

ifm electronic



Mounting and installation instructions

Positioning of the ID tags  
to the read/write head

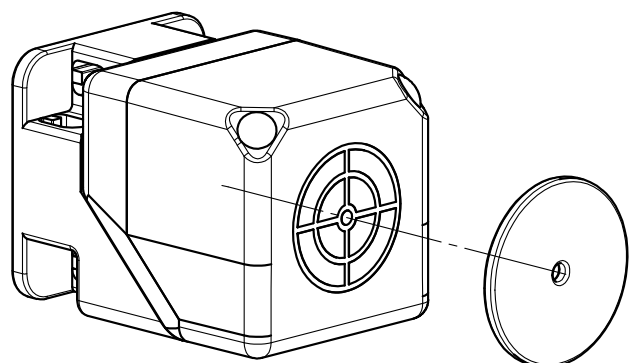
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Installation of the ID tags in/on metal

**efector190<sup>®</sup>**

**DTA20x and E803xx**

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## 1 Preliminary note

### 1.1 Scope

This document describes the ideal positioning of the ID tags (RFID transponders) E803xx to the read/write heads DTA20x as well as the read/write distances that can be obtained when the ID tags are installed in/on metal.

DTA200: DTSLF MCRWASUS01 (= read/write head)

DTA201: DTSLF MCROASUS01 (= read head)

### 1.2 Symbols used

▶ Instruction

→ Cross-reference



Important note

Non-compliance can result in malfunctions or interference.



Information

Supplementary note

### 1.3 Additional information

Technical data sheets:

[www.ifm.com](http://www.ifm.com) → Data sheet direct → e.g. E80312

Installation instructions DTS125:

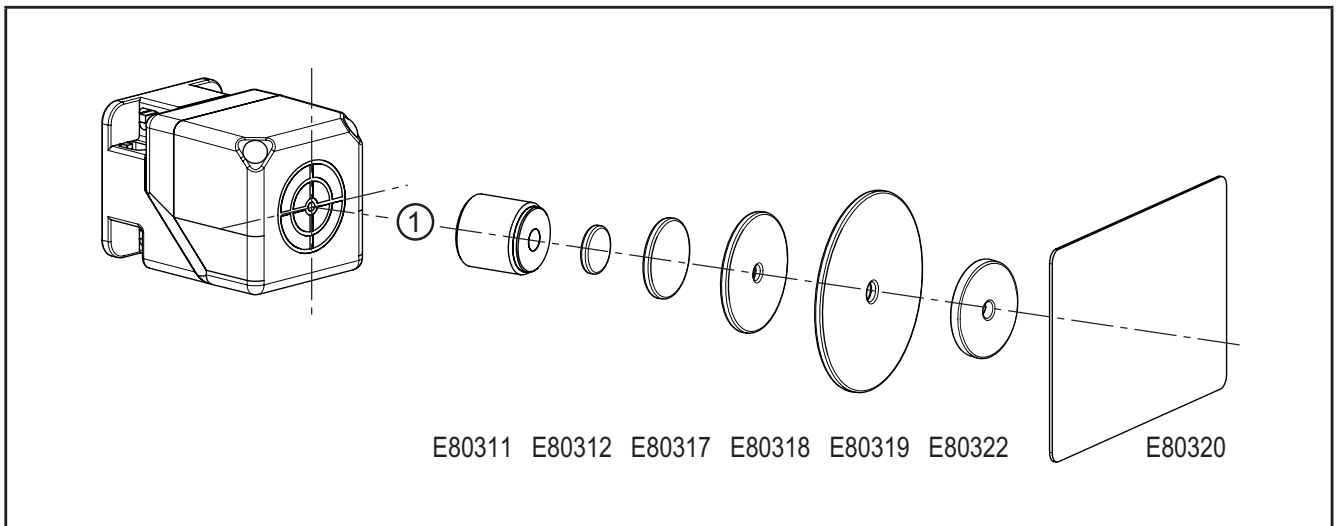
[www.ifm.com](http://www.ifm.com) → Data sheet direct → e.g. DTA200 → Additional data

## 2 General installation instructions



If the ID tags are mounted in/on metal, the read/write distance is reduced.

