

Fully Isolated Limited Distance Modem, RS-232/422 Converter



- ✓ Complete Isolation with Optical Couplers and Power DC-to-DC Converter
- ✓ Industrial Surge Protection Devices
- ✓ Six LED Diagnostic Indicators
- ✓ DC to 19,200 Baud at 6000 Feet (1800M), 9600 Baud at 3 Miles (5KM)
- ✓ Request-to-Send, Clear-to-Send Handshake
- ✓ Tri-State Outputs for Multidrop Applications
- ✓ Selection of Connectors
- ✓ Wide Operation Temperature Range
- ✓ Solderless Screw Terminal Field Connections

and system troubleshooting. The RS-232 interface supports Request To Send, Clear To Send, Data Set Ready, Received Line Signal Detect, and Data Terminal Ready. A convenient null modem switch is provided for the data lines. The RS-422 interface supports Request To Send and Clear To Send on separate wire pairs. The LDM422 may be used to convert two sets of send and receive channels by using RTS and CTS circuits as the second data channels. Data rates are the same. The units use 12VAC from a wall-mounted transformer or $\pm 12VDC$ to pins 9 (+) and 10 (-) of

the RS-232 connector. The LDM422 conforms to EIA RS-232 and RS-422 specifications. Data Terminal Ready must be asserted by the host RS-232 port before the LDM422 can transmit data. When Data Terminal Ready is not asserted all outputs of the LDM422 are high impedance, allowing up to 32 LDM422 units to be multidropped on a common communications cable. See Figure on page 2 for details.

Request To Send and Clear To Send are carried through the RS-422 port as two separate wire pairs. These may be used for full duplex flow control.

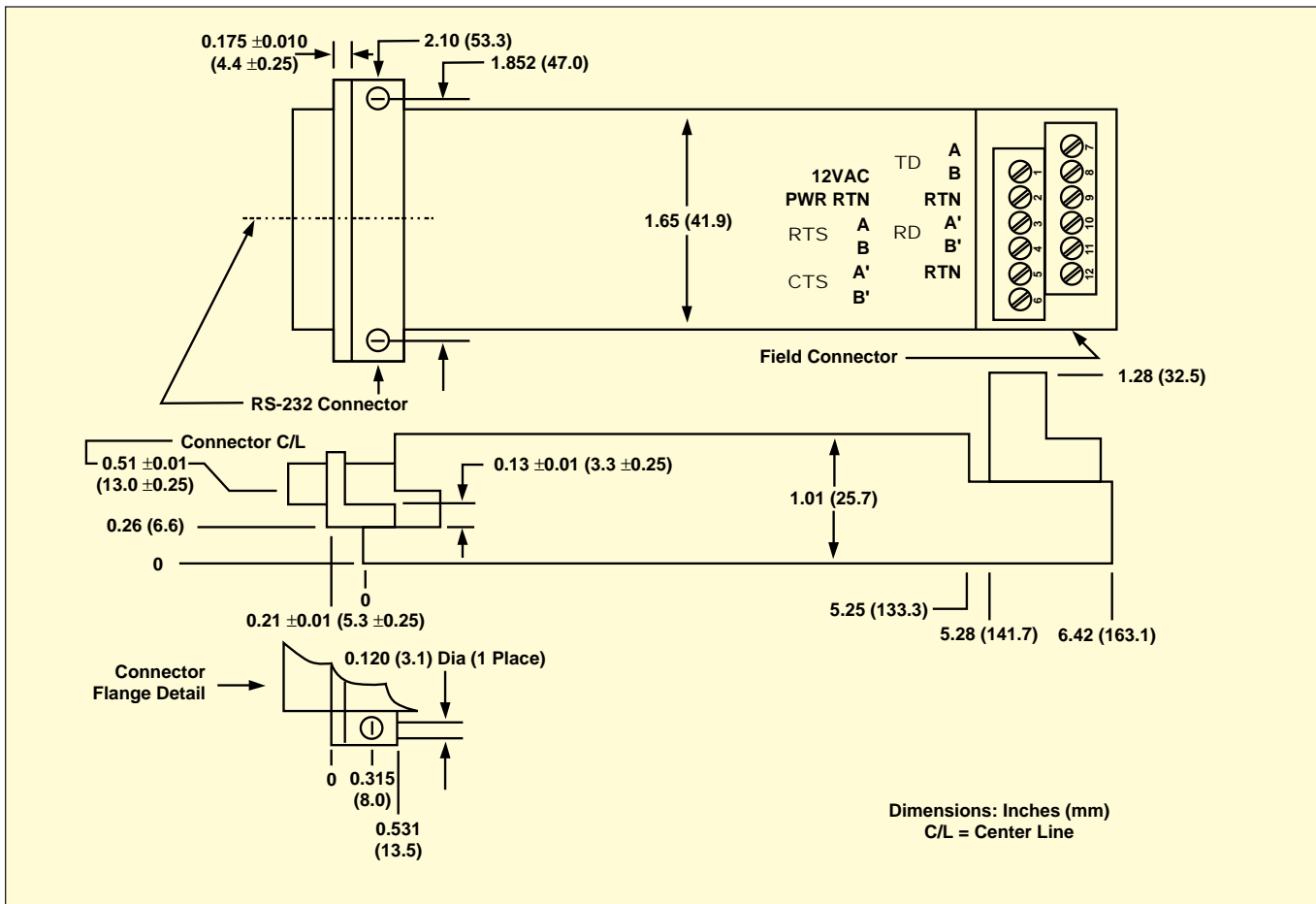
The LDM422 is a compact RS-232 to RS-422 converter which features a complete electrical isolation barrier and heavy duty electrical surge protectors. These devices feature a rugged aluminum enclosure small enough to mount on the back panel of typical computer equipment, saving valuable desk and floor space. Isolation is provided by optical couplers and a DC-to-DC converter. The RS-232 connection is through male or female EIA 25-pin connectors. The RS422 connections are made through convenient solderless screw terminals.

