Data Communication Products

RoHS III COMPLIANT 2015/863 | DIN Rail MOUNT | CE

Protecting Valuable Industrial LANS and Data Communication Systems

DESCRIPTION

Industrial LANs and data communication systems stretch over long distances, inside and outside, with signals exposed to electrical transients, noise, ground loops, power surges, and lightning. Commercial communications equipment often is not designed for use in these environments, which can lead to unreliable signal quality, damage to expensive peripherals, computers, and other online equipment, and production downtime. Our heavy-duty products "harden" and protect these systems, and can extend communications for many miles without expensive low-capacitance cabling.

Our LDM Series line drivers and converters protect host computers and equipment and extend the distances over which computers, terminals, and other devices can communicate within hazardous industrial and institutional environments – up to 12 miles using wire pairs and current loop protocols, or two miles with fiber optic data links for total electrical isolation.

Our DCP485 DIN-rail RS-232 to RS-485 converter/line driver provides 1500Vrms continuous isolation and data transfer up to 115.2kbps with automatic RS-485 line control while powered from +10 to +30VDC.

FEATURES

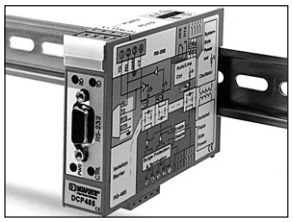
- 1500Vrms Isolation with Optocouplers and Power DC-to-DC Converter (3000Vp, 1 min)
- Industrial Temperature Range
- DTE/DC Selection Switches, Diagnostic LEDs
- Rugged, Compact Industrial Packaging, Choice of Host Connectors
- Data Rates to 115.2kbps
- Distances to 12 Miles (20km)
- Multidrop, Handshake Functions
- 2- or 4-wire, Simplex/Duplex Connection
- Full Line of Power and Connector Accessories
- CE Compliant
- Manufactured per RoHS III Directive 2015/863

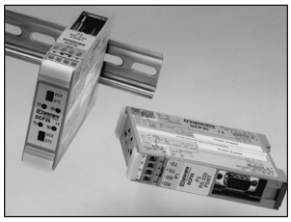
BENEFITS

- Protects Equipment from Damage Due to Power Surges, Transients, Lightning; Breaks Ground Loops
- Extends RS-232 Communication Distances without Expensive Low-capacitance Cabling
- Connects RS-232 Devices to RS-422 and RS-485 Devices

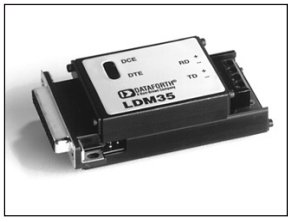
APPLICATIONS

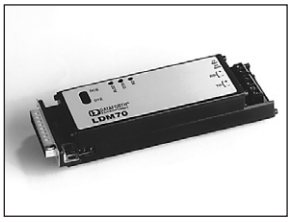
- Factory Automation and Control
- Building Automation
- Industrial Data Communication
- High-speed Data Communications

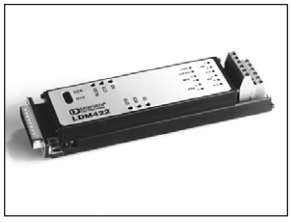

DCP485

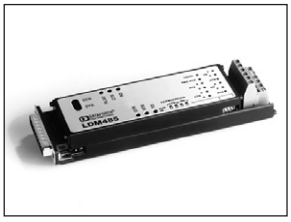

DCP35


LDM30


LDM35

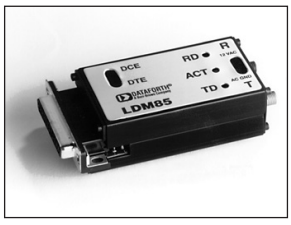

LDM70


LDM422

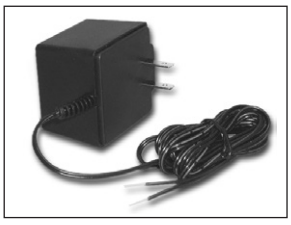

LDM485



LDM80



LDM85


PT3

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Data Communications Selection Guide

