



Ha-VIS RF-R500-c
Ha-VIS RF-R500-p

Advantages

- Applicable in rough, metal-containing industrial environments
- Robust aluminium housing
- High transponder population
- Very long antenna cable possible
- **New:** Additional 8-fold antenna multiplexer (optional)
- **New:** Web interface for configuration
- **New:** Sample function blocks for Siemens Simatic® and S7®
- **New:** PROFIBUS®, PROFINET® optional via gateway

General Description

The Ha-VIS RF-R500-c and Ha-VIS RF-R500-p RFID readers are two high performance Long Range Readers licensed according to ETSI, FCC, IC, SRRC (China) and Japan.

Characteristics:

- High receiver sensitivity for enlarged and homogeneous tag detection range
- Powerful tag response decoding, e.g. for Dense Reader Mode
- 5 hardware interface ports: Ethernet, RS 232, RS 485, USB and USB-Port
- Reader protection against fault conditions like antenna shortcut, antenna mismatching and electrostatic discharge
- RSSI data readout

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|---------|------------------|
| Ha-VIS RF-R500-c 2 W output power | | | |
| EU version | 20 91 104 1103 | | |
| US version | 20 91 104 1104 | | |
| Ha-VIS RF-R500-p with PoE / 4 W output power | | | |
| EU version | 20 91 104 1101 | | |
| US version | 20 91 104 1102 | | |
| Optional accessories | | | |
| DIN Rail mounting Kit for RF-R500 | 20 93 102 0201 | | |
| Protection cap Ha-VIS RF-R500 | 20 93 901 0101 | | |

All data represent the current state of development at the time of print and are therefore non-binding.

HARTING reserves the right to modify designs without prior notice.

Technical characteristics

| | |
|-----------------------------------|--|
| Transponder protocol | EPC Class 1 Gen 2 (ISO 18000-6-c) |
| UHF RFID antenna interface | |
| Antenna connection | 4 x SMA connector (50 Ohm); Reader internally multiplexed |
| Output Power | |
| Ha-VIS RF-R500-c | 0.3 W ... 2 W (configurable) |
| Ha-VIS RF-R500-p | 0.3 W ... 4 W (configurable) |
| Frequency area | 860 MHz ... 960 MHz (depending on specific reader) |
| Supply voltage on antenna outputs | 24 V DC / 200 mA (Ha-VIS RFID RF-R500-p only) |
| Interfaces | <ul style="list-style-type: none"> • Ethernet (TCP/IP) 10/100 Mbit/s; Full Spec. 802.3 • RS 232 / RS 485 • USB / USB-Port for WLAN dongle or external memory |
| Inputs | <ul style="list-style-type: none"> • 5 Optocoupler (max. 24 V DC / 20 mA) |
| Outputs | <ul style="list-style-type: none"> • 2 Optocoupler (24 V DC / 30 mA) • 3 Relays (24 V DC / 1 A) |
| LED Diagnosis | |
| 8 LEDs (from left to right) | <ul style="list-style-type: none"> • Run • Host communication • Warning • Input / output • Antenna 1 • Antenna 2 • Antenna 3 • Antenna 4 |
| Performance | |
| Bulk-Read capability | |
| Ha-VIS RF-R500-c | < 150 Transponder/sec |
| Ha-VIS RF-R500-p | > 150 Transponder/sec |
| Max. Operating Distance | Up to 16 m, depending on kind of transponder & environmental conditions |
| Protocol Modi | <ul style="list-style-type: none"> • Host Mode • Scan Mode • Notification Mode • Buffered Read Mode |

Technical characteristics

Power Supply

| | |
|---------------------|--|
| Power supply | |
| Ha-VIS RF-R500-c | +24 V DC ($\pm 5\%$) |
| Ha-VIS RF-R500-p | +24 V DC ($\pm 5\%$) / Power over Ethernet (PoE) |
| Current consumption | max. 2 A |

Design features

| | |
|---|--|
| Material of housing | Aluminium, powder coated |
| Dimensions (W x H x D) | 260 x 153 x 70 mm |
| Weight | 2000 g |
| Degree of protection acc. to DIN 60 529 | IP 64 (with protection cap) / IP 53 (without protection cap) |
| Installation on DIN rail | DIN rail mounting kit (optional accessories) |

Environmental conditions

| | |
|-----------------------|---|
| Operating temperature | -25 °C ... +50 °C |
| Storage temperature | -25 °C ... +85 °C |
| Relative humidity | 5 % ... 95 % (non-condensing) |
| Vibration | EN 60 068-2-6 10 Hz ... 150 Hz: 0.075 mm / 1 g |
| Shock | EN 60 068-2-27 Acceleration: 30 g |

Norms & Safety

| | |
|----------------|---|
| Radio license | <ul style="list-style-type: none">• EN 302 208• FCC 47 FCR Part 15• IC RSS-GEN, RSS-210• SRRC (China) (US version)• Japan |
| EMC | EN 301 489 |
| Low voltage | EN 60 950 |
| Human Exposure | EN 50 364 |
| RoHS compliant | |

RF diagnosis

- RF Channel monitoring
- Antenna SWR control
- Internal overheating control

Technical characteristics

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|----------------------------------|---|
| Operating system | Linux (Kernel 3.x.x) 64 MB RAM, 256 MB Flash |
| Others | <ul style="list-style-type: none"> • Anticollision function • Real time clock • RSSI • Basic SNMP support • Action on EPC • Configuration closing |
| Software | |
| Demo- and configuration software | Ha-VIS RFID config |
| Minimal hardware requirements | <ul style="list-style-type: none"> • Personal computer IBM PC Pentium III 1000 MHz or faster recommended • Windows XP® (32 Bit) with 256 MB RAM or Windows® 7 (32 / 64 Bit) • Hard disk with minimum free 30 MB memory space • Windows® compatible mouse • Windows® compatible super VGA graphic card (800 x 600) (1024x768 recommended) |
| Web interface | <ul style="list-style-type: none"> • Configuration via browser |
| Railway (rolling stock) | |
| Isolation | EN 50 155 |
| EMC | EN 50 121-3-2 (with protection cap and ferrite cores) |
| EMC | EN 50 121-4 (with protection cap and ferrite cores) |
| Vibration | EN 61373 Cat 1B |
| Shock | EN 61373 Cat 1B |
| Wet heat (cyclic) | EN 50 155 / EN 60 068-2-30 |
| Fire protection | EN 45 545 |