The LDM422 series is designed for full duplex operation over two-wire pairs. Outputs are tri-state, allowing multidropping of up to 32 units. Hardware handshake is available over two separate wire pairs. Data rates are 75 to 19,200 baud. Six diagnostic LED indicators are provided for installation guidance

SPECIFICATIONS

Model	LDM422				
Baud Rate Range	0 – 19.2K				
Baud Rate	19.2K	9.6K	4.8K	2.4K	1.2K – 0
Distance (miles)	1.14	3	4	5	7
Distance (km)	1.8	5	6.7	8.3	11.7
Maximum Multidrop	32. Reduced distances may be required when as many as 32 units are multidropped. No restrictions apply for distances of 1 mile (1.7 km) or less.				
Common Mode Isolation	Surge: 750V Continuous: 500V				
Differential Mode Surge Protection (9 devices)	(AC input) ANSI/IEEE C37.90.1-1989 (all RS-422 inputs and outputs)				
Channel Lines⁽¹⁾	TD, RD, RTS, CTS				
Control Lines⁽¹⁾	RTS, CTS, DTR, DSR, RLSD				
Modes	Asynchronous 4-wire duplex, 2-wire half-duplex, 2-wire simplex				

Notes: (1) TD = Transmit Data, RD = Receive Data, RTS = Request To Send, CTS = Clear To Send, DTR = Data Terminal Ready, DSR = Data Set Ready, RLSD = Received Line Signal Detect.



Model	LDM422
Null Modem Switch	1 (Reverses RS-232 pins 2 and 3)
RS-422 Output Drive	20mA min/output
RS-422 Input Impedance	6kΩ min/input
Power: AC operation ⁽²⁾ DC operation	12VAC, ±10%, 10W screw terms 1 & 2 +11.5VDC to +17.0VDC @ 400mA on pin 9 -11.5VDC to -17.0VDC @ 400mA on pin 10
Operating Environment	0°C to +70°C 0 to 95% relative humidity, noncondensing
Dimensions	6.6" x 2.1" x 1.28" (167.6 x 53.3 x 32.5 mm)
Weight AC Transformer	7 oz (200 g) max 11.0 oz (311.8 g) max
MTBF ⁽³⁾	>100,000 hrs

Notes: (2) 120VAC and 220VAC power transformers are available. (3) Ground-benign environmental conditions (no salt atmosphere, <50°C ambient temperature).

To Order (Specify Model Number)			
Model No.	Price	RS232 Connector	Power Source
LDM422-P	\$155	25 Pin male	Host-powered
LDM422-S	155	25 Pin female	Host-powered
LDM422-PT	168	25 Pin male	Transformer
LDM422-ST	168	25 Pin female	Transformer

Includes operator's manual. Transformer powered units also include 120 Vac wall mount transformer.

Ordering Example: LDM422-ST converter: \$168.

