

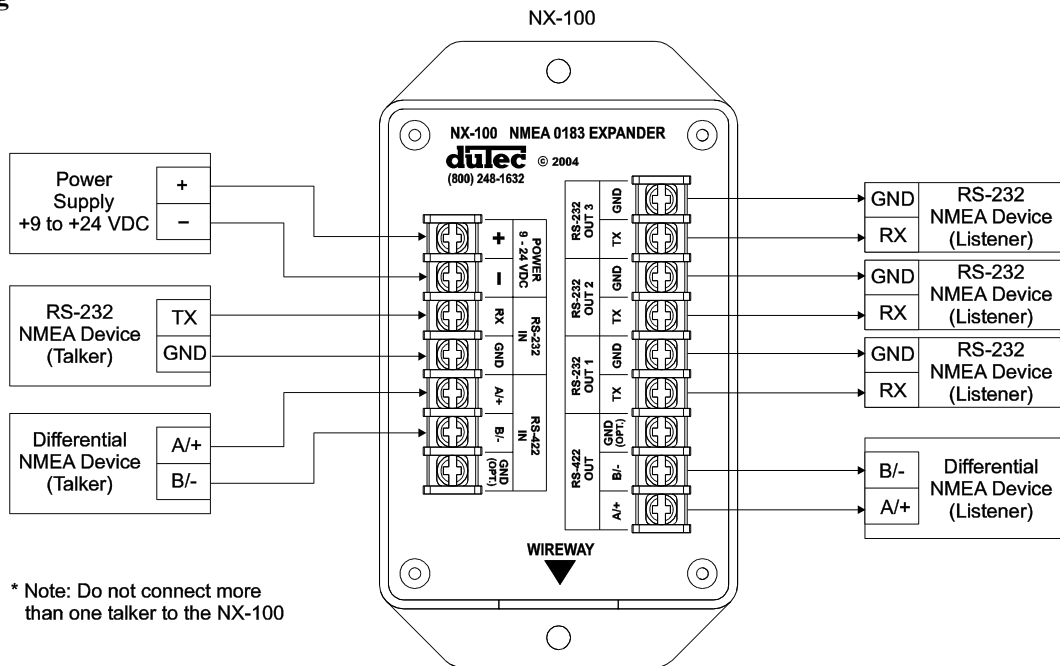
**Features**

- 2000 volts full galvanic isolation between inputs, outputs and power supply.
- 1 NMEA 0183 / RS-232 input; 1 NMEA 0183 / RS-422 input.
- 3 NMEA 0183 /RS-232 outputs; 1 NMEA 0183 / RS-422 output.
- Wide operating voltage range of 9 to 24 volts DC.
- Transient protection on all inputs and outputs.
- Fully potted electronics in flame retardant ABS plastic case (UL94V-0) with mounting flanges.
- Thermoplastic (UL94V-0) terminal blocks with tin plated brass screws and terminals accepts 24 to 14 AWG.
- Buffers and Converts NMEA 0183 signals.

**Description**

The NX-100 0183 Expander allows multiple listeners to be connected to a single talker. The NX-100 takes either a single-ended RS-232 or a differential RS-422 input signal. It conditions and buffers the input signal to provide three single-ended RS-232 outputs and one differential RS-422 output. It also provides up to  $2kV_{RMS}$  input-to-output-to-power isolation using optical and transformer technology.