- ▶ Install the ID tags centered to the antenna symbol on the front of the read/write head.
- ▶ Ensure in dynamic applications that the ID tags pass the middle of the antenna symbol.



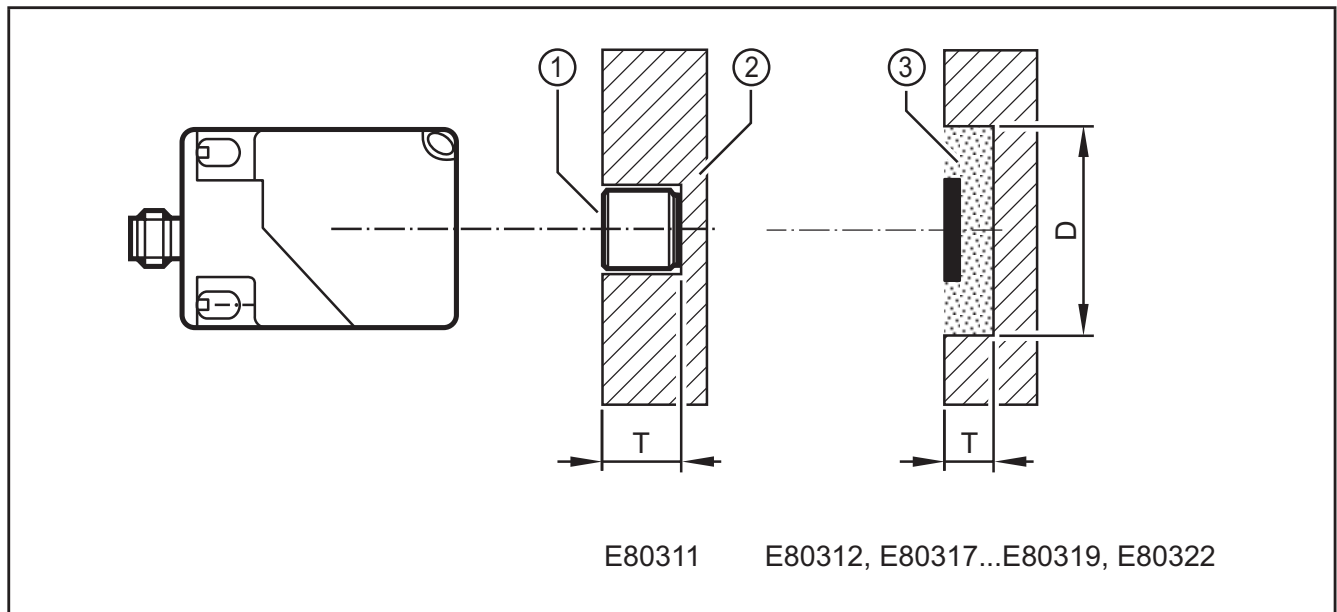
1: Marking middle of the antenna = middle of the ID tag

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### 3 ID tag flush mounted in metal

- ▶ Install the ID tag flush and centered in a circular recess. Take into account the diameter and the minimum depth of the recess.
- ▶ Fill the space between ID tag and metal carrier with a non-metallic filling compound (e.g. glue or cast resin).

