



Pushing Performance



People | Power | Partnership

HARTING Ha-VIS RFID System Components

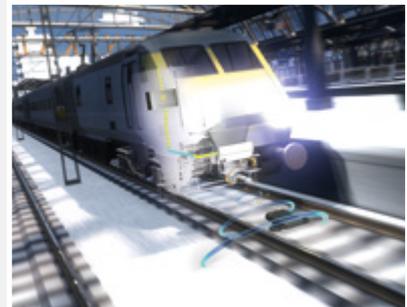
HARTING Ha-VIS RFID System Components



Real-time information and tight synchronisation of computer data and real processes play a critical role in process management and process optimisation. Only when you are sure that your information agrees with reality can you optimally control your processes and thus reduce costs.

Railway transport: determining positions and transmitting signals with RFID

Safety is the most important factor for the railway sector. UHF RFID helps to improve safety in a simple way. Precise position control using UHF RFID ensures that vehicle doors can only be opened if the vehicle is in the intended position, and then only for those doors on the railway platform side. UHF RFID also enables signal states to be transmitted to the driver's cab; this supports the driver and eliminates another source of error. Whether in the vehicle, on the railway platform or in the track bed: RFID technology designed with proven, robust HARTING quality also exists for these demanding environments.



Tracking operating materials

Operating materials are necessary, but also quite expensive. That's why it is important to always know which tool is in which condition and where it is located.

For example, the customised production using plastics injection-moulding machines requires an ever-increasing number of tools. Efficient administration and tracking is required in order to avoid costs for searching or even lost tools. Also, not every tool can be used on every machine; the tool and machine must fit together. Otherwise, the machine and tools risk being damaged.

Tools equipped with UHF RFID transponders can be reliably tracked. The compatibility of each machine and tool can also be checked at the machine. Only then can production be safely started. HARTING offers RFID solutions that have been developed and optimised for this special purpose.



Intra-logistics: RFID on conveyor belts

Only rarely do conveyor belts run totally straight. The space for attaching additional equipment such as antennas is often limited. The Ha-VIS LOCFIELD® antennas are the perfect solution for such conditions. Its body consists of a coaxial cable; this enables the antenna to be easily adapted to non-linear distances.



Smart infrastructure solutions

Real-time information plays a key role in managing and optimising processes. Quick, reliable synchronization between virtual data and the real process world is also very important.

Any lack of information inevitably has a negative impact. Equally critical, however, is the information that already exists in the company but cannot be used due to inadequate infrastructures. Such information costs money but is of no use.

This is where HARTING's RFID solutions help: They capture objects and information belonging to them, process them and forward them to the existing infrastructure. HARTING's RFID systems can be easily integrated into existing topologies. The Ha-VIS middleware enables centralised management of data and readers. This means that there are no breaks in the system where information can be lost.



Tool management / Maintenance: Ha-VIS RFID VT series (HT)

- > 4 m read range on metal for the smallest sizes
- Variable mounting options
- Especially resistant to heat and chemicals (e.g. during autoclaving)



RFID out-of-the-box solution

- Includes RFID reader, switch, protection against overvoltage, and power supply
- Protection class IP65
- Customised configurations possible
- Robust enclosure



Versatile data processing and communications

- Ha-VIS RF-R300: LLRP communications for connecting to the HARTING middleware
- Ha-VIS RF-R310: standard-compliant OPC UA interface
- Ha-VIS RF-R350: integrates middleware acc. to the GS1 standard
- Ha-VIS RF-R320: Modbus TCP for an easy connection to your machine



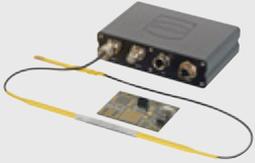
Robust UHF RFID antenna Ha-VIS RF-ANT-LR10 with very short read range

- Protection class IP67
- Optimised for near-field applications
- such as Detecting tools in machines or ensuring the correct positioning of objects



Tracking tools with RFID: Ha-VIS RFID4MoldTracking

- Optimised for integration in plastics injection-moulding machines
- Robust and heat-resistant (up to 150°C) thanks to the high temperature antenna WR24-t



