



WATERPROOF RFID READER

RFID Reader HF IP67

APPLICATIONS

- Automation
- Industry 4.0
- Supply Chain

FEATURES

- RFID Device in industrial housing
- IP67 Protection Class
- Power Supply via PoE
- Trigger Input
(protected by opto-coupler)
- Signal Output (High-Side
Switch suitable for 24 Vdc)

RFID OPTIONS

- HF | NFC (ISO 14443A/B, ISO 15693)
- ISO 18000-3M3/EPC HF Gen2
- HID iClass

PRODUCT DESCRIPTION

The RFID Reader HF IP67 is with its housing an industrial standard RFID Reader. It is ideally suited for quality controls within automation processes, Industry 4.0 applications or supply chain.

It is available with an integrated antenna or SMA connector for external antenna. It can achieve reading distances of up to 5 centimeters within industrial environments.

The device comes with an Ethernet RJ45 interface and an power supply of +24 Vdc with M12 connector. Thanks to its IP67 Protection Class it is suitable for demanding industrial processes.

4 Operation Modes are available:

- Manual control with DESFire command protocol
- Triggered by an Input
- Auto-detect with output signalling "OK, read success"
- Auto-detect with output signalling "OK, read success" + send telegram

iDTRONIC's hardware comes with a useful SDK for the development of controller, Linux or Windows based applications. Beside the documentation, command protocols, the SDK includes a Windows based demo application with full functionality over all supported HF RFID standards.

TECHNICAL DATA

ELECTRICAL SPECIFICATIONS

Power Supply	+24 Vdc or PoE
Power Consumption	< 80 mA operating, < 200 mA during power-up cycle
Operating Frequency	HF NFC: 13.56 MHz
Reading Distance	up to 5 cm*
Reader IC	CL 663
RF TX Speed	up to 848 kBd
Antenna	Internal, or external via SMA connector*
Antenna Baudrate	9600...115200 bit/s, 115.200 bits/s default
Interface	Ethernet
Protection Class	IP67
Trigger Input	Opto-coupler, 10 mA, internal series resistor, apply +24 Vdc to trigger
Connectors	M12 socket, 5 pin, A-coded RJ45 Socket (Ethernet)
Signal Output	High-Side switch, 25 V max, 20 mA

PHYSICAL SPECIFICATIONS

Dimensions	Housing: 80 × 82 × 55 mm
Weight	230 g
Material	ABS

USER ENVIRONMENT

Operating Temperature	CR- (Chloropren) seal: -40 °C to +60 °C
Surface Resistance	4x10 ¹⁴ Ohm, IEC 60093
Humidity	5 % - 95 % RH (Non-condensing)
MTBF	200'000 h

SUPPORTED STANDARDS | TAGS

ISO 14443 A and compatible	Read/Write: MIFARE® Classic Mini / 1K /4K, MIFARE Ultralight®, MIFARE Ultralight® C, MIFARE® DESFire® EV1, MIFARE® Smart MX, MIFARE® Plus S / X, MIFARE® Pro X, NTAG 21x
ISO 14443 B and compatible	Read UID only: Read UID only of all other ISO14443A RFID tags
ISO 15693 and compatible	SRI4K, SRIX4K, AT88RF020, 66CL160S, SR176
ISO 18000-3M3/ EPC HF Gen2	EM4135, EM4043, EM4x33, EM4x35, I-Code SLI / SLIX, M24LR16/64, TI Tag-it HF-I, SRF55Vxx (my-d vicinity)
HID iClass	I-Code ILT-M
	Read UID

