HANDHELD READER
125 kHz Contactless Reader/Writer

This handheld reader is designed for 125-kHz transponders. Depending on the interface option it can be connected to a host computer via RS232 or USB.

Typical applications:
- Tool ID
- Data acquisition

Features:
- Compact housing, easy to connect
- Low power consumption
- RS232 and USB versions available
- Classified as IP41 or IP65
- Easy-to-implement protocol, which is independent of the interface option
- DLL available, which encapsulates the communication protocol
- Multi transponder capability
**Technical Data**

**Housing**  
Polystyrol (UL 94 HB)

**Frequency**  
125kHz +/-0.5%

**Dimensions (L x W x H)**  
IP41: 96mm x 47mm x 24mm without cable; USB: 2.0m cable; RS232: 2.0m coiled cable  
IP65: 140mm x 62.7mm x 30.5mm without cable; USB: 2.0m cable; RS232: 2.0m coiled cable

**Interface**  
USB or RS232

**Power Supply**  
RS232: 5V from USB port via Y-cable  
USB: USB Powered

**Current Consumption**  
RF field off: 15mA  
RF field on: typically 60mA

**Temperature Range**  
Operating: -25°C to +80°C (-13°F to 176°F)  
Storage: -45°C up to +85°C (-49°F up to +185°F)

**Relative Humidity**  
5% to 95% non-condensing

**Antenna**  
Integrated ferrite coil

**Read-/ Write Distance**  
Proximity, depending on tag

**Transponders Supported**  
- EM4100, EM4102, EM4105, EM4200
- EM4050, EM4150, EM4350, EM4450
- FDX-B
- HITAG 1, HITAG 2, HITAG S (without crypto mode)
- Miro
- Q5
- T5557, T5567, T5577
- TITAN (4050), UNIQUE, ZOODIAC

**Certification**  
RoHS-II compliant

**Weight**  
IP41: RS232: Approx. 424g – USB: Approx. 101g  
IP65: RS232: Approx. 524g – USB: Approx. 201g

**Order Code**  
IP41: RS232: HHRM-NF2B00 – USB: HHRM-NB2B00  
IP65: RS232: HHRL-NF2B00 – USB: HHRL-NB2B00

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1) Only Manchester 164, sequence terminator off  
2) Only emulation of 4100, 4102 and 4105

**Accessories**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>ART15403</td>
<td>Wall holder, ABS (UL94 HB), for IP65 model</td>
</tr>
<tr>
<td>ART10499</td>
<td>Wall holder, ABS (UL94 HB), for IP41 model</td>
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Max. screwhead diameter up to Ø6.00,  
Suitable screws are acc. to DIN 7081 (e. g. PH1-screws ¥4.2)