For identifying and tracking products and components: Ha-VIS RFID4SMT

- Enables integration of UHF transponders onto printed circuit boards
- Complete solution for use in the production of PCBs



Robust smart labels: Ha-VIS RFID FT 86/92

- > 2 m read range
- Resistant surface
- Flat design
- Customised print



Automatic process mapping using RFID readers Ha-VIS RF-R500

- Read range up to 16 m
- 4 antennas can be connected
- Up to IP64 when using protection cover
- 5 GPIOs



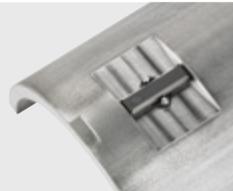
Ha-VIS LOCFIELD® follows the production line

- Create application-specific read zones
- No reflections
- Custom lengths and connection options – adapted to the intended usage



Tracking materials with the Ha-VIS ANT-WR24-i

- Versatile mounting options
- Reading ranges > 10 meters
- 70° aperture angle
- Ideal energy utilisation thanks to down pitch
- Suitable for industrial use



Using RFID to detect objects and monitor maintenance intervals

- Systems with wider reading range
- Transponder can be recessed-mounted in depressions, thanks to its flat and compact design
- Components with protection up to IP67



Mobile object detection and communication: the Ha-VIS RF-R300-M

- Location-independent: with WiFi and LTE
- GPS-based location possible
- Protection class IP67

HARTING smart infrastructure solutions for harsh railway environments

HARTING connectors are synonymous with robustness and longevity. They prove this day in and day out – for example in jumper cables connecting rail cars.

HARTING's RFID systems follow in this tradition. Despite their intelligence, they are so robust and durable that they do their job reliably even under the most difficult operating conditions. The customer can decide whether the transponder is mounted on the train and the reader on the rails, or whether the reader is mounted on the train and the transponder on the rails. HARTING systems have, of course, been tested in accordance with the railway standard EN 50155.



The RF-R350 RFID reader on the train

- Vibration EN 61373 Cat 1B
- Shock EN 61373 Cat 1B
- Isolation EN 50155
- Cold/heat: EN 50155
- Damp heat (cyclical) EN 50155



RFID transponder on the railway platform

- Extremely robust and durable
- Maintenance-free



Adapted to the railway sector: Ha-VIS RFID4Rail

- Reliable detection of the railway platform
- Precise vehicle localisation
- Transmits signal states into the vehicle
- Robust enough for the toughest environmental requirements
- For speeds of more than 250 km/h



Localisation or signal transmission with protected transponders

- Suitable for installation on railway sleepers
- Protection class IP65
- Maintenance-free



Ha-VIS RFID LT 2.0 series

- > 8 meters read range on metal
- Resistant to weathering
- Robust
- Maintenance-free



RFID out-of-the-box solution

- Includes RFID reader, switch, protection against overvoltage, and power supply
- Protection class IP65
- Customised configurations possible
- Robust stainless steel enclosure
- Tested for applications at track side



Ha-VIS middleware

- RFID readers are easy and quick to connect
- Configurable without programming effort
- Reports cumulative data in standardised formats
- Conforms with the EPCglobal® ALE 1.1 standard



Train positioning on the platform or train localisation along the route

- Using an RFID antenna on the train
- Extremely robust stainless steel antenna
- IP67, IK08
- No connector on the antenna



Maintenance and repair using the Ha-VIS RFID VT series (HT)

- > 4 m read range on metal for the smallest sizes
- Variable mounting options
- Resistant to many chemicals
- Extremely robust



RFID antenna on the railway platform

- Impact-resistant enclosure
- Read range: > 15 m
- Variable mounting positions: horizontal and vertical

RFID Products & Accessories

Ha-VIS UHF long-range RFID reader RF-R500

Characteristics

- Suitable for use in harsh industrial and railway environments
- Very wide read range of up to 16 m
- Power over Ethernet capability (PoE) (RF-R500-p)
- 4 antenna connections SMA
- Output power max. 4 W (RF-R500-p) or 2 W (RF-R500-c)
- 5 GPIOs
- Interfaces (Ethernet, USB, RS 232, RS 485)
- More than 150 transponders can be read quickly
- 860 – 960 MHz
- Tested according to EN 50 155

