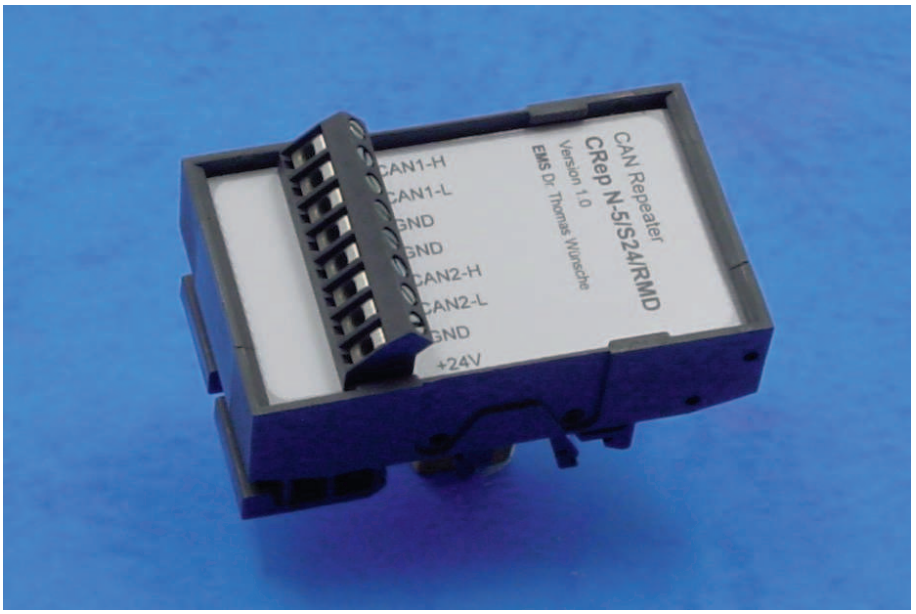

CAN-Repeater CRep N

Special Features

- Short propagation delay
- Extended error suppression, separation of faulty segments
- Wide range of power supply and operational temperature
- Assembly rail fixing, connection by terminal block

Description

The assembly rail mountable CAN repeater CRep N transmits and amplifies CAN signals in a protocol transparent way. CRep N allows the design of flexible wiring topologies. Star and tree structures as well as stub lines can be realized. The maximum data rate in comparison to a line structure can be increased by a suitable topology. For the most common occuring errors the integrated error suppression reduces the influence of faulty segments to intact sections. Besides technical improvements the selection of the most favourable network topology can lower the installation costs.

Both CAN connections behave like one single physical CAN node. An increase in the maximum number of nodes can be achieved by separation of the network into several segments, each of them connected by CRep N. Each sub network can then manage a maximum number of CAN nodes only restricted by the transceiver driver capabilities. With transmission over long distances CRep N allows signal recovering.

Technical Data

Layout and Connection

CRep N devices include 2 CAN segments, wired by a terminal block with 8 clamps. Besides the CAN signals the terminal block also carries the power supply for CRep N. The following table shows the terminal assignment.

Pin	Name	Function
1	CAN1_H	CAN bus line circuit 1 (dominant high)
2	CAN1_L	CAN bus line circuit 1 (dominant low)
3	GND	Ground line
4	GND	Ground line
5	CAN2_H	CAN bus line circuit 2 (dominant high)
6	CAN2_L	CAN bus line circuit 2 (dominant low)
7	GND	Ground line
8	+24V	Power supply +24V

Limiting Values

Parameter	Minimum	Maximum	Unit
Storage temperature	-40	+90	°C
Operating temperature	-20	+80	°C
Supply voltage	-100	+35	V
Voltage on bus connections	-30	+30	V
Admissible power consumption (at 60°C)	-	1000	mW

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CRep N and other connected devices. Exposure to limiting conditions for extended periods may affect the reliability and shorten the life cycle of the device.

Nominal Values

Parameter	Minimum	Typical	Maximum	Unit
Current consumption (running idle)	-	25	-	mA
Current sonsumption (250 kBits/s, 100% busload)	-	35	-	mA
Supply voltage	11	24	30	V
Propagation delay	-	100	175	ns

All values, unless otherwise specified, refer to a supply voltage of 24V and an environmental temperature of 20°C.