Line Drivers and Converters

Model	Max Bit Rate vs Distance	Max Distance vs Bit Rate	Field				Isolation	Host		Power	Notes
			Signal	Mode	# Wires	Connectors		Interface	Connector		
DCP35	19.2k (0.5mi) (0.8km)	12.0 mi (300) 11.3 km	Electrical Current Loop	Simplex, Full-duplex	2 4	Screw Terminals	Comm[2]	RS-232	Male/ Female DB-9	Port Signals	Port-signal Powered
DCP485	115.2k (.8mi) (1.3 km)	7 mi (2.4k) 11.3 km	Electrical RS-485 Differential Voltage	Simplex Half/ Full-duplex	2 2 4	Screw Terminals	Comm[2]/ Power[3]	RS-232	Fe/Male DB-9/ Screw Terms	Ext.[6]	DIN-rail Mounting Auto RS-485 Line Control
LDM30	57.6k (.5 mi) (0.8 km)	12 mi (1.2k) 19.3 km	Electrical Current Loop	Simplex Full-duplex	2 4	Screw Terms Mod Phone Jack	Comm[2]	RS-232	Male/ Female DB-25	Ext.[1]	Low Cost
LDM35	19.2k (.5 mi) (0.8 km)	12 mi (0.3k) 19.3 km	Electrical Current Loop	Simplex Full-duplex	2 4	Screw Terms Mod Phone Jack	Comm[2]	RS-232	Male/ Female DB-25	Port Signals	Port-signal Powered
LDM70	57.6k (.5 mi) (0.8 km)	12 mi (1.2k) 19.3 km	Electrical Current Loop	Simplex Full-duplex	2 4	Screw Terms Mod Phone Jack	Comm[2]/ Power[3]	RS-232	Male/ Female DB-25	Ext.[1]	Full Isolation, DTR/RLSD Handshake
LDM422	19.2k (1 mi) (1.6 km)	7 mi (1.2k) 11.3 km	Electrical RS-422 Differential Voltage	Simplex Half/ Full-duplex	2 2 4	Screw Terminals	Comm[2]/ Power[3]	RS-232	Male/ Female DB-25	Ext.[1]	Multidrop Capable RTS/CTS Handshake or 2nd Data Channel
LDM485	57.6k (.5 mi) (.8 km)	8 mi (2.4k) 12.9 km	Electrical RS-485 Differential Voltage	Simplex Half/ Full-duplex	2 2 4	Screw Terminals	Comm[2]/ Power[3]	RS-232	Male/ Female DB-25	Ext.[1]	Multidrop Capable RTS/CTS Handshake or 2nd Data Channel
LDM80	19.2k (2.2mi) (3.5 km)	2.2 mi (19.2k) 3.5 km	Optical	Simplex Full-duplex	1 Fiber 2 Fibers	SMA (905) ST	Total[4]	RS-232	Male/ Female DB-25	Port Signals	Total Electrical Isolation, Intrinsic Safety
LDM85	5M[5] (1.2 mi) (2 km)	1.2 mi (5M) 2 km	Optical	Simplex Full-duplex	1 Fiber 2 Fibers	SMA (905) ST	Total[4]	RS-232 RS-422/ RS-423 TTL	Male/ Female DB-25	Ext.[1]	Multipoint Optical Loop, Total Electrical Isolation

Accessories

Model	Description
Power Supply	DIN-rail Mount, 85-264VAC, 47-63Hz In
PWR-PS5R7W	24VDC, 0.3A Out
PWR-PS5R15W	24VDC, 0.65A Out
PWR-PS5R30W	24VDC, 1.3A Out
PWR-PS5R60W	24VDC, 2.5A Out
PWR-PS5R120W	24VDC, 5.0A Out

NOTES:
(1) Externally powered LDMs may be powered with wall transformer (supplied) or through pins 9 and 10 on host interface.
(2) Comm isolation provides an optical barrier on receive circuits and/or transmit circuits plus ANSI/IEEE C37.90.1 surge protection.
(3) Power isolation by DC/DC converter to field circuits.
(4) Fiber optic units provide total electrical isolation.
(5) Max data rate for LDM85 is 2.5Mbps NRZ TTL and 100Kbps RS-232/422.
(6) Externally powered +10V to +30VDC.

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