#### 3.1 Dimensions of the recess



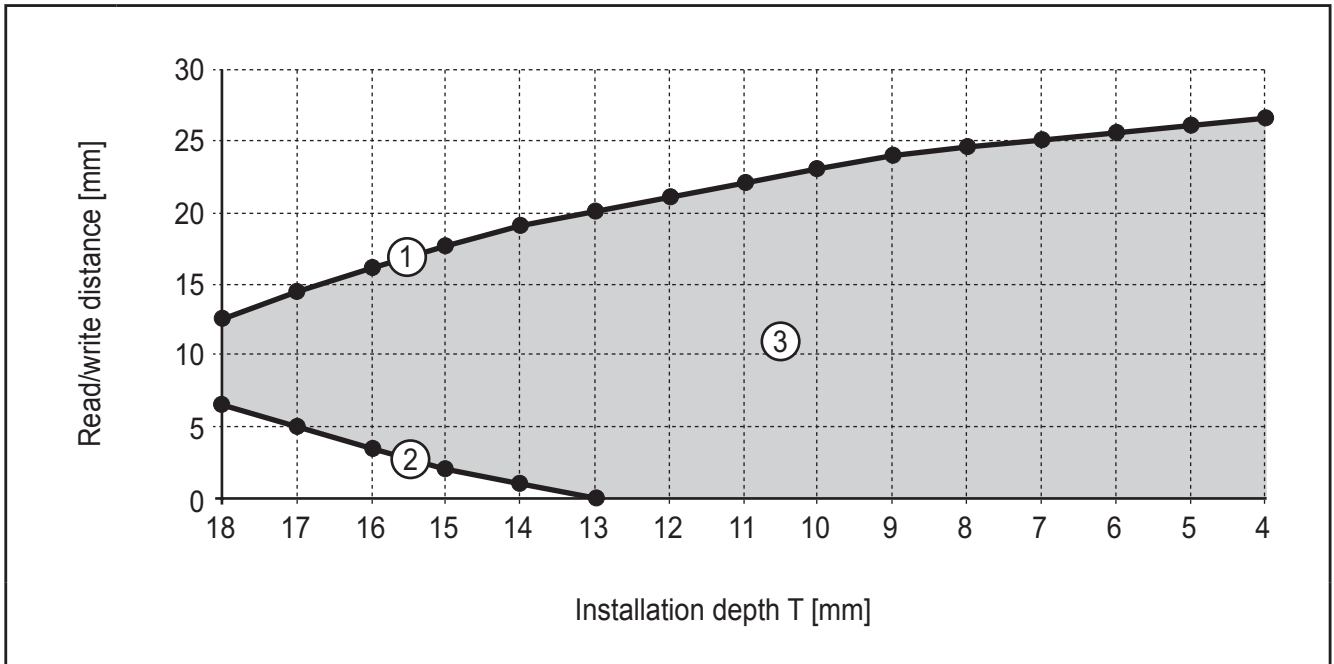
- 1: Type label of the ID points towards the read/write head  
 2: Metal  
 3: non-metallic filling compound

ID tag	Diameter of the recess D [mm]	Depth T [mm]
E80311*	M18	≤ 18 (18 = flush)
E80312	≥ 15	≥ 5
E80317	≥ 20	≥ 5
E80318	≥ 30	≥ 6
E80319	≥ 50	≥ 8
E80322	≥ 28	≥ 6

