**Product:** Rail Data Diode LV

Data Diode for 24 V 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 24 V operating voltage

**Technical Specifications**

**Product description**
- **Type:** Rail Data Diode LV (Product Code: RDD20-1400A-SUUY999HHE3XX.XXX)
- **Name:** Rail Data Diode LV
- **Software Version:** HiOS 09.0.06
- **Part Number:** 942197001
- **Port type and quantity:** 14 ports in total, thereof 6 M12 "D"-coded and 8 RJ45

**More Interfaces**
- **Power supply/signaling contact:** 2 x plug-in terminal block, 2 - 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**
- **Twisted pair (TP):** 0 - 100 m

**Network size - cascadibility**
- **Line - star topology:** any

**Power requirements**
- **Operating Voltage:** 2 x 24 VDC (16.8 .. 32 VDC)
- **Power consumption:** 23 W

**Software**
- **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 HVRPP (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 ENVM at boot, HTML5 based Management
### Security

### Time synchronisation
- PTPv2 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

| **MTBF (Telecordia SR-332 Issue 3) @ 25°C** | 159.3 h |
| **Operating temperature** | 0°/+60 °C |
| **Storage/transport temperature** | -40°/+85 °C |
| **Relative humidity (non-condensing)** | 5-95 % |

### Mechanical construction

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

### Mechanical stability

- 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

- 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

- EN 55032: EN 55032 Class A
- EN 55022: EN 55022 Class A

### Approvals

- Basis Standard: CE, EN 60131-2
- Safety of industrial control equipment: EN 60606-1

### Reliability

- Guarantee: 60 months (please refer to the terms of guarantee for detailed information)

### Scope of delivery and accessories

- **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

- **Product Documentation:** https://www.doc.hirschmann.com
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