Identification	Part number
Ha-VIS RF500-c, EU	20 91 104 1103
Ha-VIS RF500-c, US	20 91 104 1104
Ha-VIS RF-R500-p, EU	20 91 104 1101
Ha-VIS RF-R500-p, US	20 91 104 1102

Accessories

DIN rail mounting adapter kit - Board and screws for installing the RF-R500 on the DIN rail	20 93 102 0201
Ha-VIS protection cover RF-R500 - Increased protection class IP64 - Up to 8 PG feed-throughs	20 93 901 0101



Ha-VIS UHF rugged long-range RFID reader RF-R400

Characteristics

- Specialised for harsh usage in trains and on the track
- High transponder population
- Very high multiplexer speed
- Robust M12 (Ethernet) and M8 (VCC, RS 232, IO) connectors
- Tested up to +70°C
- Tested according to EN 50 155
- 4 antenna connections SMA
- Output power max. 2 W

Identification	Part number
Ha-VIS RFID Reader RF-R400, EU	20 91 107 1101
Ha-VIS RFID Reader RF-R400, US	20 91 107 1102

Accessories

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



* Sample length; other lengths available on request

Ha-VIS UHF rugged mid-range reader RF-R300

Characteristics

- Suitable for harsh industrial environments
- M12 connector sockets
- 2 antenna connections TNC-R
- Output power max. 0.5 W
- Power over Ethernet enabled (PoE)
- 8 configurable digital inputs and outputs
- High degree of protection IP67

Identification

Identification	Part number
Ha-VIS RF-R300, LLRP interface, EU/FCC	20 91 105 1101
Ha-VIS RF-R350 EU/FCC (ALE 1.1 middleware, tested according to railway standards)	20 91 105 1111

Accessories

Software update ALE 1.1 for Ha-VIS RF-R3x0 (embedded middleware)	26 99 400 0000 02
DIN rail mounting adapter kit	20 95 200 0004
Wall mounting kit	20 95 300 0007
M12 Ethernet cable, X-coded (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



* Sample length; other lengths available on request

Ha-VIS UHF wireless mid-range reader RF-R300-M

Characteristics

- Suitable for harsh environments
- Location-independent: with WiFi and LTE interface
- GPS-based location possible
- 2 antenna connections TNC-R
- Output power max. 0.5 W
- 1 SMA connector each for WiFi, 2G/3G/4G and GPS antenna
- Protection class IP67

Identification

Identification	Part number
Ha-VIS RF-R300-M	20 91 105 2101

Accessories

Software update ALE 1.1 for RF-R3x0 (embedded middleware)	26 99 400 0000 02
DIN rail mounting adapter kit	20 95 200 0004
Wall mounting kit	20 95 300 0007
M8 cable assembly 4 poles, 2.0 m	21 34 810 0489 020
5GHz WiFi antenna 6GK5793-4MN00-0AA6	20 95 300 0104
2.4GHz WiFi antenna 6GK5792-4MN00-0AA6	20 95 300 0103
LTE antenna 6NH9860-1AA00 (2G/3G/4G EU)	20 95 300 0105



Ha-VIS UHF mid-range reader RF-R200

Characteristics

- 3 external antenna connections (max. range up to 2 m)
- 1 internal antenna (max. range approx. 20 cm)
- Output power max. 0.5 W
- Power over Ethernet
- 3 antenna connections SMA
- Automatic reporting of transponders that were read

Identification	Part number
Ha-VIS RF-R200 PoE	20 91 106 1101
Ha-VIS RF-R200 module	20 91 106 1103

Accessories

DIN rail adapter Ha-VIS RF-R200	20 93 102 0202
Mounting kit Ha-VIS RF-R200	20 93 102 0203
Desktop power supply for Ha-VIS RF-R200 (EU)	20 93 310 0203
Desktop power supply for Ha-VIS RF-R200 (GB)	20 93 310 0204
Desktop power supply for Ha-VIS RF-R200 (US)	20 93 310 0205