\*) ID tag in threaded housing for screw mounting

## 3.2 Read/write distances for flush installation in metal

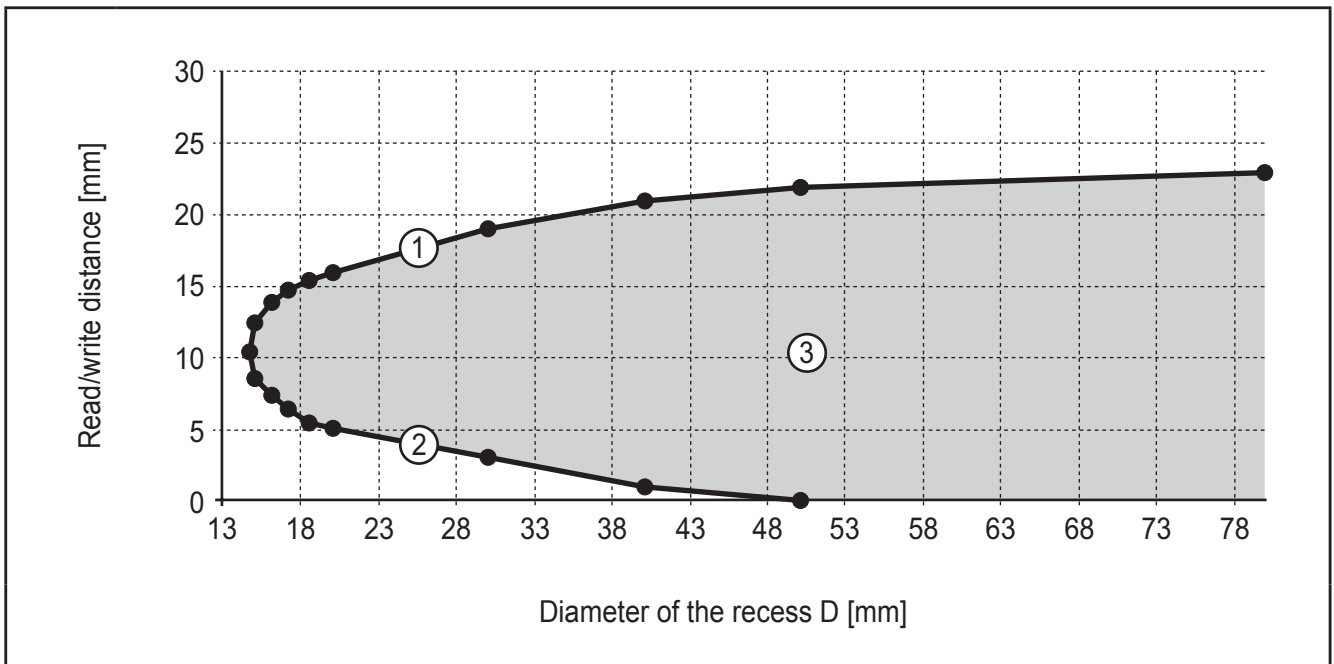
### 3.2.1 E80311



Installation depth T = 18 mm = flush installation

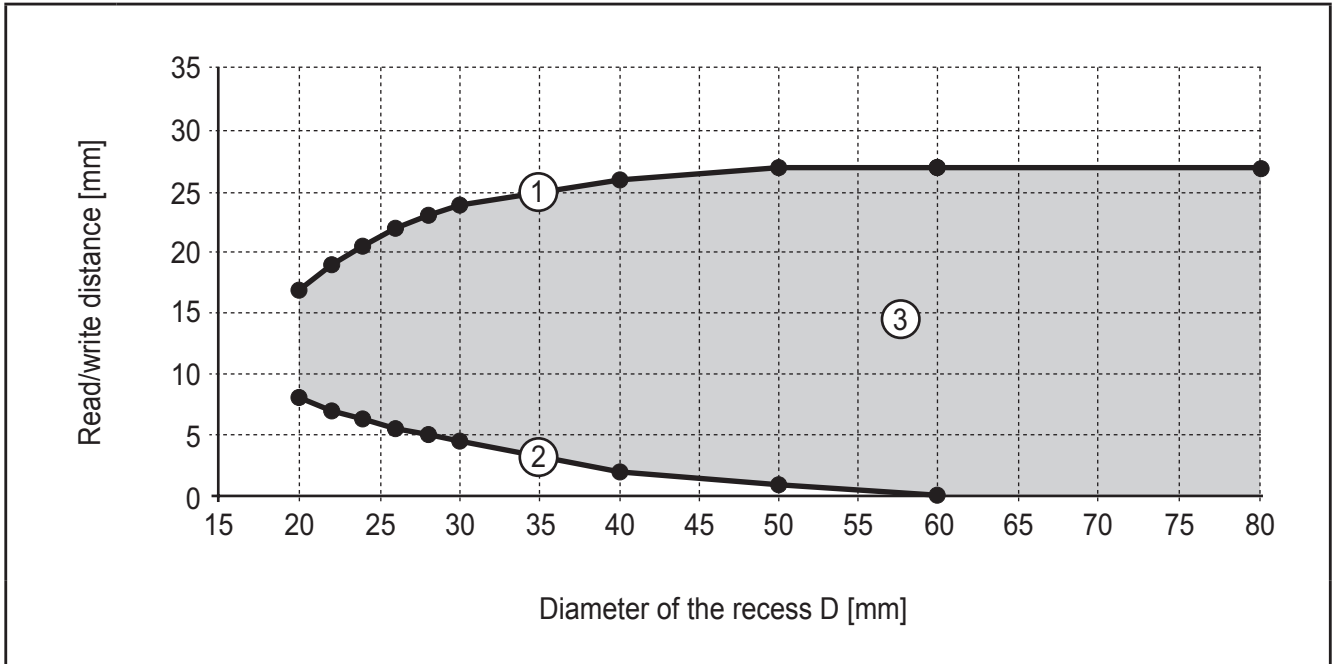
- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

