Model 2147
Profibus - DP Fiber Optic Ring Bit-Driver®

Features:
- Meets PROFIBUS-DP specification. Tested & approved by PROFIBUS Lab
- Multimode and single mode
- Plastic or glass fiber
- 2 port optical repeater, optical T-connector, optical to electrical converter
- 9600 bps to 12 Mbps - Auto Negotiation - visual indicators
- DIN rail mounting
- Status indicators: Activity and Error Condition on each port
- Redundant ring
- Data speed display
- Auto negotiation

The Model 2147 Bit-Driver used in a PROFIBUS-DP application is a two fiber optic port repeater with single TIA/EIA-485-A electrical port. The 2147 operates at rate 9600 baud to 12 Mbaud in linear bus topology. The 2147 can be used as an optical repeater between the fiber optic segments, an optical to electrical converter between a fiber optic segment and electrical station(s), or T-connector/repeater between two fiber optic segments and electrical station(s). The 2147 is transparent and does not evaluate the PROFIBUS data exchange. Model 2147 can be configured to operate in redundant ring topology.

Using fiber optics over the physical layer, the 2147 provides longer segment distances, electromagnetic noise immunity, and ground potential difference independence in the linear bus topology. The 2147 can be optionally equipped with optics of different characteristics.

The 2147 retimes the received optical signal and can link up to 32 fiber optic segments in series. The electrical port supports up to 32 stations.

The 2147 Termination switch can select an internal cable type-A termination. External terminations can derive power from the sub-D connector between pins 6 and 5.

The 2147 unit attaches to EN50022 (35mm DIN) mounting rail. Redundant power is applied through screw terminals and data rate selection made automatically with visual indicator of speed display.

TABLE 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Wavelength (nm)</th>
<th>Fiber Diameter (Micron)</th>
<th>Fiber Type</th>
<th>Connector</th>
<th>TR PWR (-dBm)</th>
<th>REC SEN (-dBm)</th>
<th>Attenuation (dB/Km)</th>
<th>Distance Meters</th>
<th>Distance Feet</th>
<th>OPT Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2147-0</td>
<td>660/850</td>
<td>200</td>
<td>Plastic</td>
<td>BFOC/2.5 (St)</td>
<td>10</td>
<td>22</td>
<td>10/75</td>
<td>700/1000</td>
<td>2000/3000</td>
<td>2 PL</td>
</tr>
<tr>
<td>2147-MM</td>
<td>850</td>
<td>50 or 62.5</td>
<td>Multimode</td>
<td>BFOC/2.5 (St)</td>
<td>12</td>
<td>24</td>
<td>3.0</td>
<td>3000</td>
<td>10000</td>
<td>1 MM</td>
</tr>
<tr>
<td>2147 (or</td>
<td>850</td>
<td>50 or 62.5</td>
<td>Multimode</td>
<td>BFOC/2.5 (St)</td>
<td>12</td>
<td>24</td>
<td>3.0</td>
<td>3000</td>
<td>10000</td>
<td>2 MM</td>
</tr>
<tr>
<td>2147-MM-MM</td>
<td>850/1300</td>
<td>50 or 62.5/9</td>
<td>MM/SM</td>
<td>BFOC/2.5 (St)</td>
<td>12/15</td>
<td>24/27</td>
<td>3.0/1.0</td>
<td>3000/10000</td>
<td>10000/33000</td>
<td>1 MM, 1 SM</td>
</tr>
<tr>
<td>2147-MM-SM</td>
<td>1300</td>
<td>9</td>
<td>SM/SM</td>
<td>BFOC/2.5 (St)</td>
<td>15</td>
<td>27</td>
<td>0.35</td>
<td>10000</td>
<td>33000</td>
<td>2 SM</td>
</tr>
<tr>
<td>2147-SM</td>
<td>1300</td>
<td>9</td>
<td>Single Mode</td>
<td>BFOC/2.5 (St)</td>
<td>15</td>
<td>27</td>
<td>0.35</td>
<td>10000</td>
<td>33000</td>
<td>1 SM</td>
</tr>
</tbody>
</table>

Note: Plastic fiber can be used for short distance applications.

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