Ha-VIS RFID Box

Characteristics

- Completely installed RFID system in control cabinet
- Tested and ready for connection
- Robust 2mm VA steel control cabinet with protection class IP65
- All configurations are also available with integrated cooling system
- All RFID boxes are also available in FCC approved versions
- Customised configurations on request

Identification	Part number
Ha-VIS RFID Box (RF-R500-p-EU, eCon 2050-A)	20 91 421 1001
Ha-VIS RFID Box (RF-R500-c-EU, eCon 2050-A)	20 91 411 1001
Ha-VIS RFID Box (RF-R400-EU, eCon 2050-A, MICA Base)	20 91 481 1010
Ha-VIS RFID Box High Temp (RF-R500-p-EU)	2091 491 1001



Ha-VIS UHF mobile reader Nordic ID

HARTING relies on Nordic ID products for its handheld UHF RFID readers. This enables HARTING to provide its customers with mobile UHF RFID readers from the entire Nordic ID product line. These handheld readers feature outstanding robustness and reading ranges of up to 5 meters. They are also fully compatible with the Ha-VIS Application Suite.

Identification	Part number
We can prepare a customised offer for you on request.	



Ha-VIS RFID UHF rugged wide-range antenna, 30° aperture angle

Characteristics

- Different aperture angles for azimuth and elevation planes (30° / 70°)
- Rugged enclosure
- Compact design
- Wide read range
- Antenna gain: 11 dBic
- Suitable for industrial environment
- Optimised for portal applications
- High degree of protection IP65
- Suitable for outdoor applications
- N socket
- 865 – 870 MHz (EU) or 902 – 928 MHz (US)

Identification

Identification	Part number
Ha-VIS RF-ANT-WR80-30-EU	20 93 201 0203
Ha-VIS RF-ANT-WR80-30-US	20 93 201 0204

Accessories

Ha-VIS RF-MOUNT-ANT-B	20 93 102 0104
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Ha-VIS RFID UHF wide-range antenna

Characteristics

- Suitable for harsh environments
- Circular UHF antenna
- Wide range
- Designed for harsh industrial applications: RF-ANT-WR24-i
- Version for high-temperature applications in industry and rail: RF-ANT-WR24-t
- Stainless steel version for joist applications below railcars: RF-ANT-WR24-r
- Antenna gain: 8 dBic (WR24-r, WR24-t) or 9 dBic (WR24-i)

Identification

Identification	Part number
Ha-VIS RF-ANT-WR24-i, EU	20 93 201 0501
Ha-VIS RF-ANT-WR24-i, US	20 93 201 0504
Ha-VIS RF-ANT-WR24-r, EU	20 93 201 0502
Ha-VIS RF-ANT-WR24-r, US	20 93 201 0505
Ha-VIS RF-ANT-WR24-t, EU	20 93 201 0503
Ha-VIS RF-ANT-WR24-t, US	20 93 201 0506



Ha-VIS RFID UHF mid-range antenna

Characteristics

- Very compact design
- Average read range (0.2 m – 2 m)
- Suitable for industrial environments with near- and far-field applications
- 100° aperture angle
- Antenna gain: 2.5 dBic
- High degree of protection IP67
- Suitable for outdoor areas
- TNC socket
- 865 – 870 MHz (EU) or 902 – 928 MHz (US)



Identification	Part number
Ha-VIS RF-ANT-MR20-EU	20 93 201 0301
Ha-VIS RF-ANT-MR20-US	20 93 201 0302

Ha-VIS RFID UHF low-range antenna

Characteristics

- Minimal size
- Extremely high spatial selectivity
- Suitable for industrial environments
- Optimised for near-field applications (< 5 cm)
- High degree of protection IP67
- Suitable for outdoor areas
- TNC socket
- Can be used worldwide (860 – 930 MHz)