### 3.2.2 E80312



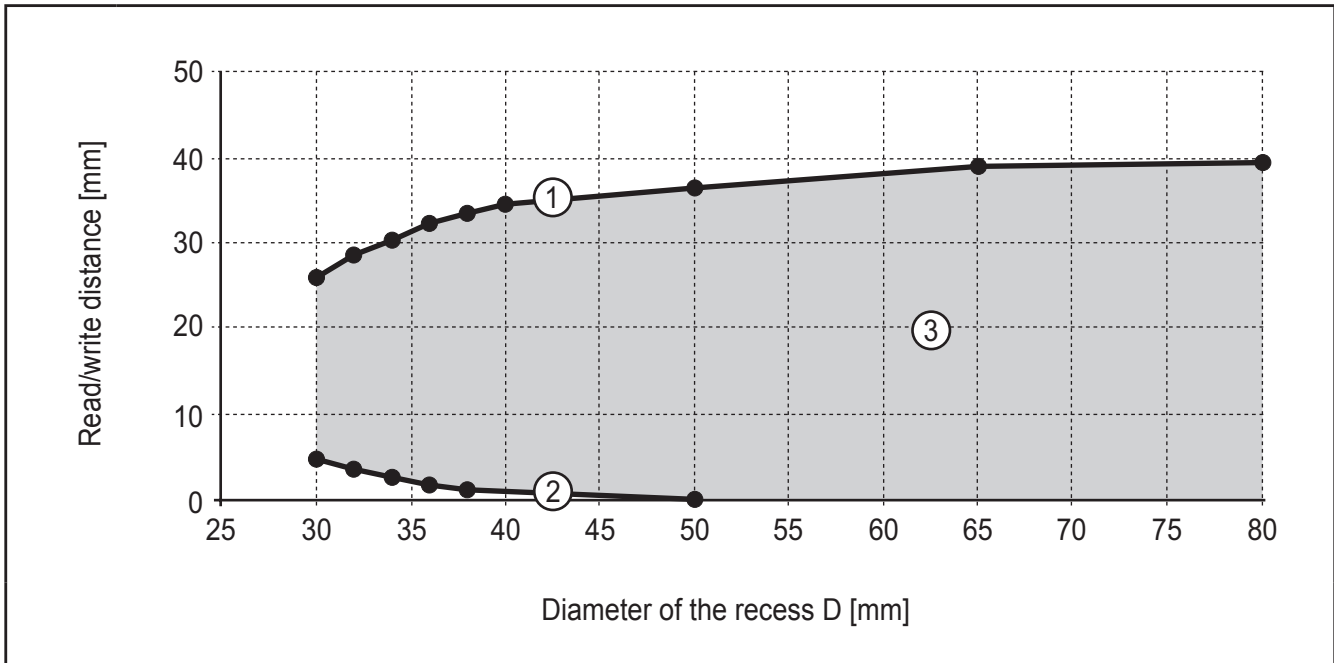
- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

