

Operating instructions  
RFID antenna adapter

**GB**

**E80390**  
**E80391**

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# 1 Preliminary note

You will find instructions, technical data, approvals and further information using the QR code on the unit / packaging or at [documentation.ifm.com](https://documentation.ifm.com).

## 1.1 Symbols used

- ✓ Requirement
- ▶ Instructions
- ▷ Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference
-  Important note  
Non-compliance may result in malfunction or interference.
-  Information  
Supplementary note

## 1.2 Legal and copyright information

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## 2 Safety instructions

### General

- The unit described is a subcomponent for integration into a system.
  - The system architect is responsible for the safety of the system.
  - The system architect undertakes to perform a risk assessment and to create documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the architect of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Intended use).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.

### Radio equipment

In general, radio equipment must not be used in the vicinity of petrol stations, fuel depots, chemical plants or blasting operations.

- ▶ Do not transport and store any flammable gases, liquids or explosive substances near the unit.

### Interference of electronic and medical devices

Operation can affect the function of electronic devices that are not correctly shielded.

- ▶ Disconnect the device in the vicinity of medical equipment.
- ▶ Contact the manufacturer of the corresponding device in case of any interference.

### **3 Intended use**

The articles E80390 and E80391 are accessories for the M18 and rectangular type RFID read/write heads. The accessories are used to change the field of the connected RFID read/write heads. This leads to the following effects depending on the installation of the accessories:



- higher range
- larger detection zone
- smaller detection zone

## 4 Installation

### 4.1 Installing E80390

E80390 is suitable for being installed on an M18 type RFID read/write head (e.g. DTM424 / DTM425).

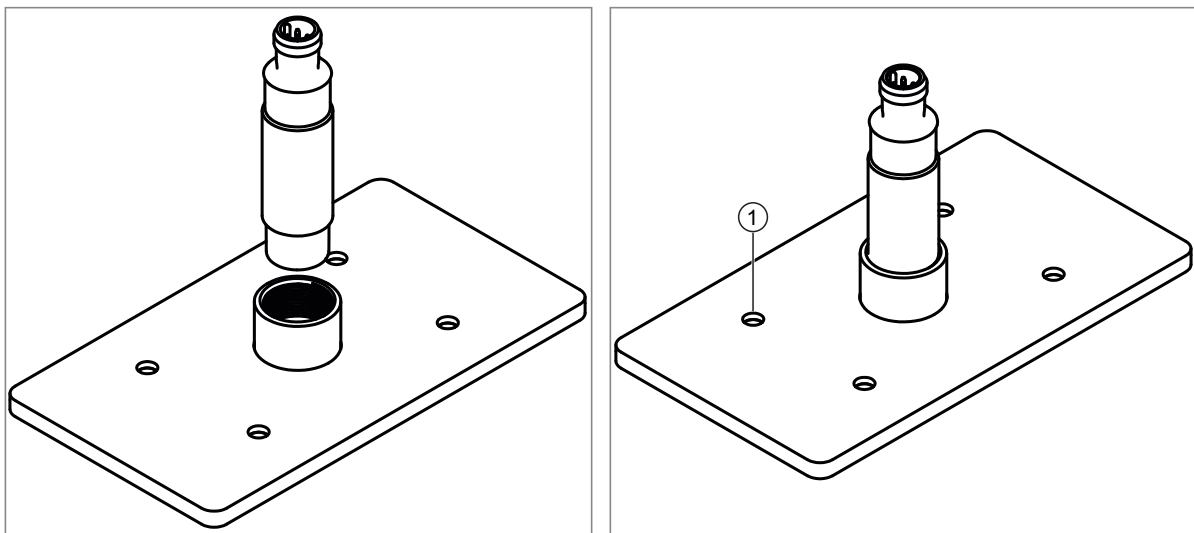
There are two ways to install the E80390:

- Installation to a mounted RFID read/write head (→ [Installation to a mounted RFID read/write head](#)  6)
- Installation to a non-mounted RFID read/write head (→ [Installation to a non-mounted RFID read/write head](#)  6)



If E8039x is mounted on metal or in the vicinity of metal, the range of the RFID read/write head is reduced.

- ▶ Mount the E8039x at least 100 mm away from metal objects.