Identification	Part number
Ha-VIS RF-ANT-LR10	20 93 201 0303

Ha-VIS RFID UHF ultra low-range antenna

Characteristics

- Minimal size
- Extremely high spatial selectivity
- Suitable for industrial environments
- Optimised for muRata MAGICSTRAP®
- High degree of protection IP67
- TNC socket



Identification	Part number
Ha-VIS RF-ANT-μLR10-EU	20 93 201 0305
Ha-VIS RF-ANT-μLR10-US	20 93 201 0306

Ha-VIS RFID LOCFIELD®

Characteristics

- Create customised read zones
- Read ranges up to 2 m
- No reflection
- 865 – 870 MHz (EU) or 902 – 928 MHz (FCC)
- Additional antenna configurations available on request

Identification	Part number
0.3 m (active length), total length 0.6 m, diameter 3 mm, SMA (m), EU	20 93 610 1100 30
0.3 m (active length), total length 0.6 m, diameter 3 mm, SMA (m), FCC	20 93 610 1200 30
0.3 m (active length), total length 0.6 m, diameter 3 mm, RP-TNC (m), EU	20 93 620 1100 30
0.3 m (active length), total length 0.6 m, diameter 3 mm, RP-TNC (m), FCC	20 93 620 1200 30
0.3 m (active length), total length 0.6 m, diameter 3 mm, TNC female jack, EU	20 93 630 1100 30
0.3 m (active length), total length 0.6 m, diameter 3 mm, TNC female jack, FCC	20 93 630 1200 30
1 m (active length), total length 1.5 m, diameter 3 mm, SMA (m), FCC	20 93 610 1200 20
1 m (active length), total length 1.5 m, diameter 3 mm, SMA (m), EU	20 93 610 1100 20
1 m (active length), total length 1.5 m, diameter 3 mm, RP-TNC (m), FCC	20 93 620 1200 20
1 m (active length), total length 1.5 m, diameter 3 mm, RP-TNC (m), EU	20 93 620 1100 20
1 m (active length), total length 1.5 m, diameter 3 mm, TNC female jack, FCC	20 93 630 1200 20
1 m (active length), total length 1.5 m, diameter 3 mm, TNC female jack, EU	20 93 630 1100 20
2 m (active length), total length 2.5 m, diameter 3 mm, SMA (m), EU	20 93 610 1100 10
2 m (active length), total length 2.5 m, diameter 3 mm, SMA (m), FCC	20 93 610 1200 10
2 m (active length), total length 2.5 m, diameter 3 mm, RP-TNC (m), EU	20 93 620 1100 10
2 m (active length), total length 2.5 m, diameter 3 mm, RP-TNC (m), FCC	20 93 620 1200 10
2 m (active length), total length 2.5 m, diameter 3 mm, TNC female jack, EU	20 93 630 1100 10
2 m (active length), total length 2.5 m, diameter 3 mm, TNC female jack, FCC	20 93 630 1200 10



Identification	Part number
2 m (active length), total length 3 m, low loss coax, diameter 5 mm, SMA (m), EU	20 93 610 2100 10
2 m (active length), total length 3 m, low loss coax, diameter 5 mm, SMA (m), FCC	20 93 610 2200 10
2 m (active length), total length 3 m, diameter 5 mm, RP-TNC (m), EU	20 93 620 2100 10
2 m (active length), total length 3 m, diameter 5 mm, TNC female jack, FCC	20 93 620 2200 10
2 m (active length), total length 3 m, diameter 5 mm, TNC female jack, EU	20 93 630 2100 10
2 m (active length), total length 3 m, diameter 5 mm, RP-TNC (m), FCC	20 93 630 2200 10

Accessories

Coax extension cables	
Extension cable, SMA male – SMA female, 1 m	20 93 204 0112
Extension cable, SMA male – SMA female, 3 m	20 93 204 0113
Extension cable, SMA male – SMA female, 5 m	20 93 204 0114
TNC adapter TNC reverse-male – SMA female	20 93 204 0302
Adapter SMA female – N female	20 93 204 0303