### 3.2.3 E80317



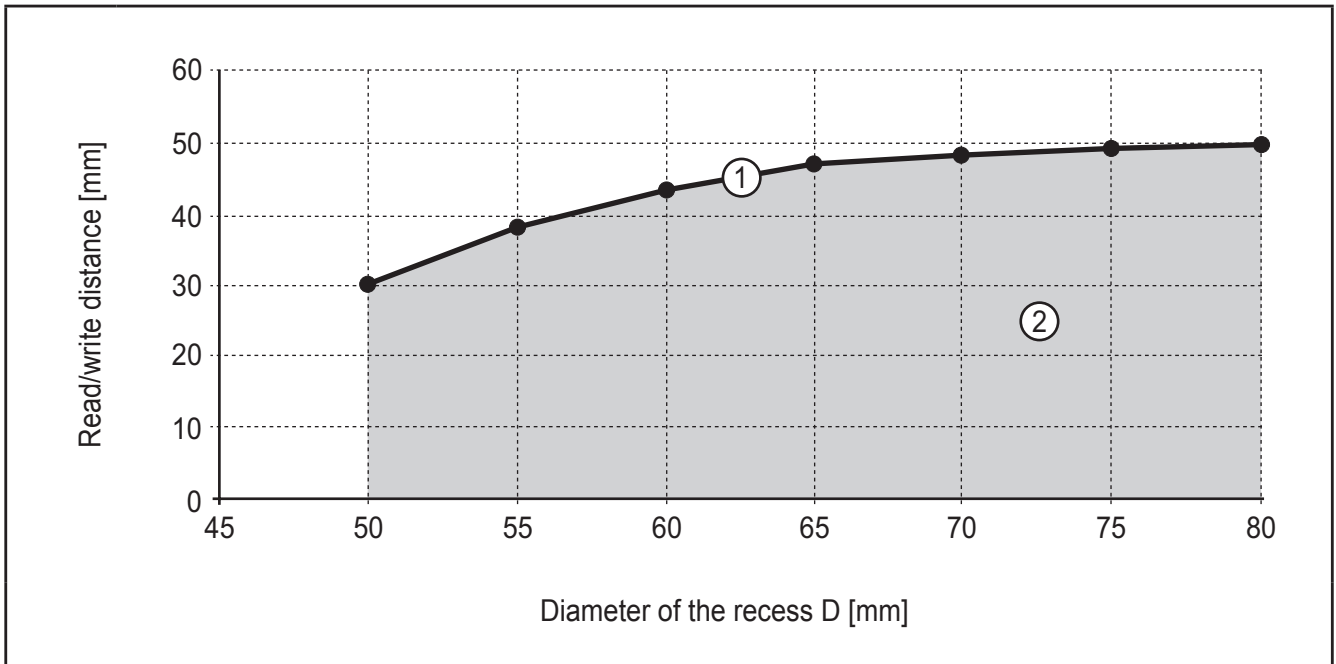
- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

