Time-Out Selection

The RS-485 driver is enabled by the first transmission of the RS-232 side of the transmit data line (Pin 3). Any transmission on the TD line keeps the RS-485 driver enabled. The transmitter is disabled approximately 1ms after the last transmitted character. This 1ms time out should not have to be changed for data rates of 9600 baud or higher.

If other time-outs are required, R12 and C7 can be replaced with component values listed in the table below.



BAUD	TIME-OUT	R12 (Ohms)	C7 (mfd)
300	33.3 ms	330K	0.1
600	16.6 ms	160K	0.1
1200	8.33 ms	820K	0.01
2400	4.16 ms	430K	0.01
4800	2.08 ms	200K	0.01
6900	1.04 ms	100K	0.01
19.2k	0.520 ms	56K	0.01
38.4k	0.260 ms	27K	0.01
57.6k	0.176 ms	16K	0.01
115.2k	0.0868 ms	8.2K	0.01

Mechanical Diagram 8



Recommended Accessories

12 VDC Power Supply, 6 W. Stripped/Tinned. Int'l AC Input. Int'l AC Blades # SMI6-12-V-ST

RS-232 Serial Cable, 6 ft. (1.8 m) # 9PAMF6



DB9 Male to DB9 Male Null Modem Adapter **# MMNM9**

B+**B** SMARTWORX



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QUICK START



Model 4850I9TB Optically Isolated RS-232 to RS-422/485 Converter

Before you begin, be sure you have the following:

- + 485OI9TB Optically Isolated Converter
- + 12 VDC Power Supply (required, sold separately)
- + RS-232 Serial Cable (optional, sold separately)
- + DB9M-DB9M Null Modem (optional, sold separately)



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Product Overview



Data A(-), Data B(+), GND

-40 to +85 °C (wide-operating)

TDA(-), TDB(+), RDA(-), RDB(+), GND

Getting Started

RS-485, 2-Wire

RS-422/485,

Temperature

4-Wire

MTBF

The 485OI9TB converts unbalanced, full-duplex RS-232 signals to balanced full-duplex (4-wire) RS-422/485 or half-duplex (2-wire) RS-485 signals. It provides 1500 Volts RMS optical isolation of the data lines and ground between the RS-232 and RS-422/485 signals.

272581 hours

The RS-232 port has a female DB9 connector with Pin 3 (TD), Pin 2 (RD), and Pin 5 (Ground) passed through. The RS-422/485 port has a 6-position terminal block. The RS-232 side of the converter derives its power from the DTR (Pin 4) and the RTS (Pin 7) lines. One or the other must be raised to power the RS-232 side.

The RS-422/485 side is powered by a 12 VDC power supply (sold separately).

2 | UL Installation

- Input Voltage: 10 14 VDC.
- Input Power 0.9 Watts.
- Wire Range: 26 16 AWG.
- Tightening Torque: 2.0 lb fin.
- Temperature rating of field installed conductors is 105 °C minimum, sized for 60 °C ampacity.
- Use copper wire only.
- Maximum surrounding ambient air temperature 50 °C.





4 | RS-232 Side - Powering





RS-422/485 4-Wire Device RDA(-) TDA (-) TDB (+) RDB(+) RDA(-)TDA(-) RDB (+) TDB(+) GND Ground +12VDC C7 **Power Supply** R12 **ECHO** V(-) ● ● OFF V(+) Refer to power supply section for specifics.

6 | RS-422/485 2-Wire