**Wiring**

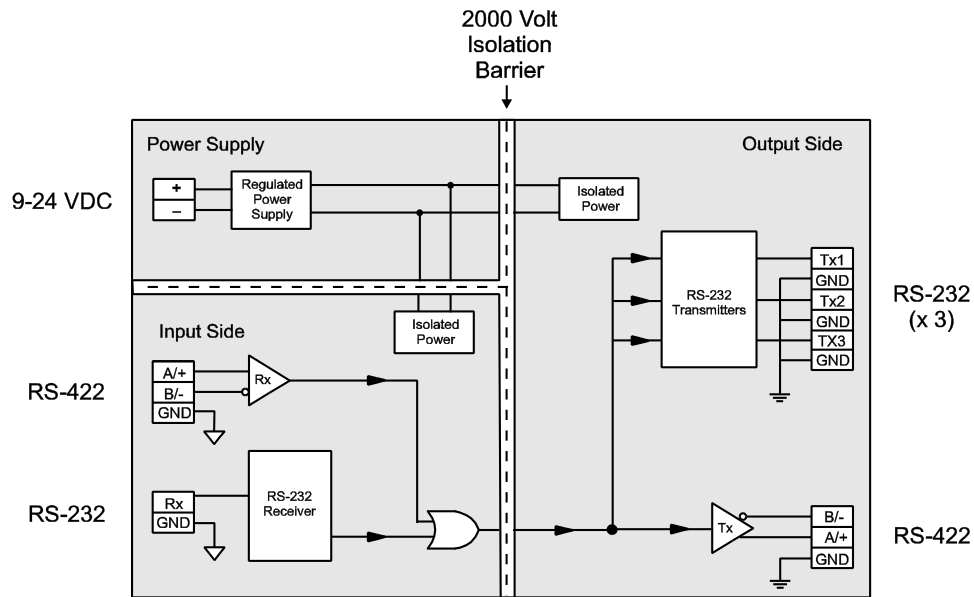


**Specifications:**

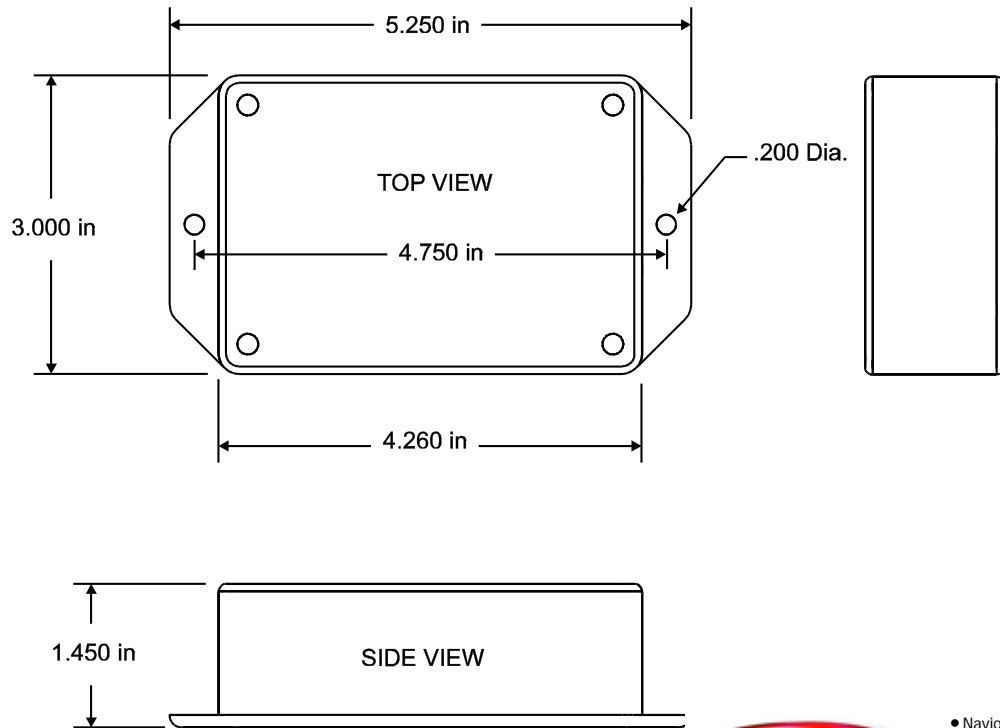
Isolation	3-way isolation: Input-to-output-to-power; Hi-pot: 2000 $V_{RMS}$ for 1 minute, 5500 VDC for 1 second, Leakage Current: Less than 50uA @ 2000 VAC / 60Hz; 5500 VDC
Power Supply	9 to 24 volts DC @ 30mA (min), 140mA (max). 400 volts DC reverse polarity protection.
NMEA / RS-422	Input Resistance: 500 ohms; Output drive: 100mA
NMEA / RS-232	Input Resistance: 3K to 7K ohms; Output Drive: 10mA
Baud Rate	0 to 115.2 kbps
Case	Height: 1.45 in. (36.83 mm) Length: 5.25 in. (133.35 mm) Width: 3.00 in. (76.20 mm)
Weight	Approx. 0.79 lbs (22.3 gms)
Operating Temperature	-20 °C to +80 °C
MTBF	122,000 hours (13.9 years), Calculated per MIL-HDBK-217F at +25 °C and Naval, Sheltered

## Functional Block Diagram

The block diagram below shows the NMEA data signal paths and isolation barriers.



## Case Dimensions



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