Ha-VIS RFID standard antenna cable

Characteristics

- 3 m standard cable
- SMA-TNC
- Attenuation: 68 dB/100 m (@800 MHz)

Identification

Ha-VIS Coax SMA-TNC, RG58, 3 m

Part number

20 93 204 0101



Ha-VIS RFID low-loss antenna cable

Characteristics

- 3 m and 10 m low-loss cable
- Attenuation: 26.5 dB / 100 m (@800 MHz)
- Outer diameter: 5.4 mm

Identification

Ha-VIS Coax SMA-TNC, LL 240 flex, 3 m

Ha-VIS Coax SMA-TNC, LL 240 flex, 10 m

Ha-VIS Coax SMA-N, LL 240 flex, 3 m

Ha-VIS Coax SMA-N, LL 240 flex, 10 m

Ha-VIS Coax TNC/TNC-RP, H155 PVC, 3 m

Ha-VIS Coax TNC/TNC-RP, H155 PVC, 10 m

Ha-VIS Coax N/TNC-RP, H155 PVC, 3 m

Ha-VIS Coax N/TNC-RP, H155 PVC, 10 m

Part number

20 93 204 0102

20 93 204 0103

20 93 204 0104

20 93 204 0105

20 93 204 0121

20 93 204 0122

20 93 204 0131

20 93 204 0132



Ha-VIS RFID heavy-duty low-loss antenna cable

Characteristics

- 3 m and 10 m low-loss cable
- Suitable for harsh environments
- Attenuation: 22 dB / 100 m (@800 MHz)
- Outer diameter: 10.3 mm
- TNC-N

Identification

Ha-VIS Coax TNC-N, RG 213, 3 m

Ha-VIS Coax TNC-N, RG 213, 10 m

Accessories

Adapter TNC-SMA

Part number

20 93 204 0106

20 93 204 0107

20 93 204 0301



Additional lengths and connector variants available on request

Ha-VIS RFID railway antenna cable

Characteristics

- For the harsh railway environment
- Complies with railway standards: DIN 5510-2, EN 45545-2, NF F 16-101
- Attenuation: 26 dB / 100 (at 1 GHz)
- Rigid inner conductor

Identification

Identification	Part number
Ha-VIS Coax SMA/TNC, SPU240FR, LSFH, 10 m	20 93 204 0123
Ha-VIS Coax SMA/TNC, SPU240FR, LSFH, 4.5 m	20 93 204 0139
Ha-VIS Coax SMA/TNC, SPU240FR, LSFH, 2 m	20 93 204 0138
Ha-VIS Coax TNC/TNC-R, SPU240FR, LSFH, EN 45545-2, 10 m	20 93 204 0133



Ha-VIS RFID heavy-duty low-loss antenna cable ECOFLEX 10

Characteristics

- 25 m and 35 m low-loss cable
- Suitable for harsh environments
- Attenuation: 12.5 dB/100 m (@800 MHz)
- Outer diameter: 10.2 mm

Identification

Identification	Part number
Ha-VIS Coax SMA-N, ECOFLEX, 25 m	20 93 204 0108
Ha-VIS Coax SMA-TNC, ECOFLEX, 25 m	20 93 204 0110
Ha-VIS Coax SMA-TNC, ECOFLEX, 35 m	20 93 204 0111



Additional lengths and connector variants available on request

Ha-VIS RFID VT series (HT)

Characteristics

- Functions on metal
- Robust, chemical-resistant enclosure
- EPC Class 1 Gen 2 compatible
- Protection class IP69K
- Expanded memory
- Versatile mounting options
- Version available for medical applications
- Customised solutions for mounting plates possible

