CAN-CR110/FO

CAN / CAN FD repeater with screw terminals and fiber optic connector

The CAN-CR110/FO is used for galvanic isolation of two segments of a CAN / CAN FD network. As a special feature, the repeater separates a defective segment from the rest of the network, allowing the remaining network to continue working. After the fault has been eliminated, the segment is automatically switched back to the network. The galvanic isolation is provided for the CAN / CAN FD segments as well as for the power supply.

Features and Benefits

- Fiber optic enables transmission in areas with high electromagnetic disturbances
- CAN and CAN FD interfaces in one device
- Cost savings due to simple wiring
- Increased system reliability
- Almost no influence on real-time behavior

Technical specifications

Display	Transmit and defective segment (two duo LEDs, one for each segment), Power (one LED)
CAN bus interface	ISO 11898-2 with CAN choke. Two screw terminals. CAN variant available with and without integrated CAN termination.
CAN baudrate	Up to 1 Mbit/s
CAN FD bus interface	ISO CAN FD and nonISO CAN FD
CAN FD baudrate	500 kbit/s (arbitration bitrate) and up to 4 Mbit/s (flexible data rate)
Delay	typ. 300 ns (corresponds to ~60 m bus length) between the wire connection of a FO Repeater through the fiber optic cable to the wire connection of a second FO Repeater (not including the signal delay time of the fiber optics, which is ~5 ns/m)
FO transmitter	Broadcom HFBR 1404Z, 820 nm
FO receiver	Broadcom HFBR 2402Z, 820 nm
FO line	Multi-mode fiber optic line (only glass); recommended: 50/125 µm, 62,5/125 µm, also compatible with: 100/140 µm, 200 µm (pay attention to max. line length)
Max. line length between two FO repeaters	50/125 µm: 1500 m, 62,5/125 µm: 2000 m
Power supply	9-36 V DC, typ. 70 mA, max. 100 mA, through terminals
Galvanic isolation	1 kV DC / 1 sec, 500 V AC / 1 min; CAN 1, CAN 2 and power supply are galvanically isolated from each other.
Certification	CE, FCC
Temperature range	-20 ºC ... +70 ºC
Housing, size	Plastic enclosure, 22.5 x 105 x 120 mm