Advanced reader technologies

i-scan® UHF

Compact RFID UHF Mid Range Reader with integrated antennas

ID ISC.MRU200i-USB USB Variant

ID ISC.MRU200i-E LAN Variant

RFID Multi Protocol Mid Range Reader for identification of UHF transponders (865-928 MHz) especially in process control and automation

Features:

- 2 integrated antennas (Near Field and Far Field); Parallel use is possible by multiplexer on board
- Low Power Mode for limitation of reading range
- Multi-tag Reader (EPC Gen2, optional ISO18000-B/-C) with several interface options
- High speed anti-collision function identifies large quantity of tags. Buffered Read Mode and notification channel function provides data filtering and buffering
- Available as ETSI- or FCC variants
- Host protocol compatible with OBID i-scan® HF reader family
With two integrated antennas (Near Field and Far Field), the new Compact UHF Mid Range Reader ID ISC.MRU200i can be used for automation and at workstations, where single tagged products were identified. So the reader is suitable to be operated for example in the textile industry or pharmaceutical industry.

Specific feature of the ID ISC.MRU200i is the combination of two different functional principles, inductive coupling and backscatter coupling in one device. The Near Field Antenna is necessary to identify midget UHF transponders, reducing negative influences of liquids by using backscatter coupling.

While the Near Field Antenna is suitable for identification of small objects, the Far Field Antenna will be used for process control within automation, especially. The very directional electromagnetic field allows a very precise identification of objects. Due to the so-called "Low Power Mode", the reading range can be limited, additionally. So, only these objects will be identified which has to be identified at each reading point. Unrequested identification of tags, for example at the neighboring conveyor belt will be avoided in that way.

Due to the integrated multiplexer, parallel operation of both antennas is possible.

The reader is offered in an elegant plastic housing as USB- and Ethernet variant and is available as ETSI- or FCC reader. Both variants have a RS232 interface. The USB variant a RS485/RS422 interface, additionally.

The reader operates with EPC class 1 Gen 2 transponders ex stock; firmware versions for ISO 18000-6-B transponders and further types are available.

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**Standard conformity**

<table>
<thead>
<tr>
<th>Radio authorization</th>
<th>EMC</th>
<th>Safety - Low voltage</th>
<th>Safety - Human Exposure</th>
<th>Vibration</th>
<th>Shock Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Europe</td>
<td>EN 302 208</td>
<td>EN 60950</td>
<td>EN 50364</td>
<td>EN 60068-2-6</td>
<td>EN 60068-2-27; acceleration: 30g</td>
</tr>
<tr>
<td>- USA</td>
<td>FCC 47 CFR Part 15</td>
<td></td>
<td></td>
<td>10...150 Hz : 0.075 mm / 1g</td>
<td></td>
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</tbody>
</table>

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<table>
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<tr>
<th><strong>Technical Data</strong></th>
<th><strong>Compact UHF Mid Range Reader with integrated antennas ID ISC.MRU200i-USB /-E</strong></th>
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<tr>
<td><strong>Housing</strong></td>
<td>ABS plastic housing with lockable hinged cover</td>
</tr>
</tbody>
</table>
| **Dimensions (WxHxD)** | 200 mm x 110 mm x 60 mm  
(7.87 inch x 4.33 inch x 2.36 inch) |
| **Weight**       | 650 g                                                                         |
| **Protective system**   | IP54                                                                          |
| **Colour**       | RAL 7035 (similar light grey)                                                 |
| **Power supply** | 12 - 24 V DC +/- 5%; Noise Ripple: max. 150 mV                                 |
| **Power consumption** | max. 15 VA                                                                     |
| **Operating frequency** | 865.6 - 867.6 MHz (EN 302 208)  
902 - 928 MHz (FCC CFR 47 Part 15.247) |
| **Transmitting power** | 50...300 mW (adjustable via software)  
Low Power Mode |
| **Antennas**     | integrated Near Field Antenna  
integrated Far Field Antenna                                                  |
| **Outputs:**     | - 2 Optocoupler  
- 1 Relay (1x NO/NC)                                                                 |
|                  | 24 V DC / 30mA  
24 V DC / 2 A                                                                     |
| **Inputs:**      | max. 24 V DC / 20mA                                                         |
| **Interfaces**  | RS232 and RS485  
USB                                                            |
| **Protocol-Modes** | FEIG ISO HOST  
Buffered Read Mode  
Scan Mode                                                  |
| **Supported Transponders** | EPC class 1 Gen2:  
ISO18000-6-C (Upgrade Code mandatory)*                                      |
| **Indicators**  | 4 LED (for diagnosis of the operation status)                                 |
| **Temperature range** | -25°C up to +45°C  
-25°C up to +85°C                                                              |
| **Relative humidity** | 5-80% (non condensing)                                                       |

* ISO 18000-6-B only on request  
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