

APPLICATIONS

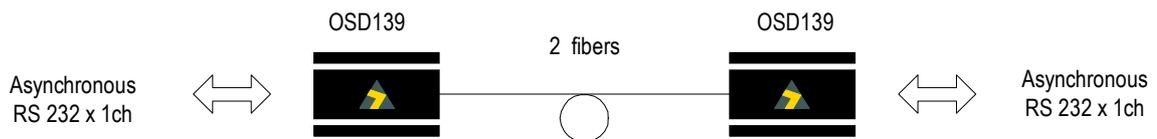
- ▲ Data transmission through electrically noisy environments
- ▲ Secure communications
- ▲ Hazardous environments
- ▲ Factory automation



FEATURES AND BENEFITS

- ▲ Interconnects one RS232/V24 data channel over 3km of multimode fiber or, optionally, over 50km of singlemode fiber
- ▲ Full duplex asynchronous data transmission at up to 60kbps
- ▲ Directly plugs into host's RS232 D connector
- ▲ Available with either male or female D connector
- ▲ DTE or DCE switchable
- ▲ Self-powered from the RS232 signals
- ▲ EMI/RFI resistant metal enclosure
- ▲ Complete end-to-end isolation
- ▲ Safe transmission in hazardous environments
- ▲ More secure than copper cables
- ▲ Small size, low cost, robust and reliable

TYPICAL APPLICATION DESIGN



ORDERING INFORMATION

- | | |
|----------|--|
| OSD139AM | Fibre Optic RS232 Transceiver (Male D connector) |
| OSD139AF | Fibre Optic RS232 Transceiver (Female D connector) |
| Option L | 1310nm singlemode operation (requires external powering) |



SPECIFICATIONS

PERFORMANCE

Data Rate	DC to 60kbps asynchronous
Pulse Distortion	<±5µS over full dynamic range
Transmit Optical Power	-25 to -19dBm peak into multimode fiber (OSD139A only) -25 to -15dBm peak into singlemode fiber (OSD139AL only)
Receiver Sensitivity	<-47dBm peak for 10 ⁻⁹ Bit Error Rate
Optical Link Budget	>22dB at 850nm (>6km of multimode fiber) >22dB at 1310nm (>50km of singlemode fiber)
Receiver Saturation	>-15dBm
Optical Wavelength	850nm nominal (1310nm for OSD139AL)
Optical Connector	ST
Electrical Connector	25 pin D-subminiature (Specify Male or Female)
Electrical Output	>±3V from 600Ω source
DTE/DCE Modes	Switch selectable
Powering	Derived from Transmit Data Line plus two control lines when host utilizes 1488 type line drivers operating from 9V supplies. Will usually operate off Transmit Data Line alone if driver operates off 12V. Alternatively, +6 to +12V power can be supplied via Pin 9 or via the power connector. Current is <10mA.
Power Connector	1.3mm socket on side of case
Enclosure	Seam welded metal case
Dimensions (mm)	15H x 44W x 80D (excluding optical connectors)
Operating Temperature	-20 to +75°C
Relative Humidity	0 to 95% non-condensing

D CONNECTOR ASSIGNMENT

Pin Name	Function	
1. Case ground	DTE Mode AC coupled to signal ground	DCE Mod AC coupled to signal ground
2. Transmit data	Modem accepts data	Modem outputs data
3. Receive data	Modem outputs data	Modem accepts data
4. Request to send	Connected to pin 5	Connected to pin 5
5. Clear to send	Connected to pin 4	Connected to pin 4
6. Data set ready	Connected to pin 20	Connected to pin 20
7. Signal ground		
8. Received line signal detect	Connected to pin 20	Connected to pin 20
9. -	External +6 to +12V power can be fed to the modem via this pin if host equipment uses non standard RS232 line drivers. Use pin 7 for 0V ground.	
20. Data terminal ready	Connected to pin 6	Connected to pin 6

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