① Mounting holes

#### 4.1.1 Installation to a mounted RFID read/write head

The E8039x RFID antenna adapter changes the field characteristics of a mounted RFID read/write head in operation.

Installing the E8039x RFID antenna adapter to a mounted RFID read/write head:

- ▶ Screw the E80390 to the RFID read/write head by hand (see figure above).
  - ▷ Use a maximum tightening torque of 0.6 Nm.
- ▶ Use the mounting holes ① to fix the E80390 to a suitable surface.
  - ▷ For a permanently reliable installation, the E80390 is additionally fastened to a suitable surface using the mounting holes.

#### 4.1.2 Installation to a non-mounted RFID read/write head

The E8039x RFID antenna adapter changes the field characteristics of a mounted RFID read/write head in operation.

Installing the E8039x RFID antenna adapter to a non-mounted RFID read/write head:

- ▶ Screw the RFID read/write head into the E80390 by hand.

- ▷ Use a maximum tightening torque of 0.6 Nm.
- ▶ Use the mounting holes ① to fix the E80390 to a suitable surface.
- ▶ Additionally fasten the RFID read/write head.
  - ▷ For a permanently reliable installation, the RFID read/write head is additionally fastened to a suitable surface using the M18 thread.
- ▶ Lay and connect the cable of the RFID read/write head.
  - ▷ The electrical connection is described in the operating instructions of the RFID read/write head.

## 4.2 Installing E80391

E80391 is suitable for mounting to a rectangular type RFID read/write head (e.g. ANT515 / ANT516).

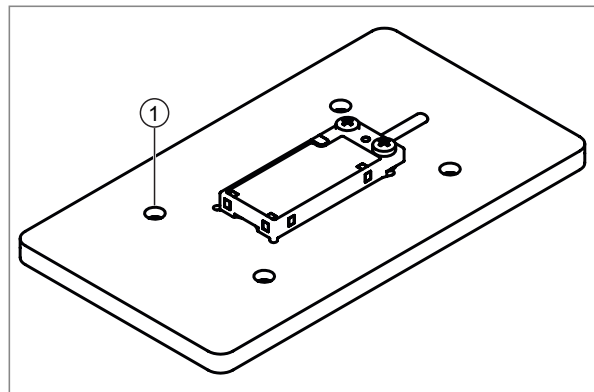
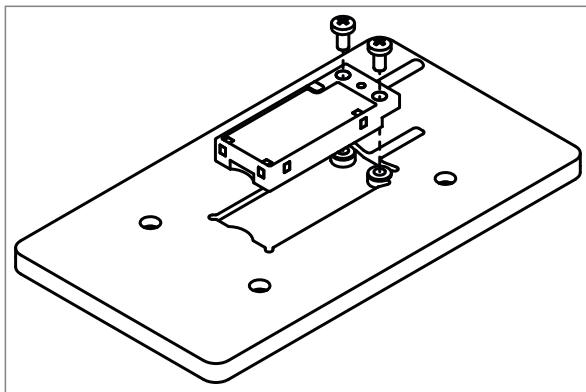


For the installation of E80391 the RFID read/write head must not be mounted.



If E8039x is mounted on metal or in the vicinity of metal, the range of the RFID read/write head is reduced.

- ▶ Mount the E8039x at least 100 mm away from metal objects.



① Mounting holes

Installing the E80391:

- ▶ Place the RFID read/write head in the cut-out of the E80391 (see figure above).
  - ▷ The sensing face of the RFID read/write head must point in the direction of the E80391.
- ▶ Screw the RFID read/write head to the E80391 with 2x M3x6 lens screws.
- ▶ Use the mounting holes ① to fix the E80391 to a suitable surface.

## 5 Technical data

### 5.1 E80390 detection range

The figure below shows the detection zone of an ANT421 with and without E80390. A 50 mm tag (E80384) was used for the measurement.

