



Ha-VIS RFID RF-R400 Reader

Advantages

- Applicable in rough, metal-containing industrial environments
- Robust aluminium housing
- High transponder population
- Very fast multiplexing speed
- Robust M12 and M8 connectors

General description

The Ha-VIS RF-R400 is a powerful 4 port UHF RFID reader. With the robust M12 (Ethernet) and M8 (power, IO and serial) connectors the reader is designed for the harsh industrial and railway environment. Even in time critical applications multiple antennas could be used due to its internal high speed multiplexer.

Technical characteristics

| | |
|-----------------------------------|--|
| Transponder protocol | EPC Class 1 Gen 2 (ISO 18 000-6-c on request) EPC Class 1 Gen V2 |
| UHF RFID antenna interface | |
| Antenna connection | 4 x SMA connector (50 Ohm); Reader internally multiplexed |
| Output power | max. 2 W (configurable) |
| Frequency area | 860 MHz ... 928 MHz (depending on specific reader) |
| Interfaces | |
| | <ul style="list-style-type: none"> • Ethernet (TCP/IP) 10/100 Mbit/s; Full Spec. 802.3 • RS 232 • USB |
| Inputs | <ul style="list-style-type: none"> • 2 optocoupler (max. 24 V DC / 20 mA) |
| Outputs | <ul style="list-style-type: none"> • 2 optocoupler (24 V DC / 20 mA) • 2 relays (24 V DC / 1 A) |

Technical characteristics

LED Diagnosis

- 8 LEDs (from left to right)
- Run
 - Host communication
 - Warning
 - Input / output
 - Antenna 1
 - Antenna 2
 - Antenna 3
 - Antenna 4

Performance

- Bulk-reading capability < 150 Transponder / s
- Max. reading distance up to 16 meters, depending on kind of transponder & environmental conditions

Protocol modi

- Host Mode
- Scan Mode
- Notification Mode
- Buffered Read Mode

Power supply

- Power supply + 24 V DC (± 5 %)
- Current consumption max. 3.8 A
- typ. 1 A (without the power consumption of an external connected active device at the antenna ports)

Design features

- Material of housing Aluminium, powder coated
- Dimensions (W x H x D) 259.8 x 157.3 x 68 mm
- Weight 1.8 kg
- Degree of protection acc. to DIN 60 529 IP 53
IP 54 (with optional IP54 Protection Set)
- Installation on DIN rail DIN rail mounting kit (optional accessories)

Environmental conditions

- Operating temperature -40 °C ... +70 °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

All data given are in line with the actual state of art and therefore not binding.
HARTING reserves the right to modify designs without giving the relevant reasons.

* tested according to EN 60068-2-2



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Technical characteristics

Norms & safety

Radio license

- EN 302 208
- FCC 47 FCR Part 15
- IC RSS-GEN, RSS-210

EMC EN 301 489

Low voltage EN 60 950

Human Exposure EN 50 364

RoHS compliant

Others

- RSSI
- Action on EPC
- Configuration cloning

Software

Demo- and configuration software

- Ha-VIS RFID config
- Windows® 7 (32 / 64 Bit) or Windows® 10
- Hard disk with minimum free 30 MB memory space
- Ha-VIS Middleware

Technical characteristics

Railway (rolling stock)

| | |
|---------------------------|------------------------------|
| Isolation | EN 50 155 |
| EMC | EN 50 121-3-2 |
| EMC | EN 50 121-4 |
| Vibration | EN 61 373 Cat 1B |
| Shock | EN 61 373 Cat 1B |
| Wet heat (cyclic) | EN 50 155 / EN 60 068-2-30 |
| Fire protection | EN 45 545 |
| Upper and lower voltage | EN 50 155 |
| Power supply interruption | EN 50 155, classes S1 and C1 |
| Power supply overvoltage | EN 50 155 |
| Voltage fluctuation | EN 50 155 |
| Salt mist | EN 50 155 |

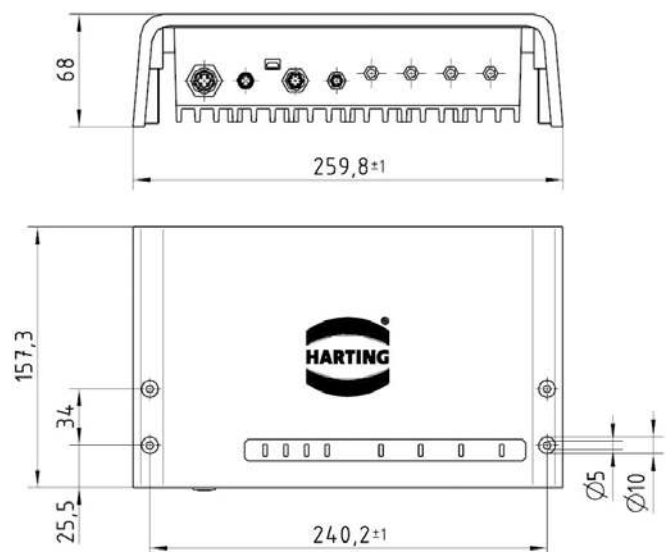
| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Ha-VIS RFID RF-R400

| | |
|------------|----------------|
| EU version | 20 91 107 1101 |
| US version | 20 91 107 1102 |

Optional accessories

| | |
|--|--------------------|
| DIN rail mounting kit | 20 93 102 0201 |
| M8 cable assembly (2 m, for power supply - VCC)** | 21 34 810 0489 020 |
| M8 cable assembly (2 m, for RS 232, relay)** | 21 34 B20 0821 020 |
| M8 cable assembly (2 m, for IO)** | 21 34 730 0821 020 |
| M12 D-coded Ethernet cable (3 m)** | 09 45 700 5025 |
| Han® 3 A RF-R400, M8 adapter*** (ideal for railway applications) | 61 04 204 0036 00 |
| Protection Set IP54 RF-R400 | 20 93 901 0111 |



** length just an example, another lengths on request

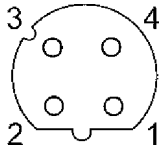
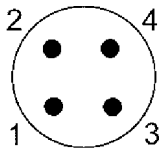
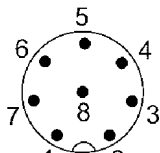
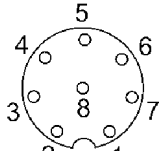
*** suitable cable assemblies that can be connected to this adapter can be manufactures on request



Ha-VIS RFID RF-R400 Reader

Technical characteristics

Connectors / Pin assignment

| LAN (D-coded) | | |
|---------------|-------------|---|
| 1 | TX+ |  |
| 2 | TX- | |
| 3 | RX+ | |
| 4 | RX- | |
| VCC | | |
| 1 | 24 V-in |  |
| 2 | 24 V-in | |
| 3 | GND-in | |
| 4 | GND-in | |
| RS232 / RELAY | | |
| 1 | RS232-RxD |  |
| 2 | RS232-TxD | |
| 3 | GND | |
| 4 | +24 VDC | |
| 5 | RELAIS1-NO | |
| 6 | RELAIS1-COM | |
| 7 | RELAIS2-NO | |
| 8 | RELAIS2-COM | |
| IO | | |
| 1 | OPTO-OUT1-E |  |
| 2 | OPTO-OUT1-C | |
| 3 | OPTO-OUT2-E | |
| 4 | OPTO-OUT2-C | |
| 5 | OPTO-IN1- | |
| 6 | OPTO-IN1+ | |
| 7 | OPTO-IN2- | |
| 8 | OPTO-IN2+ | |