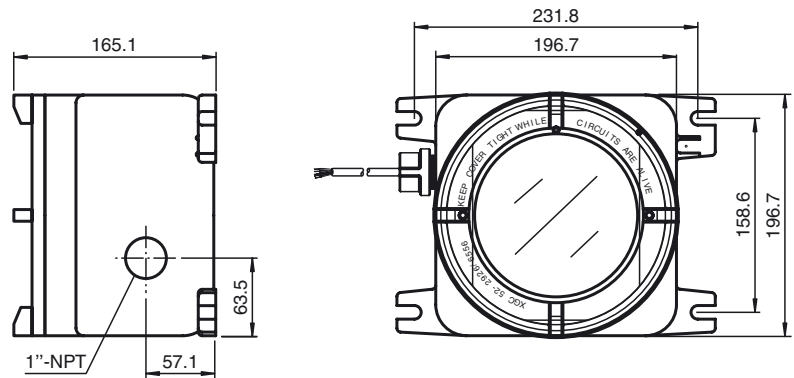## Model Number

IUH-F190-FR2-02-20M-C1D1

UHF read/write head for hazardous areas, for IDENT*Control*, Canada, USA, and Mexico
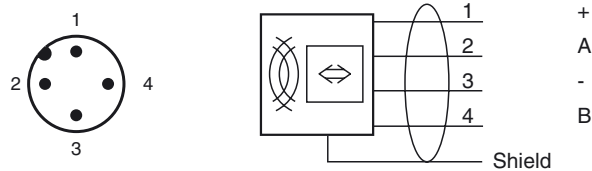
Features

- Explosion-proof housing
- Most flexible midrange UHF read/write head for worldwide use
- Ready-made PLC function blocks designed for quick and easy system integration
- Compact and robust housing for harsh industrial environments
- Switchable antenna polarization guarantees reliable tag detection and enhances process flow
- Multi-tag reading of up to 40 tags ensures increased productivity
- Approved for Class I, Groups B, C, D

Dimensions

Electrical connection

Pin	Signal
1	+
2	A
3	-
4	B
	Shield

Technical data

General specifications		
Operating frequency		902 MHz … 928 MHz: USA, Canada, Mexico, Colombia Transmission licenses for other countries on request
Emitted power		50 ... 500 mW EIRP adjustable
Operating distance		typ. 1 m
UL File Number		E305142
Indicators/operating means		
LED green		Power on
LED yellow		Read/write operation successful
LED blue		Transmission mode
Electrical specifications		
Power consumption	P_0	≤ 7 W
Supply		from the IDENTControl
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F) (Operation with nontransmission periods, adjustable) -25 ... 50 °C (-13 ... 122 °F) (Continuous transmission mode)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Degree of protection		NEMA Type 4, 7, 9
Connection		M12 x 1 connector
Material		
Housing		diecast aluminum
Base		diecast aluminum
Mass		approx. 7720 g
Cable length		20 m
Compliance with standards and directives		
Standard conformity		
Electromagnetic compatibility		EN 301489-1 V1.9.2:2011 EN 301489-3 V1.4.1:2003
Safety		EN 60950-1:2006/A1:2010
Degree of protection		EN 60529:2000
Approvals and certificates		
UL approval		Class I, Division 1, Group B, C, D

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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FCC approval	This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any 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.
IC approval	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.
Radio approval	USA: FCC IREIUH-F190-V1 Canada: IC 13-116260 Mexico: RCPPEIU 14-2030 Colombia: 201580046

Notes

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.

Function

The compact IUH-F190-FR2-02-20M-C1D1 read/write head operates in the UHF frequency range and is optimized for use in industrial applications involving ranges up to 1m. The device reads and writes passive tags according to EPC Generation 2 (ISO/IEC 18000-63). The read/write head can be operated in the USA, Canada, and Mexico. The read/write head complies with the respective radio regulations.

A wide range of options is supported for filtering data. The read/write head is connected to the IDENTControl interface using an M12 connector. The user can monitor the status of the read/write head using the integrated LEDs. The read/write head has a typical detection range of approx. 1 meter; this range is determined by the tag used and can be changed by adjusting the transmission power. Other influencing factors are the application-specific setup and surrounding materials, particularly metal. The read and write distances measured under ideal conditions can be found in a separate document. For the actual read and write distances under real conditions, the combination of read/write head and tag must be tested in the intended application.

This explosion-proof unit comes with a 20 m M12 straight pigtail pre-attached to the unit. The cable can be fed directly through a straight piece of conduit, or the M12 connector can be cut off and reconnected at the final destination after the cable has been fed through the conduit.

The conduit seal comes already poured so that no hazardous gasses can enter the enclosure by way of the conduit fitting. Removing the cover is not necessary but can be done if the read head IUH-F190-V1-FR2-02 needs to be replaced in the future.

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Accessories

IC-KP-B17-AIDA1
IDENTControl control interface
With Ethernet interface for TCP/IP,
PROFINET, EtherNet/IP, and MODBUS
TCP protocols

IC-KP2-1HB17-2V1D
IDENTControl Compact control interface
With Ethernet interface for TCP/IP,
PROFINET, EtherNet/IP, and MODBUS
TCP protocols

IC-KP2-2HB17-2V1D
IDENTControl Compact control interface
With Ethernet interface for TCP/IP,
PROFINET, EtherNet/IP, and MODBUS
TCP protocols

IC-KP2-1HB6-V15B
Control interface unit
IDENTControl Compact
with PROFIBUS DP interface

IC-KP2-2HB6-V15B
Control interface unit
IDENTControl Compact
with PROFIBUS DP interface

IC-KP2-1HB6-2V15B
Control interface unit
IDENTControl Compact
with PROFIBUS DP interface

IC-KP2-1HRX-2V1
Control interface unit
IDENTControl Compact
with serial interface RS-232 and RS-485

IC-KP2-2HRX-2V1
Control interface unit
IDENTControl Compact
with serial interface RS-232 and RS-485

IC-KP2-2HB21-2V1D
Control interface unit
IDENTControl Compact
with EtherCAT interface

IUC72-F152-M-FR2
Data carrier

IUC76-50-FR2
Data carrier

IUC76-F203-M-FR2 10pcs
Data carrier

IUC76-C8-T14-GBL
Data carrier

IUC77-F151-M-GBL
Data carrier

IUC77-25L100-GBL 1000pcs
Data carrier

IUC77-25L110-GBL 1000pcs
Data carrier

IUC78-17L73-GBL-Y270371 15Kpcs
Data carrier

IUC76-F157-M-FR2
Data carrier

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