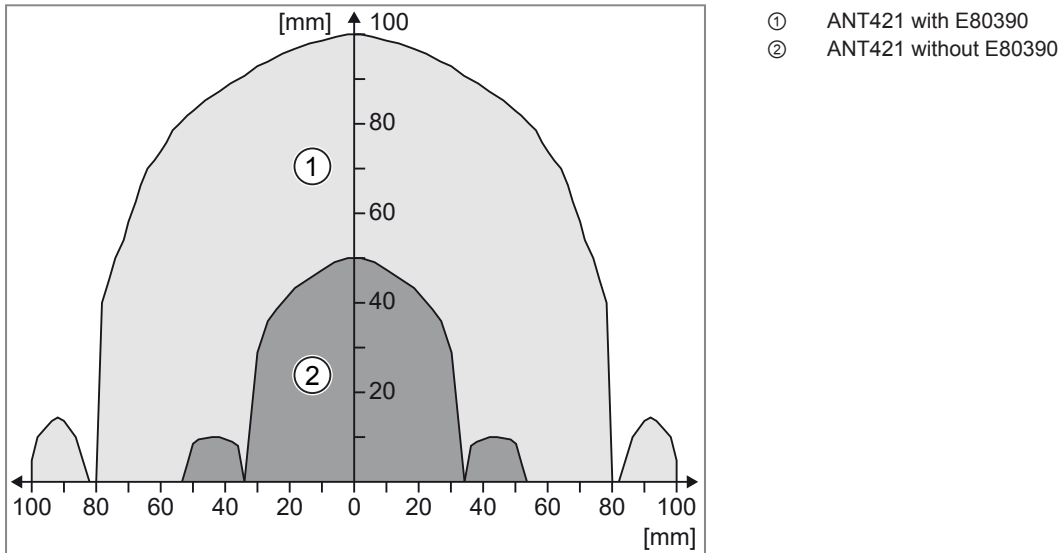


Fig. 1: Detection range of an ANT421

### 5.2 E80391 detection range

The figure below shows the detection zone of an ANT515 with and without E80391. A 50 mm tag (E80384) was used for the measurement.

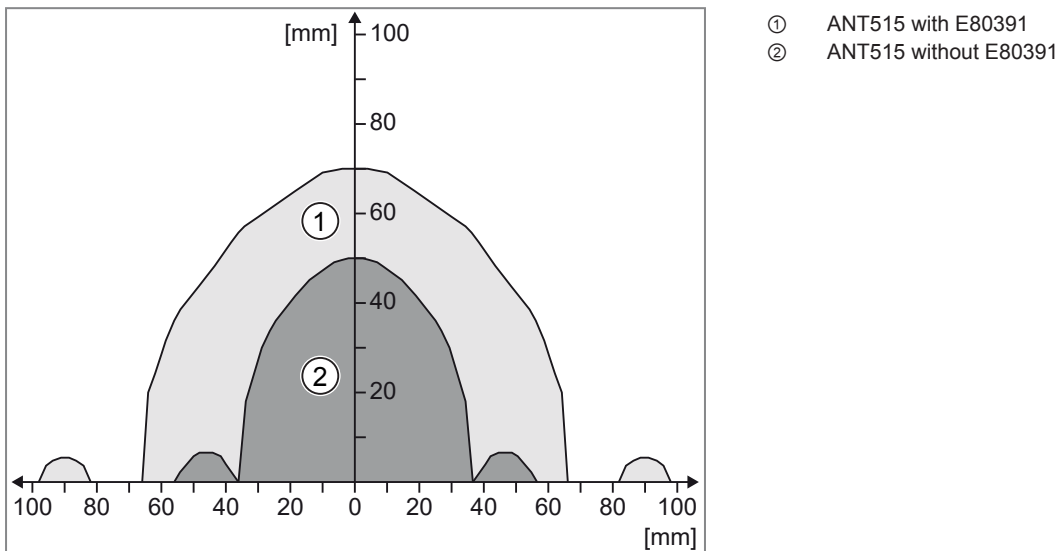


Fig. 2: Detection range of an ANT515



## 6 Maintenance, repair and disposal

The unit is maintenance-free.

- ▶ Contact ifm in case of malfunction.
- ▶ Do not open the housing as the unit does not contain any components which can be maintained by the user. The unit must only be repaired by the manufacturer.
- ▶ Clean the device using a dry cloth.
- ▶ Dispose of the unit in accordance with the national environmental regulations.

## 7 Approvals/standards

For approvals and standards, the following information is available:

- Test standards and regulations: [documentation.ifm.com](https://documentation.ifm.com)
- EU declaration of conformity and approvals: [documentation.ifm.com](https://documentation.ifm.com)
- Notes relevant for approval: Package insert of the device and [documentation.ifm.com](https://documentation.ifm.com)