**GENERAL FEATURES:**
- Plug-and-Play (hot-pluggable)
- Externally 5V powered
- Included UL listed 5V/120VAC/220VAC power adapter
- Data direction auto-turnaround - no flow control necessary
- Built-in surge and static protection
- 5 Year manufacturer’s warranty
- RoHS, CE, and FCC certified

**DESCRIPTION:**
The SerialComm TTL-485-5P is a bi-directional 5V externally powered RS-485 to 5V TTL converter which converts a half-duplex RS-485 port to a 5V TTL signal. A built-in data direction auto-turnaround feature automatically enables the TTL driver when data is present from the RS-485 port, eliminating the need for software drivers, and making the device fully plug-and-play. The TTL-485-5P has a DB9 male connector on the RS-485 port, and DB9 male connector on the TTL port. Two separate terminal blocks are included with the product - one for the RS485 port and the other for the TTL port. The terminal blocks plug into the RS-485 and TTL ports, providing screw-lug wire terminations for the ports. The unit is enclosed in a rugged ABS housing and is externally powered.

**CERTIFICATIONS:**
- CE, FCC, RoHS, and REACH Third-party Certified
- Manufactured and Distributed to ISO 9001:2015 QMS
- Low Failure Rate – 99+% Reliability Since Inception
- 5 Year Replacement Warranty

**TTL VOLTAGE LEVELS:**
<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>TTL INPUT</th>
<th>TTL OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>(&gt; 2.0V)</td>
<td>HIGH (5.0V)</td>
</tr>
<tr>
<td>LOW</td>
<td>(&lt; 0.8V)</td>
<td>LOW (0.0V)</td>
</tr>
</tbody>
</table>

**PINOUT CONFIGURATION:**

**COMMUNICATION**
- RS-485 Standard
- From 300 Baud To 115,200 Baud
- RS-485 Side: either DB9 Male or 5-way Terminal Block
- 5V TTL Side: either DB9 Male or 5-way Terminal Block
- RS-485 Side: 4000 ft (1.2km) & 5V TTL Side: 10 ft (3m)

**ELECTRICAL**
- Included 5VDC/(100VAC-240VAC) Power Adapter
- Less Than 10 mA
- 15KV Electric Static Discharge (ESD) Protection
- 600W Surge Protection

**MECHANICAL**
- Rugged ABS
- With Terminal Block: 1.7oz (50 grams)
- Without Terminal Block: 0.8oz (24 grams)
- With Terminal Blocks: 3.98” X 1.35” X 0.70” (99.8 mm X 34.1 mm X 17.6 mm)
- Without Terminal Blocks: 2.47” X 1.33” X 0.70” (62.8 mm X 33.8 mm X 17.8 mm)

**ENVIRONMENTAL**
- -4° F to 140° F (-20°C to 60° C)
- -40° F to 185° F (-40°C to 85° C)
- 5% To 95% - No Condensation

**QUALITY**
- CE, FCC, RoHS and REACH Third-party Certified
- Manufactured and Distributed to ISO 9001:2015 QMS
- Low Failure Rate – 99+% Reliability Since Inception
- 5 Year Replacement Warranty
APPLICATIONS:

FIGURE 1: EXTENDING TTL DATA DISTANCE

FIGURE 2: MASTER/SLAVE MULTIPLE DROP CONFIGURATION

TROUBLESHOOTING INSTRUCTIONS:
Using one TTL-485-5P unit:
1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on one unit:
   a) Connect the TTL IN to TTL OUT on the TTL port.
   b) Connect the RS-485 port to the PC RS-485 port.
   c) Running a hyper terminal program on the PC, send ASCII characters to the TTL-485-5P converter from one PC port, and check that the characters are received at the same PC port. This tests that the transmit and receive functions of the TTL-485-5P unit is working properly.

Using two TTL-485-5P units:
1. Check that all connections comply with the connection diagrams.
2. Perform a loop back test on two units:
   a) Connect the two TTL ports. Connect TTL IN to TTL OUT and TTL OUT to TTL IN.
   b) Connect the two RS-485 ports to two PC RS-485 ports.
   c) Running hyper terminal programs on both PCs, send ASCII characters to the TTL-485-5P converter from one PC port, and check that the characters are received at the 2nd PC port. Repeat the test in the opposite direction. This tests that the transmit and receive functions of both TTL-485-5P units are working properly.