Optical Fiber Transceiver CTrans OL

Special Features

- Coupling of CAN systems by optical fiber
- Available for PMMA and glass fiber, connection by connector or by clamping technology
- Protocol transparent; CAN error handling mechanisms are preserved
- Extended error suppression
- LEDs to indicate status
- Rail mountable
- Accessory: PMMA optical fiber for CTrans OL-P products

Description

CTrans OL acts as a transceiver for protocol transparent transmission of CAN signals between copper based sections via an optical fiber.

Several technical improvements can be obtained by optical transmission of CAN signals, such as secure separation of high voltages and insensitivity to electromagnetic perturbation. Furthermore the transparent transmission of CAN signals with CTrans OL preserves the main benefits of CAN, such as error correction and priority driven bus access.

Like repeaters CTrans OL can be used to build flexible wiring topologies. Star and tree structures as well as stub lines can be realized. The integrated error suppression reduces the influence of faulty segments onto intact sections.

For the optical connection cost effective PMMA fibers with pluggable connection and 62,5 µm multimode glass fibers with ST connectors are supported. Depending on the type of fiber a wiring distance up to 1000 m can be achieved.

Three LEDs on the front panel indicate the status of the internal power and whether a signal is received on the CAN or fiber optical connection.

Technical Data

Layout and Connection

CTrans OL devices include one CAN segment fed to a 3 pin pluggable terminal. Power is connected at a 2 pin pluggable terminal. The figure shows the locations of power, CAN and fiber optical connections. Three LEDs on the front panel indicate the status of power, CAN and optical transmissions.

Limiting Values

Parameter	Minimum	Maximum	Unit
Storage temperature	-30	+80	°C
Operating temperature	-20	+60	°C
Supply voltage	-100	+35	V
Voltage on bus connections	-30	+30	V
Admissible power consumption (at 60 °C)	-	2000	mW

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CTrans OL and other connected devices. Exposure to limiting conditions for extended periods may affect the reliability and shorten the life cycle of the device.

Nominal Values

Parameter	Minimum	Typical	Maximum	Unit
Current consumption (running idle)	-	30	-	mA
Current consumption (250 kBits/s, 100 % busload)	-	40	-	mA
Supply voltage	10	24	30	V
Propagation delay (per pair of devices)	-	125	300	ns

All values, unless otherwise specified, refer to a supply voltage of 24 V and an environmental temperature of 20°C.

Scope of Delivery

- Optical fiber transceiver CTrans OL
- User manual