

CAN-CR210/FO



The CAN-CR210/FO repeater with two CAN channels (thereof one as Fiber Optic interface) and one CAN backbone channel 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 bus systems or to insert a galvanic isolation.

The CAN 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. For creating star or tree topologies, several CAN-CR210/FO repeaters can be connected to a CAN-hub via the integrated backbone bus.

The CAN-CR210/FO separates a defective segment from the rest of the network, allowing the remaining network to continue working.

FEATURES AND BENEFITS

- 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 interfaces, thereof 1 x FO interface with F-SMA connector
- DIN-Rail backbone bus to line up and connect repeaters easily
- Galvanic isolation
- Fiber optic enables transmission in areas with high electromagnetic disturbances

ORDER NUMBER	1.01.0068.45010
Display	3 x CAN status LED (duo LED for communication and errors), Power LED
CAN channels (high-speed)	2
CAN bus interface	ISO 11898-2 with CAN choke. 1 x D-Sub 9 connector; 1 x backbone bus
CAN bit rates	Up to 1 Mbit/s
CAN bus termination resistors	120 Ohm switchable via DIP switch
CAN high-speed transceiver	SN65HVD251

ORDER NUMBER	1.01.0068.45010
Galvanic isolation	1 kV DC / 1 sec (CAN 1), 500 V AC / 1 min
CAN propagation delay (typical)	Typ. 300 ns (60 m bus length)
FO transmitter	Broadcom HFBR 1404Z, 820 nm
FO receiver	Broadcom HFBR 2402Z, 820 nm
FO connector	2 x F-SMA connector
FO line	Multi mode fiber optic cables (only glass); Recommended: 50/125 µm, 62.5/125 µm, also compatible with: 100/140 µm, 200 µm (consider max. line length)
Maximal line length between two FO repeaters	50/125 µm: 1500 m; 62.5/125 µm: 2000 m
Power supply	+9 V to +32 V DC
Power consumption at 24 V	Typ. 62 mA, max. 100 mA
Operating temperature	-20 °C to +70 °C
Weight	Approx. 300 g
Dimensions	22.5 x 100 x 120 mm
Storage temperature	-40 °C to +85 °C
Protection class	IP30
Relative humidity	10 to 95 %, non-condensing
Certification	CE, FCC
Housing material	Polyamid



ACCESSORIES	ORDER NUMBER
T bus connector	1.04.0073.00000
Termination adapter for CAN/CAN FD (D-Sub male to female)	1.04.0075.03000
CAN cable 2.0 m (D-Sub male to female)	1.04.0076.00180
CAN Y cable 0.22 m	1.04.0076.00001
CAN Y cable 2.1 m	1.04.0076.00002

PIN ALLOCATION

POWER CONNECTOR ④

1	V+ (+9 V to +32 V DC)
2	0 V
3	PE
4	PE

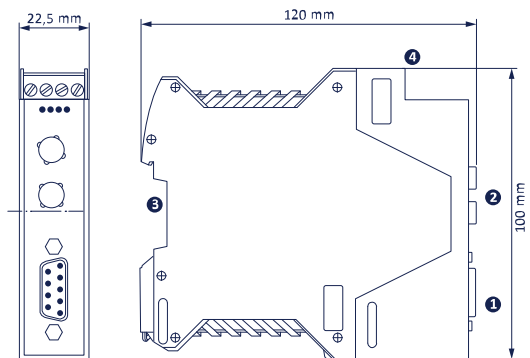
CAN CONNECTOR D-Sub 9 ①

Pin no.	Signal
2	CAN-Low
3	CAN-GND
7	CAN-High

CAN CONNECTOR TBUS ③

1	CAN-High
2	CAN-Low
3	CAN-GND
4	-
5	-

TECHNICAL DRAWING



CONNECTORS
 1 = CAN 1
 2 = CAN 2 (FO)
 3 = CAN 3 (TBUS)
 4 = POWER