

CAN-CR110/FO



The CAN-CR110/FO repeater with two CAN/CAN FD channels (thereof one as Fiber Optic interface) is used for the conversion of the CAN signal from copper wire (ISO 11898-2) to fiber optic cables. It can be used to improve the load capacity of the CAN bus with nodes, to establish a physical coupling of CAN FD bus systems or to insert a galvanic isolation.

The CAN FD repeater creates the necessary flexibility to optimize the structure of CAN networks and to free CAN networks from the restriction to the bus structure. It can be used to implement tree or star topologies as well as for stub lines. Since there is no integrated bus termination resistor, it gives you flexibility in positioning resistors for CAN termination.

The CAN-CR110/FO separates a defective segment from the rest of the network, allowing the remaining network to continue working.

FEATURES AND BENEFITS

- CAN and CAN FD interfaces in one device
- Cost savings due to simple wiring
- Almost no influence on real-time behavior
- Greater flexibility in CAN network design
- Separates a defective segment, allowing the remaining network to continue working
- Increased system reliability
- 2 x CAN/CAN FD interfaces, thereof 1 x FO interface with F-SMA connector
- Galvanic isolation
- Fiber optic enables transmission in areas with high electromagnetic disturbances

ORDER NUMBER	1.01.0210.11220
Display	2 x CAN status LED (duo LED for communication and errors), Power LED
CAN FD/CAN channels	2
CAN bus interface	ISO 11898-2 with CAN choke. 1 x screw connector; 1 x FO connector
CAN bit rates	Up to 1 Mbit/s
CAN FD bus interface	ISO CAN FD and nonISO CAN FD
CAN FD bit rates	Arbitration rate up to 1000 kbit/s, data rate up to 8000 kbit/s. The data rates are verified by tests. User-defined bit rates are possible.

ORDER NUMBER	1.01.0210.11220
CAN bus termination resistors	None
CAN/CAN FD transceiver	MCP2562FD
Galvanic isolation	1 kV DC / 1 sec.; 500 V AC / 1 min.
CAN propagation delay (typical)	Typ. 300 ns (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 connector	F-SMA connector
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)
Maximal line length between two FO repeaters	50/125 µm: 1500 m; 62,5/125 µm: 2000 m
Power supply	+9 to +36 V DC
Power consumption at 24 V	Typ. 70 mA, max. 100 mA
Operating temperature	-20 °C to +70 °C
Weight	Approx. 150 g
Dimensions	22.5 x 105 x 120 mm
Storage temperature	-40 °C to +85 °C
Protection class	IP20
Relative humidity	10 to 95 %, non-condensing
Certification	CE, FCC
Housing material	Polyamid



ACCESSORIES	ORDER NUMBER
Termination adapter for CAN/CAN FD (D-Sub male to female)	1.04.0075.03000
CAN Y cable 0.22 m	1.04.0076.00001
CAN cable 2.0 m (D-Sub male to female)	1.04.0076.00180

PIN ALLOCATION

CAN CONNECTOR ① ②

⊘ 1	□	CAN-High
⊘ 2	□	CAN-Low
⊘ 3	□	CAN-GND
⊘ 4	□	Shield

POWER CONNECTOR ③

⊘ 1	□	V+ (+9 V to +36 V DC)
⊘ 2	□	V-
⊘ 3	□	PE
⊘ 4	□	PE

TECHNICAL DRAWING

