

# RFID read/write device IUT-F190-R4-V1-FR2-02

- Flexible UHF read/write device with medium detection range
- Compact and robust housing for harsh industrial environments
- Switchable antenna polarization guarantees reliable tag detection and enhances process flow
- Connection via integrated RS-485 interface
- Multi-tag reading increases productivity

UHF RFID read/write device, USA and Canada





#### **Function**

The compact IUT-F190-R4-V1-FR2-02 read/write station operates in the UHF frequency range and is optimized for industrial use at medium distances. The device writes and reads passive transponders according to EPC Gen2 (ISO/IEC 18000-63). The read/write station can be used in the USA and Canada. The read/write station is compliant with the relevant radio regulations.

Wide range of options supported for filtering data. The read/write station has an RS-485 interface and is connected via an M12 connector. The

user can monitor the status of the read/write station using the integrated LEDs.

The read/write station has a typical detection range of approximately 2 m, which is determined by the transponder used and can be adjusted by the setting of the transmission power. Other influencing factors include the setup and installation of the specific application and the surrounding materials, in particular metal. The separately specified read and write distances for the respective transponders have been determined in a test laboratory under ideal conditions. For the actual read and write distances under real conditions, the combination of read/write station and transponder must be tested in the desired application.

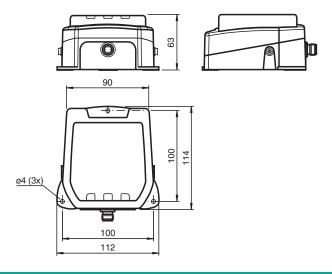
#### **Application**

This product is a wireless device and may be operated only in the country for which a transmission license exists. Information regarding transmission licenses can be found on the datasheet for the product. If a product is released to a customer in a country for which there is no transmission license, the product may be operated only in the country for which a transmission license exists.

If a product does not correspond to the legal requirements in force in the EU but is released to a purchaser within the EU, the product is intended for use solely in the destination country of the end customer outside of the EU for which a transmission license exists. The product may therefore under no circumstances be used directly by the purchaser or released to third parties for the purpose of distribution, application or use on the market within the EU as part of a commercial activity

In the event of an infringement, the purchaser is obliged to indemnify the supplier against any resulting damages, costs, penalty payments and other expenses.

