

## HF | NFC RFID READER

# CYLINDRICAL READER BLUEBOX



### PRODUCT DESCRIPTION

The HF | NFC Cylindrical Reader BLUEBOX is a fixed and compact all-in-one UHF RFID reader for industrial automation processes.

It has a power output of up to +24 dBm / 250 mW. The power setting can be set in 1 dBm steps starting from 0 to 24 dBm. In combination with the integrated circular antenna and a gain of -8 dBi, HF | NFC Cylindrical Reader BLUEBOX can achieve reading distances of up to 8 centimeters within industrial environments.

Typically this device will be used within the industrial automation at production lines and conveyor belt systems. Another wide spread application is the identification of tool attachment at construction, municipal and farming vehicles.

The HF | NFC Cylindrical Reader BLUEBOX comes with a RS232 or RS485 interface and a power supply of 10 to 36 V. This RFID device allows a flexible and fast integration into many existing applications with its easy to install cylindrical housing and standardized M12 connectors.

iDTRONIC's HF | NFC Cylindrical Reader BLUEBOX supports the well known BLUEBOX SDK with demo and setup tools. The Windows based tools support all operating systems starting from XP up to Windows 10. Combined with C++, C# and a ASCII command protocol the software development kit offers an easy option to integrate this UHF reader into any environment.

Further customization of firmware and hardware is possible on request and on a project basis.

#### ► APPLICATIONS

- Industrial Automation
- Material Handling
- Tracking & Tracing
- Attachment Identification
- Production Control

#### ► FEATURES

- Integrated Antenna
- RS232 or RS485 interface
- 10 to 36 V Power Supply
- Up to 40 cm Reading Distance
- Compact Cylindrical Housing
- 1 Bicolor LED for Status Information
- IP67 rated

#### ► RFID OPTIONS

##### HF | NFC

- ISO 14443A/B
- ISO 15693
- NXP MIFARE

## TECHNICAL DATA

ELECTRICAL SPECIFICATIONS	
Power Supply	10...36 Vdc
Power Consumption	4 W
Operating Frequencies	13.56 MHz
RF Output Power	+24 dBm / 250 mW, software configurable in 1 dB steps
Antenna	Integrated
Operating Distance	up to 8 cm*
Communication Interfaces	RS232 RS485
Status Display	1 bicolor LED
Connector	5 pin M12 A-coded male connector
ANTENNA SPECIFICATIONS	
Antenna Gain	-8 dBic
Beam Width	100° / 170°
Axial Ratio	< 1.5 dB
Polarization	circular
MECHANICAL SPECIFICATIONS	
Housing Material	Nickelled brass + PC
Overall Dimensions	M30 × 1.5 × 78 mm
Weight	220 g
Protection Class	IP67

\*Reading distance depends on tag, antenna and environmental conditions.

ENVIRONMENTAL CONDITIONS	
Operating Temperature	-20 to +65 °C
Storage Temperature	-40 to +65 °C
Humidity	up to 95 %, non-condensing
SUPPORTED STANDARDS   TAGS	
Standard ISO 14443A/B, ISO 15693, NXP MIFARE Family	
APPLICABLE STANDARDS	
EMC	EN 301489-1:2012-04 (v1.9.21) EN 301489-3:2013-12 (V1.6.1)
Radio Regulation	EN 300330-1:2015-08 (V1.8.1) EN 300330-2:2015-08 (V1.6.1)
Safety	EN 60950-1:2014-08 EN 62369-1:2010-03 EN 50364:2010-11
RoHS 2	EC Guideline 2011/65/EU and amendment 2015/863/EU, updated by 2017/2102/EU EN 50581:2012 (valid till 2024-07-07) EN 63000:2018
REACH	EU Guideline 1907/2006, updated by 2020/171/EU
Certificate	CE
SDK INFORMATION	
Supported OS	Windows 7, 8
Supported Languages	C#, C++, serial command protocol
Demo Software	Windows

## ORDER CODES

VERSIONS	ORDER CODES
HF   NFC Cylindrical Reader BLUEBOX - M12 without cable - RS232	R-IN-HF-5224H
HF   NFC Cylindrical Reader BLUEBOX - M12 without cable - RS485	R-IN-HF-5225H
HF   NFC Cylindrical Reader BLUEBOX - Cable 1.5 m with open ends - RS232	R-IN-HF-5227H
HF   NFC Cylindrical Reader BLUEBOX - Cable 1.5 m with open ends - RS485	R-IN-HF-5228H