isolated—all commons (Input, Output, and Power Supply) are tied together
<b>Mechanical</b>	Dimensions	0.7 x 2.45 x 2.5 in (18 x 62 x 65mm) (W x H x D)
	Mounting	Mounts directly to DIN rail

## RB12 Wiring

Terminal	Function
A	+ RS422 Output (1)
B	- RS422 Output (1)
C	+ RS422 Input
D	- RS422 Input
E	+ RS422 Output (2)
F	- RS422 Output (2)
G	Common
H	+ 5 VDC Power Supply

## Ordering Information

Part Number: RB12

## Company Profile

Delta Computer Systems, Inc. manufactures motion controllers, related accessories, and other products providing high-performance automation solutions to a wide range of industries.

