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Model DX28 NMEA 0183 Dual Expander

The DX28 Expander is a 2-channel signal splitter/amplifier for NMEA 0183 data signal distribution. It can be configured as one 1-in x 8-out expander, two 1-in x 4-out expanders, or an autoswitching expander. The two inputs are completely independent and can operate at the same or different baud rates up to 38,400. The selectable auto-switching feature enables automatic switchover to the **AUXILIARY** input when signal is lost from the **PRIMARY** input. A bicolor (green/red) status LED on each input shows data activity and a third LED (yellow) provides “overcurrent” fault indication.

Each input drives four independent RS-422 outputs. The inputs use differential detectors, which are isolated from Power and Ground. The outputs are independent so that shorting one output does not affect the others. The two channels (**PRIMARY & AUXILIARY**) are identical and completely independent of each other except in “Autoswitch” mode. For a single 8-way expander, the 2 inputs are strapped together. To enable Auto-switching, connect the Auto terminal to GND so that all 8 outputs will pass the **PRIMARY** input and ignore the **AUXILIARY** input. A loss of **PRIMARY** data for 3 seconds will automatically switch to the **AUXILIARY** input. When the **PRIMARY** signal returns, the DX28 immediately switches back to it.

The LED on each input flashes when data is received on that input, green for **PRIMARY** and red for **AUXILIARY**. In Auto-switching mode, both input LED’s flash the same color at the same time, indicating **PRIMARY** or **AUXILIARY** as currently active. A third LED (yellow) is used for “overcurrent” indication. This LED turns on if the DX28 draws excess current. This can occur if an output terminal is misconnected. It may also indicate an internal fault of the DX28.

SPECIFICATIONS

Input impedance	2K ohms
Input sensitivity	2V differential
Input baud rate	38,400 max.
Output level (RS-422)	3.5v < 500 ohms
Supply voltage	10 – 30 Vdc
No-load current	<20 ma.
Full-load current	100 ma.
Overcurrent indication	> 100 ma.
Size (inches)	2.5 x 3.5 x 1.0
Weight (ounces)	3.0
Operation Temp (degC)	0 – 50
Humidity Range	0-100% (non-condensing)
Case Packaging	ABS Plastic

