

CAN Bus introduction



WRC-CANX



WRC-CANX-NEM



WRC-CANR-DF-DN

DeviceNet and CAN-Bus Extenders

WRC-CANX CAN Bus Extenders extend CAN Bus networks such as DeviceNet, SDS, and OpenCAN Part B. CAN-based products limit cable length based upon network data rates, as well as limit the length of drops from T-Junctions. WRC's Bus Extenders allow a user to extend the cable length without having to sacrifice network speed by providing an isolated extender operating at the network speed to effectively multiply the allowed network cable length.

Common Features include:

- Isolated network extender
- Manual or automatic speed selection 125K, 250K, 500K, baud rates
- No address setting required for DeviceNet, SDS, or OpenCAN
- Multiple extenders can be used in series with manual speed selections
- Works on all CAN-Based bus networks
- Powered from 24 Vdc supplied by the CAN Network or by the user (on each side of the repeater)
- Diagnostic bi-color LEDs on each network green / red
- Diagnostic bi-color LED for Module status green / red
- 1 millisecond latency for each network extension
- Ambient Temperature : 0 to 70 degrees :C
- Humidity: 0 95% RH non-condensing

Series III versions of WRC's DeviceNet Bus Extenders:

- Extend the versatility of DeviceNet:
- Allow longer networks and versatile topologies
- · Provide isolation over network segments
- Allows longer droplengths
- Offers a fiber-optic version that will operate over 2.2 km

Two Extender media to choose from: WRC-CANX and WRC-CANR Versions

- Supports DeviceNet, CAN2A, CAN2B Remote and Data Frames
- Expanded memory stores and forwards more messages, reducing bottlenecks during periods of high traffic
- New "adaptable memory technology" puts message memory where it is needed.
- New indicators help you debug network problems quickly
- Separate baudrate selections for A and B sides.
- Supports up to 15 of any baudrate configurations. Not just DeviceNet, but CanOpen, SDS and any other CAN network technology.
- Jumper selectable termination resistors
- · Custom hard-coded configurations for bulk applications on request
- Autobaud technology can be configured to lock on baudrates from the A-side, B-side, both sides, or both sides separately

WRC-CANR Version

- New version breaks the 500m barrier. Now messages can be sent up to 2.2 km with multi-mode fiber— optic physical layer.
- Remote configuration and indicators allows both CANR halves to be diagnosed and configured from only one of the halves



DeviceNet Extender

WRC-CANX

• Basic DeviceNet Extender takes a CAN-based message in Port A, transfers it over an isolation barrier and regenerates the message out Port B (see figure 1).

Applications which require extensions to overcome DeviceNet limitations should consider this approach. Models available include:

- WRC-CANX-DIN-DN
- WRC-CANX-NEMA-DN
- WRC-CANX-DIN-SDS
- WRC-CANX-NEMA-SDS
- WRC-CANX-DIN-CAN
- WRC-CANX-NEMA-CAN



MESSAGE IN A figure 2 (with copper cable connecting to

ports A and C)

WRC-CANR

WRC-CANR-DF-DN is a fiber-optic repeater with ST connectors:

- WRC's Fiber-optic version takes a CAN-based message in Port A, transfers the message over a fiber optic link (B) and regenerates the message out Port C (see figure 2).
- WRC-CANR-DF-DN is compatable with 62.5/125 micrometer multimode cable, maximum distance is 2200 meters.

Pairs of repeaters are required. Models available include:

• WRC-CANR-DF-DN

Two mechanical packages to choose from:

DIN-rail

WRC-CANX-DIN is DIN-rail mountable:

- Dimensions: 3.43" wide x 4.35" long x .2.13" high (87 mm wide x 110 mm long x 54 mm + high)
- PC Board 2.86" wide x 4.25" long with removable termination strip facing out on the long side
- PVC DIN Rail mount material
- DeviceNet compatible 5 conductor, removable termination strip for each network connection
- Uses EN50022 Din Rails (available as WRC50022)

NEMA-style

WRC-CANR-DF-DN and WRC-CANX-NEM are sealed NEMA4X/IP66 enclosures:

- "Mini" style, quick disconnects for the network: 1 male, 1 female
- 3-conductor female, "mini" style, quick disconnects are provided for power connectors
- Dimensions: 3.70" wide x 5.12" long x 2.24" high (94 mm wide x 130 mm long x 81 mm high)
- Transparent polycarbonate cover allows viewing diagnostic LEDs on each network
- UL 94-V1, VDE 0471-Part 2, Flammability Ratings
- Polycarbonate, glass filled body
- Groove & Lip seal design
- Polyurethane gasket sealing that is oil, acid, and temperature resistant
- 4 mounting screws external to gasket seal