Ha-VIS RFID RF-R3x0 Reader

Ha-VIS RFID RF-R3x0 Reader

Advantages

- Designed for the harsh industrial environment
- Tested according industry and railway standards
- Ready for software customisation
- M12 connectors
- Power over Ethernet
- Ha-VIS Middleware compatible: RF-R300
- OPC UA for AutoID Companion specification: RF-R310
- Modbus/TCP communication: RF-R320
- GS1® ALE 1.1 based Middleware included: RF-R350

General description

- The Ha-VIS RF-R3x0 is a very robust industry and railway approved RFID reader. It is tested according the EN 50 155.
- All components are designed for a very long lifetime in harsh industrial environments.
- The modular software design of the new reader gives HARTING the ability to support various communications protocols such as LLRP, OPC UA, or even the implementation of a very powerful middleware functionality based on ALE 1.1 standard of the GS1®. In addition, customer-specific variants can be supplied.

Technical characteristics

Transponder protocol	EPC Class 1 Gen2 (ISO 18000-6c)
UHF RFID antenna interface	
Antenna connection	2 x RP-TNC connector (50 Ohm); reader internally multiplexed
Output power	max. 0.5 W
Frequency range	865 … 928 MHz (region configurable)
Interfaces	Ethernet (TCP/IP) 10/100 Mbit/s; Full Spec. 802.3
Diagnosis (LED)	3 LEDs to visualise the device and antenna status
Inputs / Outputs	up to 8 configurable IOs (not available in PoE operation)
Performance	
Bulk-reading capability	up to 100 transponders/s
Max. reading distance	up to 5 meters, related to the transponder type and environmental conditions
Protocol	RF-R300: LLRP (Low Level Reader Protocol, worldwide standardised) RF-R310: OPC UA according to OPC Unified Architecture for AutoID Companion specification RF-R320: Modbus/TCP for an easy PLC connection RF-R350: Embedded middleware functionality based on the GS1® ALE 1.1 standard – Web services – http telegrams – TCP telegrams – UDP telegrams – MySQL database support – MQTT
Power supply	
Power supply	24 V DC (± 5 %) / Power over Ethernet (PoE)
Current consumption	max. 500 mA
Operating system	Linux (Kernel 3.x.x)
System performance	1 GHz ARM processor 1 GB RAM 4 GB eMMC up to 32 GB flash (via Micro SD Card)

Ha-VIS RFID RF-R3x0 Reader

Technical characteristics

Design features

Material of housing	aluminium
Dimensions (W x H x D)	132 x 104 x 35 mm
Installation on DIN rail	DIN rail mounting kit (optional accessories)

Environmental conditions

Operating temperature	-40 °C … +55 °C
Storage temperature	-40 °C … +85 °C
Relative humidity	5 % … 95 % (non-condensing)
Vibration	EN 60 068-2-6 10 Hz to 150 Hz: 0.075 mm / 1g
Shock	EN 60 068-2-27 Acceleration: 30 g
Protection class	IP67

Technical characteristics

Norms & safety

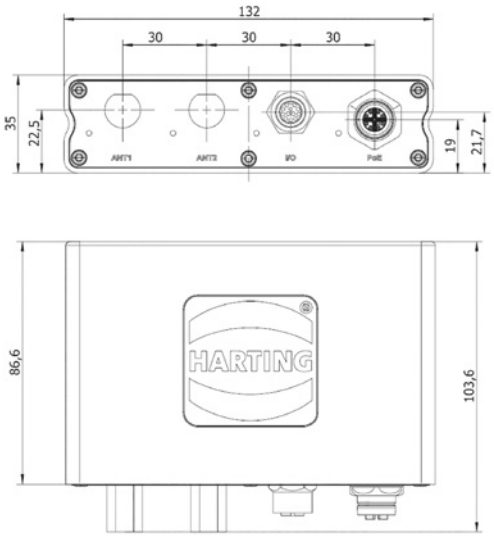
Radio license	EN 302 208 FCC 47 FCR Part 15 IC RSS-GEN, RSS-210
EMC	EN 301 489
Low voltage	EN 60 950
Human exposure	EN 50 364
RoHS compliant	

Railway (rolling stock)

EMC	EN 50 121-3-2
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 45 545-2

Identification	Part number
Ha-VIS RFID RF-R300 EU/FCC	20 91 105 1101
Ha-VIS RFID RF-R310 EU/FCC (OPC UA)	20 91 105 1211
Ha-VIS RFID RF-R320 EU/FCC (Modbus TCP)	20 91 105 1311
Ha-VIS RFID RF-R350 EU/FCC *(ALE 1.1 Middleware tested acc. to railway standards)*	20 91 105 1111
Software update ALE 1.1 for RF-R3x0	26 99 400 0000 02
Optional accessories	
DIN rail mounting kit	20 95 200 0004
Wall mounting kit	20 95 300 0007
M12 X-coded Ethernet cable (2 m)*	09 47 841 1002
M12 A-coded cable assembly (2 m)* (IOs / ext. power supply)	21 34 840 0C79 020
Ha-VIS Coax TNC/TNC-RP, H155 PVC, 3 m*	20 93 204 0121
Ha-VIS eCon 3060BT-A-P	24 03 006 0020

Drawing — Dimensions in mm



HARTING IT Software Development GmbH & Co. KG
Marienwerder Straße 2 | D-32339 Espelkamp
www.HARTING-RFID.com | Auto-ID@HARTING.com

2017-07-20

** length just an example, another lengths on request*