# **Dimensions**



## **Technical Data**

#### **General specifications**

Sperating frequency	Technical Data		
Operating distance UL File Number E46821  MTBF 105 a (Operation at +40 °C) Indicators/operating means  LED yellow Power on Read/write operation successful Transmission mode  Eetertical specifications  Rated operating voltage U <sub>2</sub> 2030 V DC , ripple 10 %sex  Current consumption   ≤ 450 mA   Power consumption   P <sub>0</sub> ≤ 9 W   Surge protection   P <sub>0</sub> ≤ 9 W   Surge protection   P <sub>0</sub> ≤ 9 W   Protocol ASCII   1200, 2400, 4800, 9600, 19200, 38400 (default) Bit/s  Standard conformity   P <sub>0</sub> ≤ 9 W   Power consumption   EN 6529   Protocol ASCII   1200, 2400, 4800, 9600, 19200, 38400 (default) Bit/s  Standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   Power on the standard conformity   P <sub>0</sub> ≤ 9 W   P <sub>0</sub> ≤ 9	Operating frequency		
U.E. File Number  MTSF  105 a (Operation at +40 °C)  Indicators/operating means  LED green  Power on  LED green  Power on  Read/write operation successful  Transmission mode  Electrical specifications  Rated operating voitage  Current consumption  \$450 mA  Power consumption  \$645 mA  Power consumption  Power consumption  Power consumption  Power consumption  Power consumption  Read specifications  Read operating voitage  Current consumption  Power consumption  Power consumption  Power consumption  Power consumption  Read operating voitage  Read power consumption  Power consumption  Read power consumption  Read power consumption  Read power consumption  Power consumption  Read power consumptions  Read power consumption  Read power consumptio	Emitted power		3 1250 mW EIRP adjustable
MTBF         105 a (Operation at +40 °C)           Indicators/operating means         LED glow         Power on           LED yellow         Read/write operation successful           LED bile         Transmission mode           Electrical specifications         Electrical specifications           Rated operating voltage         U₂         2030 V DC , ripple 10 %ess           Current consumption         P₂         ≤ 9 W           Surge protection         P₂         ≤ 9 W           Surge protection         ASCII           Interface         Protocol         ASCII           Protocol         ASCII           Transfer rate         1 200, 2400, 4800, 9600, 19200, 38400 (default) Bit/s           Standard conformity         Degree of protection         EN 60529           RFID         ISO/IEC 1800-63           Approval         This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:           FCC approval         This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:           IC approval         This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:           IC approval         This device complies with industry Canada licence-exempt RSS standard(s) and with part 15 of the FCC Rules. Operation is sub	Operating distance		typ. 2 m
Indicators/operating means   Power on   Power on   Read/write operation successful   Transmission mode   Read/write operation successful   Read/write operation	UL File Number		E468231
Indicators/operating means   Power on   Power on   Read/write operation successful   Transmission mode   Read/write operation successful   Read/write operation	MTBF		105 a (Operation at +40 °C)
LED blue Transmission mode  Electrical specifications  Rated operating voltage U₂ 20 30 V DC , ripple 10 %ss  Surge protection category 2  Interface  Physical R5485 point-to-point connection  Protocol A5CII  Transfer rate 1200, 2400, 4800, 9600, 19200, 38400 (default) Bit/s  Standard conformity  Degree of protection EN 60529  RFID Schader Complies with part 15 of the FCC rules. Operation is subject to the following two conditions:  (1) This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:  (1) This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:  (1) This device must accept any interference received, including interference that may continue the following two conditions:  (1) This device must accept any interference received, including interference that may continue the following two conditions:  (1) This device must accept any interference received, including interference that may continue the following two conditions:  (1) This device must accept any interference, and (2) this device must accept any interference, and (3) this device must accept any interference, and (3) this device must accept any interference, including interference that may continue to the following two conditions:  (1) This device complies with fundative Canada incone-exampt R58 standard(s) and with part 15 of the FCC Rules. Operation is subject to the following two conditions:  (1) this device must accept any interference, including interference that may cause the province of the following two conditions:  (1) this device may not cause interference, including interference that may cause the province may not cause interference, including interference that may cause the province of the province and the following two conditions:  (1) this device may not cause interference, including interference that may cause the province of	Indicators/operating means		,
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LED blue   Transmission mode	•		Read/write operation successful
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Rated operating voltage   U2   20 30 V DC, ripple 10 %gs   450 mA   70 Power consumption   2   450 mA   70 Power consumption   2   450 mA   70 Power consumption   2   450 mA   70 Power consumption   7	Electrical specifications		
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following two conditions:  (1) This device may not cause harmful interference, and (2) This device may not cause harmful interference received, including interference that may cause undesired operation.  Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.  This device complies with Industry Canada licence-exempt RSS standard(s) and with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.  Ambient conditions  Classification  Environmental condition A (controlled environment)  -20 70 °C (-4 158 °F) (Operation with nontransmission periods, adjustable) -20 60 °C (-4 140 °F) (Continuous transmission mode)  Storage temperature  -20 80 °C (-4 185 °F)  Pollution degree  Mechanical specifications  Housing length  114 mm  Housing width  112 mm  Housing height  Degree of protection  (2nnection  Connection  connector M12 x 1  Material  Housing  PA 6.6  Base  diecast aluminum			
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Storage temperature -20 60 °C (-4 140 °F) (Continuous transmission mode)  Storage temperature -40 85 °C (-40 185 °F)  Pollution degree 2  Mechanical specifications  Housing length 114 mm  Housing width 112 mm  Housing height 63 mm  Degree of protection IP67  Connection connector M12 x 1  Material  Housing Base diecast aluminum	Classification		Environmental condition A (controlled environment)
Pollution degree 2  Mechanical specifications  Housing length 114 mm  Housing width 112 mm  Housing height 63 mm  Degree of protection IP67  Connection connector M12 x 1  Material  Housing PA 6.6  Base diecast aluminum	Ambient temperature		-20 60 °C (-4 140 °F) (Continuous transmission mode)
Mechanical specifications  Housing length 114 mm  Housing width 112 mm  Housing height 63 mm  Degree of protection IP67  Connection connector M12 x 1  Material  Housing PA 6.6  Base diecast aluminum	Storage temperature		-40 85 °C (-40 185 °F)
Housing length 114 mm Housing width 112 mm Housing height 63 mm Degree of protection IP67 Connection connector M12 x 1  Material Housing PA 6.6 Base diecast aluminum	Pollution degree		2
Housing width 112 mm  Housing height 63 mm  Degree of protection IP67  Connection connector M12 x 1  Material  Housing PA 6.6  Base diecast aluminum	Mechanical specifications		
Housing height  Degree of protection  IP67  Connection  Connector M12 x 1  Material  Housing  PA 6.6  Base  diecast aluminum	Housing length		114 mm
Degree of protection IP67  Connection connector M12 x 1  Material  Housing PA 6.6 Base diecast aluminum	Housing width		112 mm
Connection connector M12 x 1  Material  Housing PA 6.6  Base diecast aluminum	Housing height		63 mm
Material Housing PA 6.6 Base diecast aluminum	Degree of protection		IP67
Housing PA 6.6 Base diecast aluminum	Connection		connector M12 x 1
Base diecast aluminum	Material		
Base diecast aluminum	Housing		PA 6.6
Mass 860 q	· ·		diecast aluminum
	Mass		860 g

# **Safety Information**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

# **Accessories**

	IUC76-F157-T19-M-FR2	Data carrier for autoclave applications
100円	IUC77-25L100-GBL 1000pcs	Data carrier
11111	IUC77-28L90-M-FR2 25pcs	Data carrier
	IUC77-34-M-FR2 10pcs	Data carrier
	IUC77-50-FR2 10pcs	Data carrier
	IUZ-MH13	Mounting bracket for wall mounting
	IUZ-MH15	Mounting aid for round steel ø 12 mm or sheet 1.5 mm 3 mm
66	V1-G-2M-PUR-ABG-V1-W	Cordset M12 socket straight to M12 plug angled A-coded, 4-pin, PUR cable grey, shielded
66	V1-G-5M-PUR-ABG-V1-W	Cordset M12 socket straight to M12 plug angled A-coded, 4-pin, PUR cable grey, shielded
66	V1-G-10M-PUR-ABG- V1-W	Cordset M12 socket straight to M12 plug angled A-coded, 4-pin, PUR cable grey, shielded