Ixxat CAN-CR100

Item number: 1.01.0210.20000

The Ixxat CAN-CR100 repeater with two CAN/CAN FD interfaces improves the CAN bus load capacity, establishes a physical coupling of bus systems and offers galvanic isolation. It provides the flexibility to optimize network structures and liberates them from CAN bus structure constraints for optimized operation. With integrated termination resistors.



CAN/CAN FD repeater with screw terminals and termination resistor

Features and benefits

Robust industrial use

Designed for industrial environments, meeting high demands for robustness, temperature ranges, and safety.

Fast and transparent operation

Minimal impact on real-time behavior, equivalent to a short line length (ca. 35 m/175 ns delay). Enabling transparent transmission, compatible with all higher layer protocols.

Enhanced network reliability

Higher system reliability by electrically isolating CAN/CAN FD segments and power up to 1 kV. This enhances the protection of the device against damage to electronics caused by voltage peaks.

Integrated bus termination resistors

Integrated bus termination resistors prevent reflections on the line ends and ensure optimum communication.

Flexibility in CAN FD network design

Helps to optimize CAN/CAN FD network structures by enabling extended layouts (stub lines, star and tree topologies).

Cost savings due to simple wiring

Optimized topologies enable simpler wiring, resulting in less cables and cost savings at installation and maintenance.

Network monitoring and fault recovery

In case of disturbances, the repeater automatically disconnects the affected segment and restores it after the fault is resolved.

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General

Related Accessories	1.04.0074.03000
Net Width (mm)	99
Net Height (mm)	113
Net Depth (mm)	22.6
Net Weight (g)	111
Packed Width (mm)	14
Packed Height (mm)	4
Packed Depth (mm)	18
Packed Weight (g)	189
Operating Temperature °C Min	-20
Operating Temperature °C Max	70
Storage Temperature °C Min	-40
Storage Temperature °C Max	85
Relative Humidity	10 to 95 %, non-condensing
Current Consumption Type Value at Vcc Nom (mA)	70
Current Consumption Max value at Vcc nom (mA)	100
Input Voltage (V)	+9 V to +36 V DC
Isolation	1 kV DC for 1 sec.
Content of Delivery	CAN FD repeater, user manual

Ixxat CAN-CR100



General

Mounting	DIN rail mount (bracket included)
Housing Materials	Polyamide housing for top hat rail mounting
Packaging Material	Cardboard
Warranty (years)	1

Identification and Status

Product ID	1.01.0210.20000
Successor	1.01.0211.20000
Country of Origin	Germany
HS Code	8517620000

Physical Features

Connectors / Input / Output	2 x screw terminals, 1 x power connector
Contains Battery	No

CAN Features

CAN Mode	CAN high-speed (ISO 11898-2) with CAN choke
CAN Baud Rate	Up to 1 Mbit/s

CAN FD Features

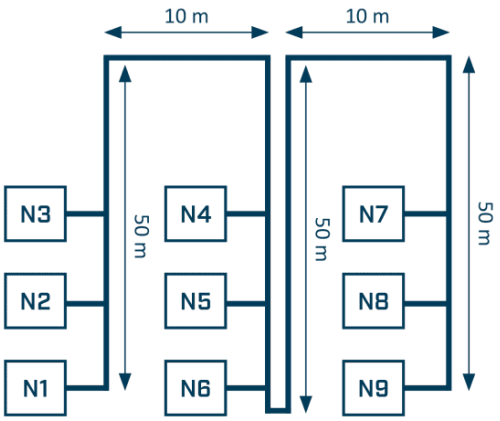
CAN FD Mode	ISO CAN FD, nonISO CAN FD
CAN FD Transceiver	MCP2562FD
CAN FD Baud Rate	Arbitration rate up to 1000 kBit/s, data rate up to 8000 kBit/s (verified by testing). User defined bit rates are possible.

Certifications and Standards

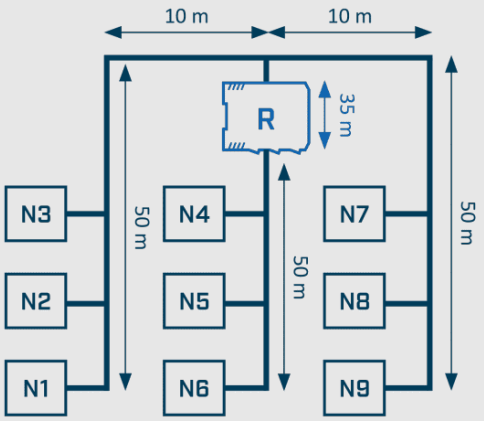
cULus	Yes
Protection Class IP	IP20
Certifications & Compliance	CE, FCC, cULus
WEEE Category	IT and telecommunications equipment

Use Case

Conventional bus structure
The distance between the two nodes furthest apart (1/9) is 220 meters.



Extended structure with drop line
The distance between the two nodes furthest apart (1/6 or 6/9) is 145 meters.



CAN repeaters can be used to better adapt the cable routing to the ambient conditions. Stub lines can be made and the bus structure can be expanded to a star/tree structure, which saves cable lengths. Shorter cable lengths reduce interference on the signal lines and enable higher bit rates. Segments connected via repeaters are galvanically decoupled and therefore offer overvoltage protection for connected participants.