



Product: [Rail Data Diode HV](#)

Data Diode for 110 VDC and 110 / 230 VAC operating voltage

Product Description

The RDD20 devices consist of 2 independent DATA IN and DATA OUT routers. Within the device there is a continuous unidirectional data connection (100 Mbit/s) from DATA IN to DATA OUT for the data transmission. Due to the security requirements, data transmission is only possible from DATA IN to DATA OUT. Data Diode for 110 VDC and 110 / 230 VAC operating voltage

Technical Specifications

Product description

| | |
|-------------------------|--|
| Type: | Rail Data Diode HV (Product Code: RDD20-1400A-SKYY999HHE3SXX.X.XX) |
| Name: | Rail Data Diode HV |
| Software Version: | HiOS 09.0.06 |
| Part Number: | 942197002 |
| Port type and quantity: | 14 ports in total, thereof 6 M12 "D"-coded and 8 RJ45 |

More Interfaces

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| Power supply/signaling contact: | 2 x plug-in terminal block, 3- pin / 1 x plug-in terminal block, 2- pin |
| V.24 interface: | 2 x RJ11 socket |
| SD-card slot: | 2 x SD card slot for Autoconfiguration Adapter ACA31 |

Network size - length of cable

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| Twisted pair (TP): | 0-100 m |
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Network size - cascadiability

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| Line - / star topology: | any |
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Power requirements

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| Operating Voltage: | 2 x 110 VDC (77 .. 138 VDC), 2 x 110 / 230 VAC (93,5 .. 253 VAC) |
| Power consumption: | 21 W |

Software

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| Switching: | Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Interface Trust Mode, CoS Queue Management, IP Ingress DiffServ Classification and Policing, Queue-Shaping / Max. Queue Bandwidth, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, Jumbo Frames, VLAN (802.1Q), Protocol-based VLAN, VLAN Unaware Mode, Voice VLAN, MAC-based VLAN, IP subnet-based VLAN, IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Jumbo Frames, Layer 2 Loop Protection |
| Redundancy: | HIPER-Ring (Ring Switch) HIPER-Ring over Link Aggregation Link Aggregation with LACP Link Backup Media Redundancy Protocol (MRP) (IEC62439-2) MRP over Link Aggregation Sub Ring Manager RSTP 802.1D-2004 (IEC62439-1) RSTP Guards VRRP VRRP Tracking HiVRRP (VRRP enhancements) Redundant Network Coupling |
| Management: | DNS Client, Dual Software Image Support, TFTP, SFTP, SCP LLDP (802.1AB), LLDP-MED, SSHv2, V.24, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet, OPC-UA Server |
| Diagnostics: | Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Email Notification, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, Link Speed and Duplex Monitoring, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, RSPAN, SFLOW, VLAN Mirroring, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump, Snapshot Configuration Feature |
| Configuration: | Automatic Configuration Undo (roll-back), Configuration Fingerprint, Text-based Configuration File (XML), BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port DHCP Server: Pools per VLAN, AutoConfiguration Adapter ACA31 (SD card), HiDiscovery, DHCP Relay with Option 82, Command Line Interface (CLI), CLI Scripting Full-featured MIB Support, Web-based Management Context-sensitive Help, Backup config on a remote server when saving, Clear config but keep IP settings, CLI script handling over ENVN at boot, HTML5 based Management |

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| Security: | MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, RADIUS Policy Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, DHCP Snooping, Dynamic ARP Inspection, Automatic Denial-of-Service Prevention, LDAP, Ingress MAC-based ACL, Ingress IPv4-based ACL, Time-based ACL, VLAN-based ACL, Ingress VLAN-based ACL, ACL Flow-based Limiting, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, CLI Logging, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, Configurable Password Policy, Configurable Number of Login Attempts, SNMP Logging, Multiple Privilege Levels, Local User Management, Remote Authentication via RADIUS, User Account Locking, Password change on first login |
| Time synchronisation: | PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, Buffered Real Time Clock, SNTP Client, SNTP ServerPTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, Buffered Real Time Clock, SNTP Client, SNTP Server |
| Miscellaneous: | Port Power Down, Manual Cable Crossing |
| Routing: | IP/UDP Helper, Full Wire-Speed Routing, Port-based Router Interfaces, VLAN-based Router Interfaces, Loopback Interface, ICMP Filter, Net-directed Broadcasts, OSPFv2, RIP v1/v2, ICMP Router Discovery (IRDP), Static Unicast Routing, Proxy ARP, Static Route Tracking |

Ambient conditions

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| MTBF (Telecordia SR-332 Issue 3) @ 25°C: | 78.4 h |
| Operating temperature: | 0-+60 °C |
| Storage/transport temperature: | -40-+85 °C |
| Relative humidity (non-condensing): | 5-95 % |

Mechanical construction

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| Dimensions (WxHxD): | 146 mm x 164 mm x 120 mm |
| Weight: | 2200 g |
| Mounting: | DIN Rail |
| Protection class: | IP20 |

Mechanical stability

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| IEC 60068-2-6 vibration: | 5 Hz .. 8.4 Hz (3,5 mm amplitude), 5 Hz .. 150 Hz |
| IEC 60068-2-27 shock: | 15 g, 11 ms |

EMC interference immunity

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| EN 61000-4-2 electrostatic discharge (ESD): | 4 kV contact discharge, 8 kV air discharge |
| EN 61000-4-3 electromagnetic field: | 10 V/m (80 .. 1000 MHz), 3 V/m (1400 .. 2000 MHz), 1 V/m (2000 .. 2700 MHz) |
| EN 61000-4-4 fast transients (burst): | 2 kV power line, 4 kV data line |
| EN 61000-4-5 surge voltage: | 2 kV (line / ground), 1 kV (line / line) power supply 1 kV (line/earth) data line |
| EN 61000-4-6 Conducted Immunity: | 10 V (150 kHz .. 80 MHz) |

EMC emitted immunity

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| EN 55032: | EN 55032 Class A |
| EN 55022: | EN 55022 Class A |
| FCC CFR47 Part 15: | FCC 47CFR Part 15, Class A |

Approvals

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|---|----------------|
| Basis Standard: | CE, EN 60131-2 |
| Safety of industrial control equipment: | EN 60950-1 |

Reliability

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| Guarantee: | 60 months (please refer to the terms of guarantee for detailed information) |
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Scope of delivery and accessories

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| Accessories to Order Separately: | Terminal cable 943 301-001; AutoConfiguration Adapter ACA31 942 074-001; Network management software Industrial HiVision 943 156-xxx ; 3-pin terminal block for supply voltage (50 pieces) 943 845-008 ; 2-pin terminal block for signal contact (50 pieces.) 943 845-010 ; Power Cord 942 000-001; Protection cap for RJ45 socket (50 pieces) 943 936-001; Dust-Cover set for M12 socket, metal (25 pcs.) 942 057-001 ; Dust-Cover set for M12 socket, plastic (25 pcs.) 942 057-002 |
| Scope of delivery: | Device, terminal blocks, general safety instructions |

Further Instructions

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| Product Documentation: | https://www.doc.hirschmann.com |
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| Certificates: | https://www.doc.hirschmann.com/certificates.html |
| Software Download: | https://hirschmann-support.belden.com/en-US/downloads |

History

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| Update and Revision: | Revision Number: 0.128 Revision Date: 06-18-2024 |
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Variants

| Item # | Type |
|-----------|--------------------|
| 942197002 | Rail Data Diode HV |

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