### 3.2.4 E80318



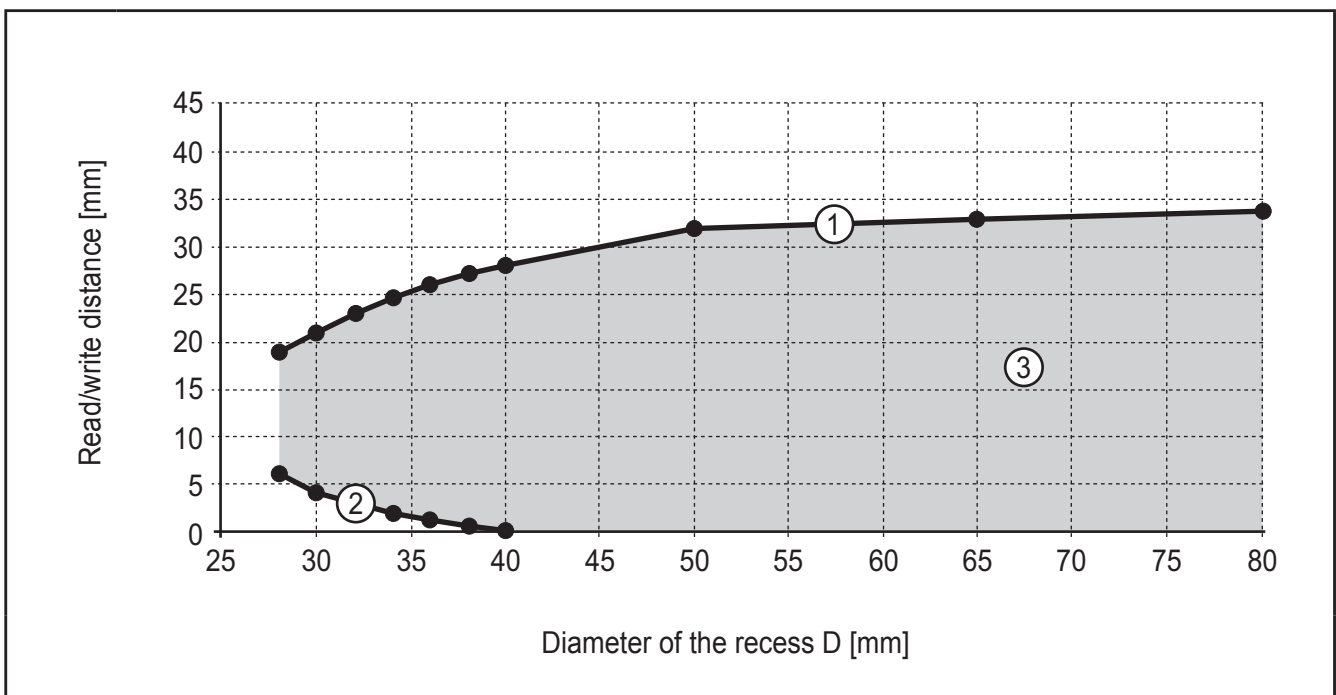
- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

### 3.2.5 E80319



- 1: Upper limit
- 2: Read/write area

### 3.2.6 E80322



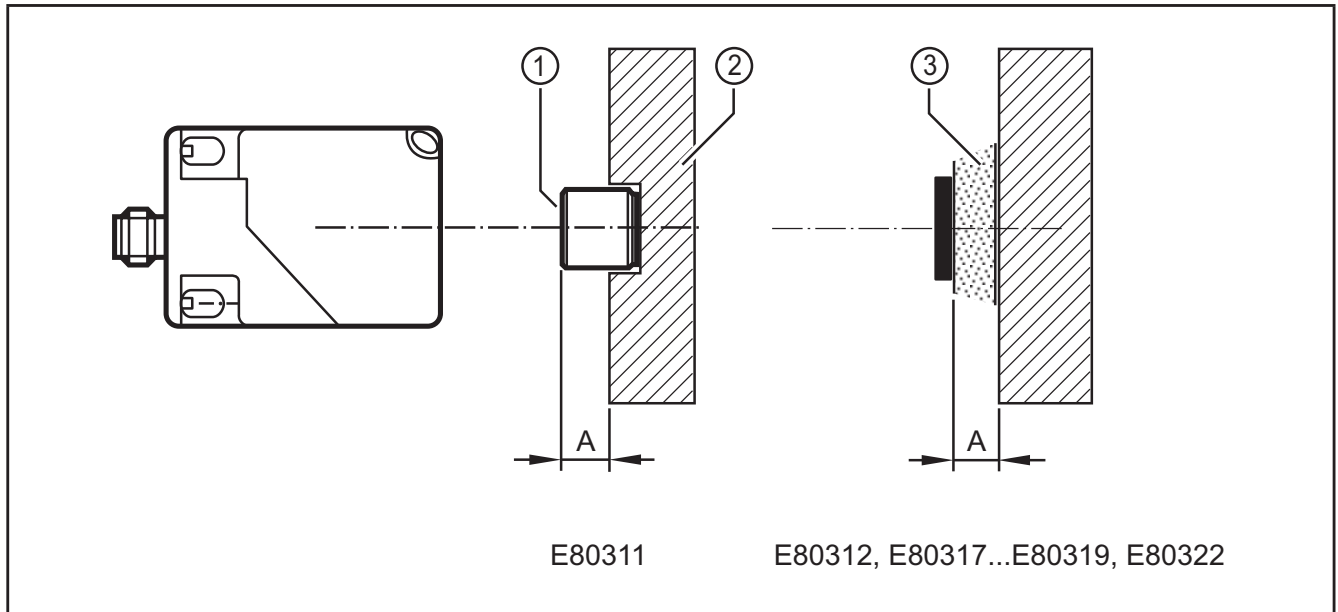
- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

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## 4 ID tag at a distance from the metal

► Mount a non-metallic spacer between ID tag and metal carrier.

