

Fully Isolated Limited Distance Modem, RS232/422 Converter



LDM422 Series



- ✓ 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' (1800 M), 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

The LDM422 is a compact RS232 to RS422 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 RS232 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 and system troubleshooting. The

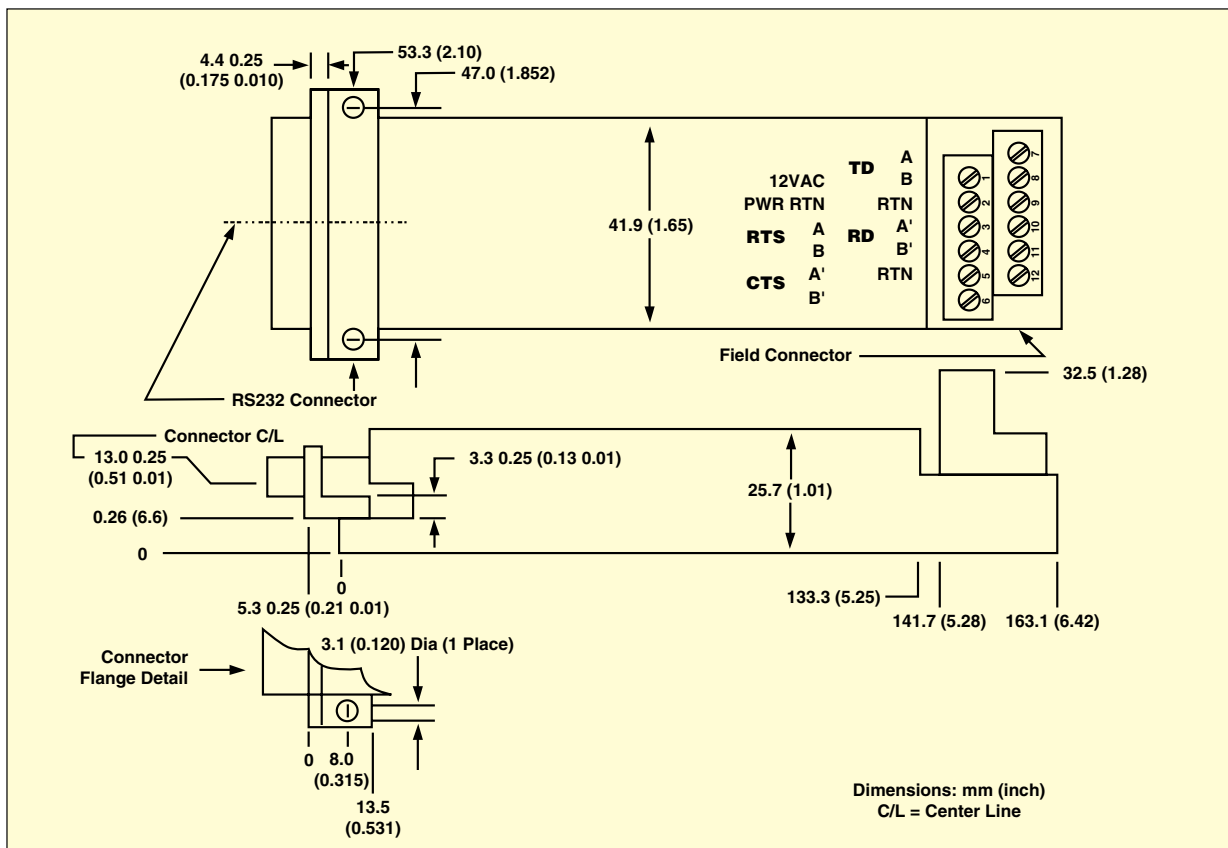
RS232 interface supports request to send, clear to send, data set ready, received line signal

Detect, and data terminal ready. a convenient null modem switch is provided for the data lines. The RS422 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.

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 RS422 inputs and outputs)				
Channel Lines⁽¹⁾	TD, RD, RTS, CTS				
Control Lines⁽¹⁾	RTS, CTS, DTR, DSR, RLS D				
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, RLS D = Received Line Signal Detect.



Data rates are the same. The units use 12 Vac from a wall-mounted transformer or ± 12 Vdc to pins 9 (+) and 10 (-) of the RS232 connector. The LDM422 conforms to EIA RS232 and RS422 specifications. Data terminal ready must be asserted by the host RS232 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 RS422 port as two separate wire pairs. These may be used for full duplex flow control.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

Model	LDM422
Null Modem Switch	1 (Reverses RS232 pins 2 and 3)
RS-422 Output Drive	20mA min/output
RS-422 Input Impedance	6k Ω min/input
Power:	
AC operation ⁽²⁾	12 Vdc, $\pm 10\%$, 10 W screw terms 1 and 2
DC operation	+11.5 Vdc to +17.0 Vdc @ 400mA on pin 9 -11.5 Vdc to -17.0 Vdc @ 400mA on pin 10
Operating Environment	0°C to 70°C 0 to 95% relative humidity, noncondensing
Dimensions	167.6 x 53.3 x 32.5 mm (6.6 x 2.1 x 1.28")
Weight	200 g (7 oz) maximum
AC Transformer	311.8 g (11.0 oz) maximum
MTBF ⁽³⁾	>100,000 hrs

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

To Order		
Model No.	RS232 Connector	Power Source
LDM422-P	25 Pin male	Host-powered
LDM422-S	25 Pin female	Host-powered
LDM422-PT	25 Pin male	Transformer
LDM422-ST	25 Pin female	Transformer

Comes complete with operator's manual. Transformer powered units also include 120 Vac wall mount transformer.

Ordering Example: LDM422-ST converter and OCW-1, OMEGACARESM extends standard 1-year warranty to a total of 2 years.