**RX/TX REPEATER**

**FEATURES**
The RX/TX Repeater retransmits signals from an encoder output in order to drive signals over a longer distance with reduced noise and distortion free waveforms. The input is equipped with a Differential Line Receiver and a Differential Line Driver. It takes the differential signals (A, A', B, B', Z, Z') squares the signals up, and then repeats the signals at the outputs.

Benefits are greater immunity from electrical noise, signal distortion, and interference, especially with long cable runs. The output signal can be 5 VDC or an amplitude equivalent to Vcc.

**APPLICATIONS**
Repeat differential signals for data transmission over long distances. To properly terminate differential signals to eliminate/reduce signal distortions. Increase output current drive capability in order to drive multiple receivers.

**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 ................. 24 VDC Max Diff
- Output Voltage ............... 5 VDC or Vcc
- Output Current ............... 30 mA/Channel Max

**ORDERING INFORMATION**
(Specify stock # when ordering)
Differential = A,A', B,B', Z,Z'
For differential signals only

<table>
<thead>
<tr>
<th>Stock #</th>
<th>INPUT</th>
<th>OUTPUT</th>
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<tbody>
<tr>
<td></td>
<td>Differential Line Receiver - MAX 3095</td>
<td>Differential Line Driver 7272</td>
</tr>
<tr>
<td>100020-13</td>
<td>5V</td>
<td>5V</td>
</tr>
<tr>
<td>100020-14</td>
<td>5V</td>
<td>Vcc(^1)</td>
</tr>
<tr>
<td>100020-15</td>
<td>6-12V</td>
<td>5V</td>
</tr>
<tr>
<td>100020-16</td>
<td>6-12V</td>
<td>Vcc(^1)</td>
</tr>
<tr>
<td>100020-17</td>
<td>13-24V</td>
<td>5V(^1)</td>
</tr>
<tr>
<td>100020-18</td>
<td>13-24V</td>
<td>Vcc(^1)</td>
</tr>
</tbody>
</table>

\(^1\) Vcc should range between 5-24 VDC.
\(^2\) Outputs will be equivalent to voltage applied to Vcc (Pin P1-15)

**NOTES UNLESS OTHERWISE SPECIFIED**
1. TERMINATE CABLE SHIELD/DRAIN WIRES TO THE CASE TERMINAL OF P1 AND P2.
2. IF APPLICABLE, BARE CONDUCTORS MUST BE ELECTRICALLY INSULATED FROM THE CIRCUIT BOARD WITH A NONCONDUCTIVE SLEEVE SUCH AS HEAT SHRINK TUBING.
3. RECOMMENDED CABLE FOR DIFFERENTIAL/ COMPLEMENTARY ENCODER SIGNALS:
4. LOW CAPACITANCE, TWISTED-SHIELDED PAIR: SEE ACCESSORIES SECTION FOR AXCC CABLES/CONNECTORS. AXCC CABLES MUST HAVE OUTER INSULATION STRIPPED OFF IN ORDER TO FIT THROUGH CABLE ENTRY GLAND.
5. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT VOLTAGE PER THE SELECTED RX/TX MODEL NUMBER

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