Identification	Part number
Ha-VIS RFID VT 89 S (HT) - 512 Bit - global, 10 pieces	20 92 641 0201
Ha-VIS RFID VT 89 S (HT) - 512 Bit - global, 50 pieces	20 92 641 0202
Ha-VIS RFID VT 86 S (HT) - 512 Bit - EU, 10 pieces	20 92 611 0201
Ha-VIS RFID VT 86 S (HT) - 512 Bit - EU, 50 pieces	20 92 611 0202
Ha-VIS RFID VT 92 S (HT) - 512 Bit - US/Asia, 10 pcs.	20 92 621 0201
Ha-VIS RFID VT 92 S (HT) - 512 Bit - US/Asia, 50 pcs.	20 92 621 0202
Ha-VIS RFID VT 89 L (HT) - 3.3 kBit - global, 10 pieces	20 92 642 0201
Ha-VIS RFID VT 89 L (HT) - 3.3 kBit - global, 50 pieces	20 92 642 0202
Ha-VIS RFID VT 86 L (HT) - 3.3 kBit - EU, 10 pieces	20 92 612 0201
Ha-VIS RFID VT 86 L (HT) - 3.3 kBit - EU, 50 pieces	20 92 612 0202
Ha-VIS RFID VT 92 L (HT) - 3.3 kBit - US/Asia, 10 pcs.	20 92 622 0201
Ha-VIS RFID VT 92 L (HT) - 3.3 kBit - US/Asia, 50 pcs.	20 92 622 0202
Ha-VIS RFID VT - medical version	On request
Ha-VIS RFID VT set - customised mounting holder according to customer request	On request



Ha-VIS RFID FT series (NT)

Characteristics

- High quality RFID label
- Scratch- and smudge-resistant surface
- Washable, resistant to chemicals
- Variants with extremely high protection
- Variants for lower protection requirements
- Versatile printing options (custom logo, barcode, QR code, etc.)
- Versatile mounting on different surfaces
- Mounting with adhesive pad
- Variants for metallic or non-metallic surfaces
- Can be used worldwide
- EPC Class 1 Gen 2 compatible

Identification	Part number
Ha-VIS RFID FT 89 (NT), 500 pieces	20 92 641 0703
Ha-VIS RFID FT 89 on small (NT), 500 pieces	20 92 641 0803
Ha-VIS RFID FT 89 light (NT), 500 pieces	20 92 641 0713
Ha-VIS RFID FT 89 paper (NT), 500 pieces	20 92 641 0723
Label with customised printing (for orders over 10000 pieces)	On request



Ha-VIS RFID Control ETB series

Characteristics

- Intelligent RFID transponder: for operating with sensors and actuators, also in passive mode
- Can be used for monitoring the (switch-state) conditions on rotating objects
- UHF RFID transponder with sensor functionality
- Monitoring function, e.g. for monitoring the status of a switch
- Requires no maintenance in passive mode, since no battery replacement is necessary
- Connection of sensors / actuators using a cable of up to 8 metre length
- EPC Class 1 Gen 2 compatible
- Functional read range (in passive mode) of up to 3 m
- Robust chemical-resistant enclosure – optimised for industrial use

Identification

Identification	Part number
Ha-VIS RFID Control ETB 86v1 - EU Version, 1 piece	20 92 614 7055
Ha-VIS RFID Control ETB 92v1 - US Version, 1 piece	20 92 624 7055
Ha-VIS RFID Control ETB 86v2 - EU Version, 1 piece	20 92 615 7055
Ha-VIS RFID Control ETB 92v2 - EU Version, 1 piece	20 92 625 7055
Ha-VIS RFID Control ETB 86v1 Plus - Eu Version, 1 piece	20 92 614 7555
Ha-VIS RFID Control ETB with sensors / actuators – customised solution	On request



Ha-VIS RFID LT 2.0 series (MT)

Characteristics

- Different variants for EU and US/Asia frequencies
- Large user memory: 3.3 kBit
- EPC Class 1 Gen 2 compatible
- Optimised for metallic surfaces
- Robust chemical-resistant enclosure – optimised for industrial use

Identification

Identification	Part number
Ha-VIS RFID LT 2.0 86 L - EU Version, 1 piece	20 92 612 7155
Ha-VIS RFID LT 2.0 92 L - US/Asia Version, 1 piece	20 92 622 7155



