RX/TX CONVERTER

ORDERING INFORMATION
(Specify stock # when ordering)

Differential = A, B, B', Z, Z'
Single Ended = A, B, Z

FEATURES
The RX/TX Converter converts a Push-Pull or NPN encoder output to an RS422 compatible differential Line Driver output. In addition, it will also convert Line Driver/RS422 encoder output to single ended signals (Push-Pull) for compatibility with certain PLC’s.

Each converter has two independent channels: Channel 1 is equipped with a differential Line Receiver on the input. It then converts these differential signals (A, A', B, B', Z, Z’) to Push-Pull output signals (A, B, Z), with an amplitude equivalent to Vcc.

Channel 2 will convert single ended signals from a Push-Pull or NPN Open Collector encoder to Differential Line Driver signals. Differential Line Driver signals include complementary outputs A’, B’, and Z’ which offer greater immunity to electrical noise, signal distortion, and interference, especially with long cable runs.

APPLICATIONS
To provide differential signals for data transmission over long distances between a push-pull, or NPN open collector transmitter and receiver. To enable devices with different output/input circuits to be connected. To properly terminate differential signals to eliminate/reduce signal distortions.

SPECIFICATIONS

Supply Source (Vcc) ............... 5 to 24 VDC
Current Consumption ............. 20 mA max (plus encoder and output load requirements)
Max Frequency ...................... Up to 1 MHz
Enclosure .......................... IP54 (dust proof)
Earth Circuit ...................... Grounded to Case
Input Voltage ........................ Channel 1: 24 VDC Max Diff
.................................. Channel 2: 5 VDC Max
Output Voltage ..................... Channel 1: Vcc
.................................. Channel 2: 5 VDC or Vcc
Output Current ..................... 30 mA/Channel Max

Stock #

<table>
<thead>
<tr>
<th>Channel 1</th>
<th>Channel 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT</td>
<td>OUTPUT</td>
</tr>
<tr>
<td>MAX 3095</td>
<td>5V Vcc</td>
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</tbody>
</table>

1. OC - Open Collector input designed with a 2k pull-up resistor for an open collector output encoder or device.
2. Inputs can be from devices with pull-up, push-pull or TTL type outputs.
3. Vcc should range between 5-24 VDC

NOTES UNLESS OTHERWISE SPECIFIED

1. TERMINATE CABLE SHEILD/DRAIN WIRES TO THE CASE TERMINAL. P1 AND P2
   IF APPLICABLE. BARE CONDUCTORS MUST
   BE ELECTRICALLY INSULATED FROM THE CIRCUIT
   BOARD WITH A NONCONDUCTIVE SLEEVE SUCH AS
   HEAT SHRINK TUBING.

2. RECOMMENDED CABLE FOR DIFFERENTIALLY
   COMPLEMENTARY ENCODER SIGNALS:
   LOW CAPACITANCE, TWISTED-SHIELDED PAIR.
   SEE ACCESSORIES SECTION FOR 4XXC
   CABLES/CONNECTORS. 4XXC CABLES MUST HAVE
   OUTSIDE INSULATION STRIPPED OFF IN ORDER TO FIT
   THROUGH CABLE ENTRY GLANDS.

3. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT
   VOLTAGE PER THE SELECTED RX/TX MODEL NUMBER

4. P2-14 (Vcc) or P2-19 (5V) can be used to power encoder.

5. P1-15 (5-24Vdc) in (vcc) 5V for customer supplied
   power to operate RX/TX.

All dimensions are in inches with a tolerance of ±0.005” or ±0.01” unless otherwise specified. Metric dimensions are given in brackets [mm].

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