PM100 RS232 & RS422 EXPANDER

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; 3 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 PM100 0183 Expander allows multiple listeners to be connected to a single talker. The PM100 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-topower isolation using optical and transformer technology.

Specifications:

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 $50uA~@~2000~VAC\:/\:60Hz; 5500~VDC$ Isolation

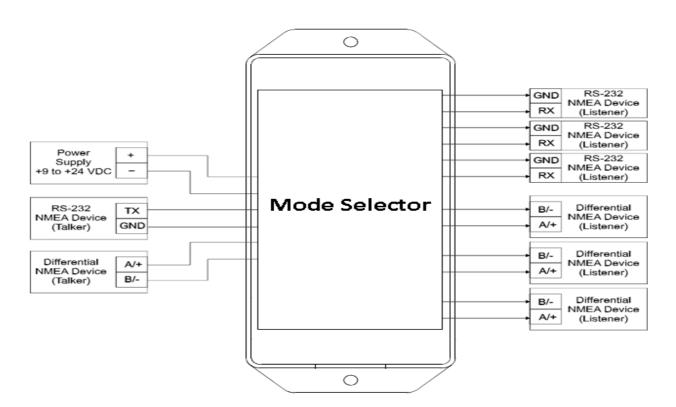
Power Supply 9 to 24 volts DC @ 30mA (min), 140mA (max). 400 volts DC reverse polarity protection.

NMEA / RS-422 Input Resistance: 500 ohms; Output drive: 100mA NMEA / RS-232 Input Resistance: 3K to 7k onms; Output Drive: 10mA

Baud Rate 0 to 115.2 kbps

Height: 1.34 in. (34 mm)

Length: 4.8 in. (122 mm) Width: 2.36 in. (60 mm)

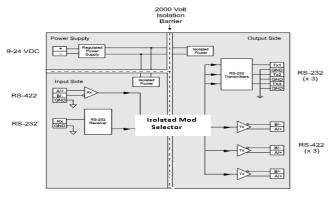


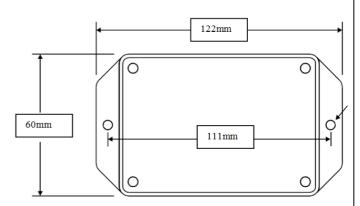
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Functional Block Diagram

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





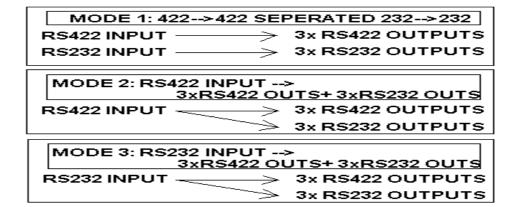


Case Front

PM100 RS232 & RS422 EXPANDER 2 INPUTS 6 BUFFERED OUTPUTS \square MODE 1: 422-->422 SEPERATED 232-->232 MODE 2: 422-->422+232 Mode Select Jumpers Inside □MODE 3: 232-->232+422 www.devrematik.com Selected Mode Indicator **PWR INPUTS** RS232 OUTPUTS RS422 OUTPUTS 9-24VDC RS232 RS422 CH1 CH2 CH3 CH1 CH2 CH₃ + BA + BA

JUMPER SETTINGS (REMOVE THE SCREWS TO REACH THE JUMPER SETTINGS)

SELECTED MODE	OPERATION	SW1	SW2	SW3	SW4
MODE 1	RS422→RS422 SEPERARTED RS232→RS232	OFF	ON	ON	OFF
MODE 2	$RS422 \rightarrow (RS422 + RS232)$	ON	OFF	ON	OFF
MODE 3	$RS232 \rightarrow (RS422 + RS232)$	OFF	ON	OFF	ON



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