Ha-VIS RFID ETBv1 Protection Box

Characteristics

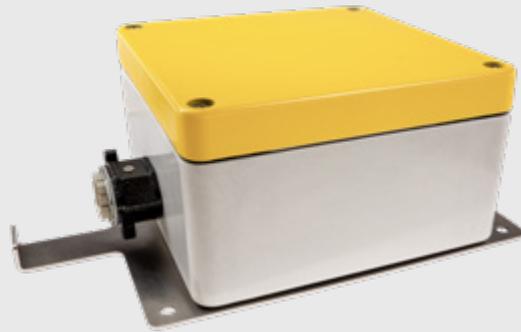
- Very safe enclosure for ETB transponders
- For transmitting signal states into the vehicle
- Suitable for mounting in the track bed
- Protection class IP65
- Maintenance-free, since no additional battery is required

Identification

Identification	Part number
Ha-VIS RFID ETB 86v1 Rail Protection Box	20 92 614 8055
Ha-VIS RFID ETB 92v1 Rail Protection Box	20 92 624 7855

Accessories

Cable for Ha-VIS RFID ETBv1 Rail Protection Box, 5.5 m	61 04 201 2216 00
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Ha-VIS RFID Solution Packages

Ha-VIS RFID4Logistics - Gate2Go

Characteristics

- RFID gate application that can be set up quickly and easily
- Fully equipped for immediate commissioning
- Suitable for proof-of-concepts or temporary use
- Adjustable for gates up to 3x3 meters

Identification

Identification	Part number
Ha-VIS RFID4Logistics - Gate2Go, EU	20 91 000 0029
Ha-VIS RFID4Logistics - Gate2Go, FCC	20 91 000 0030



Ha-VIS RFID4Mold Tracking

Characteristics

- Automated tracking of tools
- Can be integrated in plastics injection-moulding machines
- Robust and heat resistant
- Configured with Ha-VIS ALE middleware

Identification

Identification	Part number
Ha-VIS RFID4MoldTracking Master, EU	20 91 000 0025
Ha-VIS RFID4MoldTracking Master, FCC	20 91 000 0026
Ha-VIS RFID4MoldTracking, EU	20 91 000 0027
Ha-VIS RFID4MoldTracking, FCC	20 91 000 0028



Ha-VIS RFID4Rail - SLP

Characteristics

- Reliable detection of the railway platform
- Transmits signal states into the vehicle
- Robust enough for mounting in the track bed
- Suitable for speeds of more than 250 km/h

Identification	Part number
Ha-VIS RFID4Rail - SLP-500, EU	20 91 104 9000
Ha-VIS RFID4Rail - SLP-500, FCC	20 91 104 9001
Ha-VIS RFID4Rail - SLP-400, EU	20 91 107 9000
Ha-VIS RFID4Rail - SLP-500, FCC	20 91 107 9001
Ha-VIS RFID4Rail - SLP-300	20 91 105 9000



Ha-VIS RFID4SMT

Characteristics

- Enables precise tracking of components and products using UHF RFID
- Easily integrates into production
- Package contains all the required UHF RFID components
- Optimised for printed circuit board production
- Includes ALE 1.1 middleware (Master version only)

Identification	Part number
Ha-VIS RFID4SMT Master, EU	20 91 000 0021
Ha-VIS RFID4SMT Master, FCC	20 91 000 0022
Ha-VIS RFID4SMT, EU	20 91 000 0023
Ha-VIS RFID4SMT, FCC	20 91 000 0024



Ha-VIS middleware, certified software

Characteristics

- Easy integration of UHF RFID for every project
- No programming effort required
- Reliable standardised solution
- Reading and writing of tag information
- Easy installation because it is delivered as a virtual appliance
- Various filter and aggregation options
- Possible to configure customised solutions
- Supports digital IO port cycle
- Reader monitoring
- Fast data processing
- Modular and scalable

Identification

Ha-VIS middleware app appliance

Part number

26 99 210 1110 10



Service

- RFID proof-of-concept at customer's site or in the RFID laboratory
- Configuration service for the Ha-VIS RFID reader and middleware
- Consulting for RFID systems
- Training
- Telephone and e-mail support
- Auto-ID@HARTING.com



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