

Ixxat CAN-CR220

Item number: 1.01.0067.44300

The Ixxat CAN-CR220 repeater with two CAN interfaces provides a galvanic isolation up to 4 kV DC/4 kV AC for 1 second, enhancing the protection of network segments. It improves the CAN bus load capacity, establishes a physical coupling of bus systems and provides the flexibility to optimize network structures. The CAN-CR220 meets DIN/EN 50178 standards.



CAN repeater with 4 kV DC/4 kV AC galvanic isolation

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. 40 m/200 ns delay). Enabling transparent transmission, compatible with all higher layer protocols.
- ✓ **Increased system protection up to 4 kV DC/4 kV AC for 1 sec.**
Using the CAN-CR220, network components can be galvanically isolated up to 4 kV DC/4 kV AC for 1 second (4 kV DC/3.75 kV AC for 1 minute). This reliably enhances the protection of the device against damage to electronics caused by voltage peaks.
- ✓ **Integrated bus termination resistors**
Integrated bus termination resistors (120 Ohm, switchable via DIP switch) prevent reflections on the line ends and ensure optimum communication.
- ✓ **Flexibility in CAN network design**
Helps to optimize CAN 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.



General	
Net Width (mm)	100
Net Height (mm)	118
Net Depth (mm)	22.5
Net Weight (g)	200
Packed Width (mm)	13
Packed Height (mm)	4
Packed Depth (mm)	17
Packed Weight (g)	283
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)	41
Current Consumption Max value at Vcc nom (mA)	100
Input Voltage (V)	+9 V to +32 V DC
Isolation	4 kV DC/4 kV AC for 1 sec., 4 kV DC/3.75 kV AC for 1 min., 3 kV AC for 3 min.
Content of Delivery	CAN repeater, user manual
Mounting	DIN rail mount (bracket included)



General

Housing Materials	Polyamide housing for top hat rail mounting
Packaging Material	Cardboard
Warranty (years)	1

Identification and Status

Product ID	1.01.0067.44300
Country of Origin	Germany
HS Code	8517620000
Export Control Classification Number (ECCN)	EAR99
Supply Risk Factor ERP	Used in Volume 01
Purchasing Multiple ERP	52

Physical Features

Connectors / Input / Output	2 x D-Sub 9 connectors, 1 x power connector
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CAN Features

CAN Mode	CAN high-speed (ISO 11898-2) with CAN choke
CAN Transceiver	TI SN65HVD251
CAN Baud Rate	Up to 1 Mbit/s

Certifications and Standards

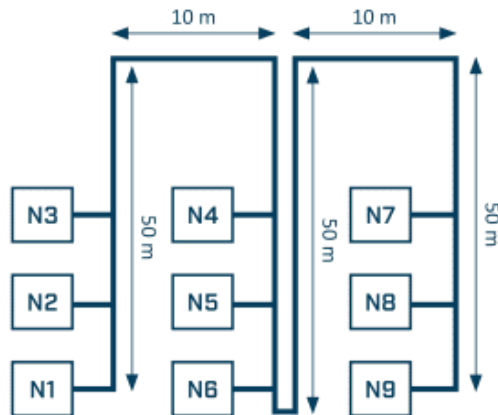
Protection Class IP	IP30
ETIM Classification	EC000698
WEEE Category	IT and telecommunications equipment



Use Case

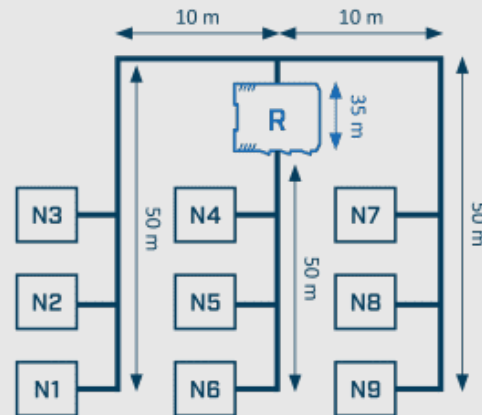
Conventional bus structure

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.