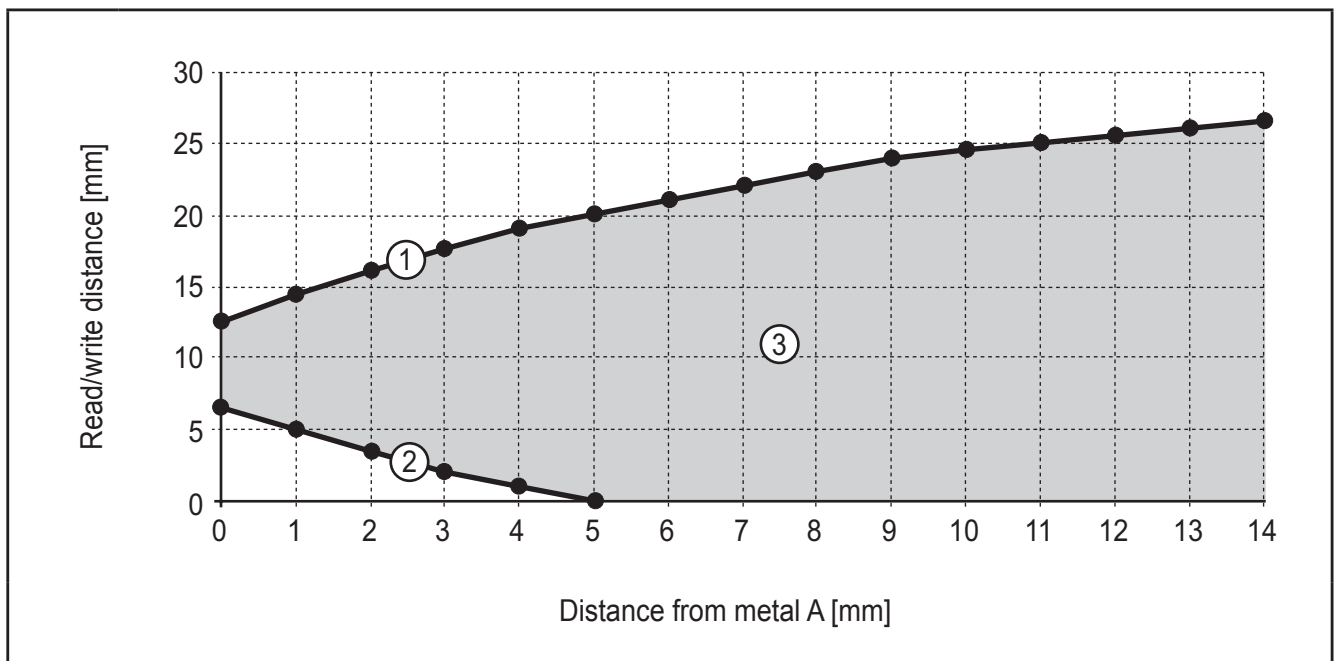
### 4.1 Installation dimensions



- 1: Type label of the ID points towards the read/write head
- 2: Metal
- 3: non-metallic spacer

### 4.2 Read/write distances at a distance from the metal

#### 4.2.1 E80311



Distance A = 0 mm = flush installation

- 1: Upper limit
- 2: Lower limit
- 3: Read/write area



## 4.2.2 E80312...E80322

ID tag	Distance from metal A [mm]		
	5	10	15
E80312	22	25	28
E80317	30	33	36
E80318	40	45	50
E80319	40	60	65
E80322	40	45	50

Read/write distances in mm

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