APPLICABLE STANDARDS

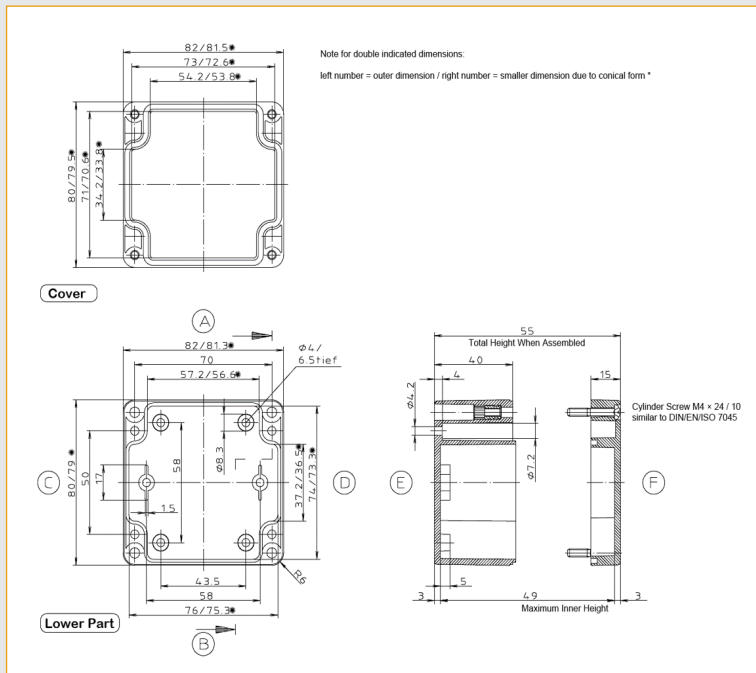
EMC	EN 301489-1:2012-04 (v1.9.21) EN 301489-3:2013-12 (V1.6.1)
Radio Regulation	EN 300330-1:2015-08 (V1.8.1) EN 300330-2:2015-08 (V1.6.1)
Safety	EN 60950-1:2014-08 EN 62369-1:2010-03 EN 50364:2010-11
RoHS	EC Guideline 2011/65/EU and amendment 2015/863 EN 50581:2012 (valid till 2024-07-07) EN 63000:2018
REACH	EU Guideline 1907/2006, updated by 2018/2005/EU

SDK INFORMATION

Supported OS	Windows XP, Vista, 7, 8, 8.1, 10
Supported Languages	Binary command protocol, VS2005 C++ Library
Demo Software	Windows

*Reading distance depends on tag, antenna and environmental conditions

MECHANICAL DRAWING



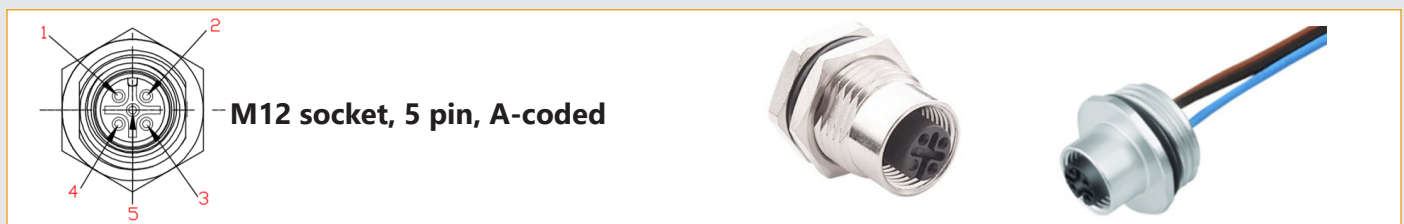
PRODUCT PICTURE



External SMA Antenna

PIN OUTS

POWER SUPPLY + IO



PIN	SIGNAL	IO TYPE	DESCRIPTION	WIRE COLOR
1	+24 Vdc	PWR	Alternative supply to PoE	Brown
2	Trigger	Input	+24 Vdc, app. 10 mA, internal series resistor	White
3	GND	PWR	–	Blue
4	Signal	Output	PNP Output, Switches Vref	Black
5	Vref	Input	PNP Input	Grey

The output on pin 4 switches the Vref from pin 5. Vref is supplied by the customer.

ORDER CODES

VERSIONS	ORDER CODES
RFID QM Reader (Integrated Antenna)	R-IN-DES-ET-IA
RFID QM Reader (External SMA Antenna)	R-IN-DES-ET-1CH

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