

RS232 multiplexers to optic fibre singlemode (SM) – ELO E248 and multimode (MM) ELO E246, ELO E247



Characteristics

- Independent on communication protocol
- Four independent RS232 duplex channels
- Data rate 0 – 230 kbps
- Supply voltage DC 9-24 V
- Range MM-2 km, SM-15 km

Introduction

Multiplexer concentrate four completely independent duplex RS232 interfaces to a pair of optic fibers. The fibers can be SINGLE MODE (SC connectors) or MULTI MODE (SC or ST connectors).

Use of the multiplexers

Conversion of metallic media to more expensive fiber optic is mainly suitable:

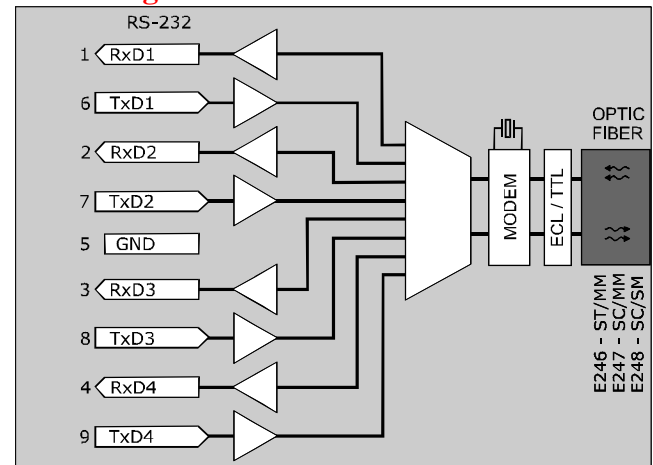
- 1] in the environment of high interference level,
- 2] if the higher isolation is required, (switching stations, transformers),
- 3] if the metallic line can not be used because of EMI ,
- 4] if the higher transport security and safety is necessary,
- 5] if isolation via the optocouplers is not suitable for different reasons

Operation principles

A pair of multiplexers communicate over the optic fibers. If the communication is correct, the LINK indicator is alight.

The maximum data rate of each channel is 230 kbps, minimum is 0. Multiplexer does not need any adjusting. The contacts of RS232 connector are not used according RS232 standards. To get the standard ELO E24E (OCTOPUS) cable with four DB9F DCE connectors must be used.

Block diagram



Modem ELO E248 is designed for singlemode fibers 9/125 μm. Its range is typically 15 km, optic connectors are SC type. For multimode cables 50/125 μm or 62.5/125 μm there are models ELO E247 with SC connectors and ELO E246 with ST ones.

Specification

Parameters

Transmitted signals	4x Tx/D, 4x Rx/D
Type of RS232 connector	DB9F
Transmit mode	duplex
Fiber optic cable E246/E247	two multimode fiber cables 50/125 μm (62/125μm)
Optic connectors E246/E247	ST/SC type
Range	c. 2 km
Fiber optic cable E248	two singlemode fiber cables 9/125 μm
Optic connectors E248	SC type
Range	c. 15 km

Maximum data rate of each channel	230 kbps
Minimum data rate	0 bps
Supply	external DC supply 9-24V/200 mA
Limiting voltage	7 – 30 V DC
Dimension:	
Length x Width x Height	120 x 80 x 25 mm
Weight	160 g

Other

Stocking temperature	-10° to +55°C
Working temperature	+0° to +50°C
Humidity	0 – 85% (non-condensing)