

DNA R-3

Redundancy Node for RS-485 Networks

For an independent EN54-13 Life Safety Communication Network Layer



Overview

The DNA R-3, RS-485 Redundancy Node for Ring Topology Networks, has been developed by Instance Global – Managing Data Xchange S.L. to facilitate dynamic network management.

The equipment is designed to improve the Quality of Service (QoS) of critical communication networks while operating under the performance criteria required by EN54-13 and BS5839 part 1.

The DNA R-3 is a four port RS-485 node module allowing for RS-485 Class A redundant ring topologies.

The RS-485 ports connected to the communication ring are correctly terminated to match the network communication cable impedance ensuring optimum signal quality and amplitude. Signal quality is constantly monitored and the termination impedance is adjusted to compensate for changes in cable impedance due to climatic or physical cable parameter changes.

System diagnostics and reporting can be achieved using the Instance Global PC graphics tool, IView.

Features

- Independent Reporting with Class A ring communication redundancy
- Multiple fault tolerance
- 2.5 kV Galvanic Isolation between Ports A1/A2 and Ports B/C
- Support of single or dual port industrial equipment RS-485 connections
- Able to operate on Hosted Fibre/Ethernet links
- Simple LED system status indication
- Wireless Connectivity for remote monitoring using a Bluetooth, WIFI or GPRS communication module connection
- Support for the generation of system performance reports required for installation commissioning
- Visual interface provided by IView, the Instance Global Graphical User Interface with monitoring, diagnostics and reporting options
- Enables preventative maintenance management through system degradation monitoring
- Configuration and commissioning parameters are stored allowing for system performance tracking over time
- Ports B and C have adjustable termination to correctly match the loop cabling segment
- Baud rate selectable from 9600 - 115200 bits/sec
- DIN rail mounting

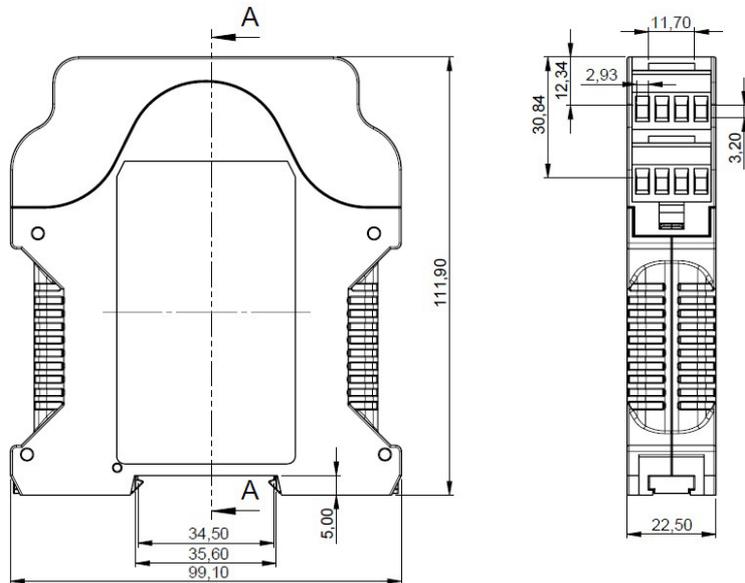


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Specifications

Dimension Diagram

Dimensions: 99.1 X 111.9 X 22.5mm
 Weight: 200g
 Mounting: DIN Rail



Power

Operating Voltages: 18V – 36V (24V Nominal)
 Rated Current: 150mA (at 24V)

Interfaces

RS485: Port A1: Selectable Fixed Termination (120Ω)
 Port A2: Selectable Fixed Termination (120Ω)
 Port B: Dynamic Termination
 Port C: Dynamic Termination
 Port B & Port C: Isolated (2.5kV)
 Baud Rate: 9600 to 115200 (selectable / configurable)

USB: USB Micro-B connection (Device / Slave Mode)
 Module: Proprietary Interface Card connection (Bluetooth / WIFI / GPRS)

Temperature

Operating: -10 to 50°C
 Storage: -40 to 70°C

Agency Approvals and Standards

CE, RoHs, WEEE compliant

EMC: EN 61000-6-2, Immunity Standard (Industrial Environments)
 EN 61000-6-4, Emission Standard (Industrial Environments)

Safety: EN 60950, IT Equipment



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