

ifm electronic



Mounting and installation instructions

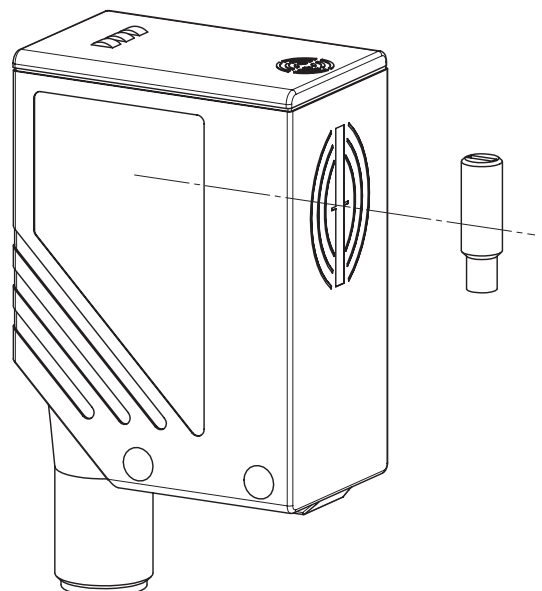
Positioning of the ID tags
to the read/write head

UK

Installation of the ID tags in/on metal

efector190[®]

DTA10x 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 DTA10x as well as the read/write distances that can be obtained when the ID tags are installed in/on metal.

DTA100: DTS125 AARWASUS (= read/write head)

DTA101: DTS125 AAROASUS (= 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 → Data sheet direct → e.g. E80312

Installation instructions DTS125:

www.ifm.com → Data sheet direct → e.g. DTA100 → Additional data

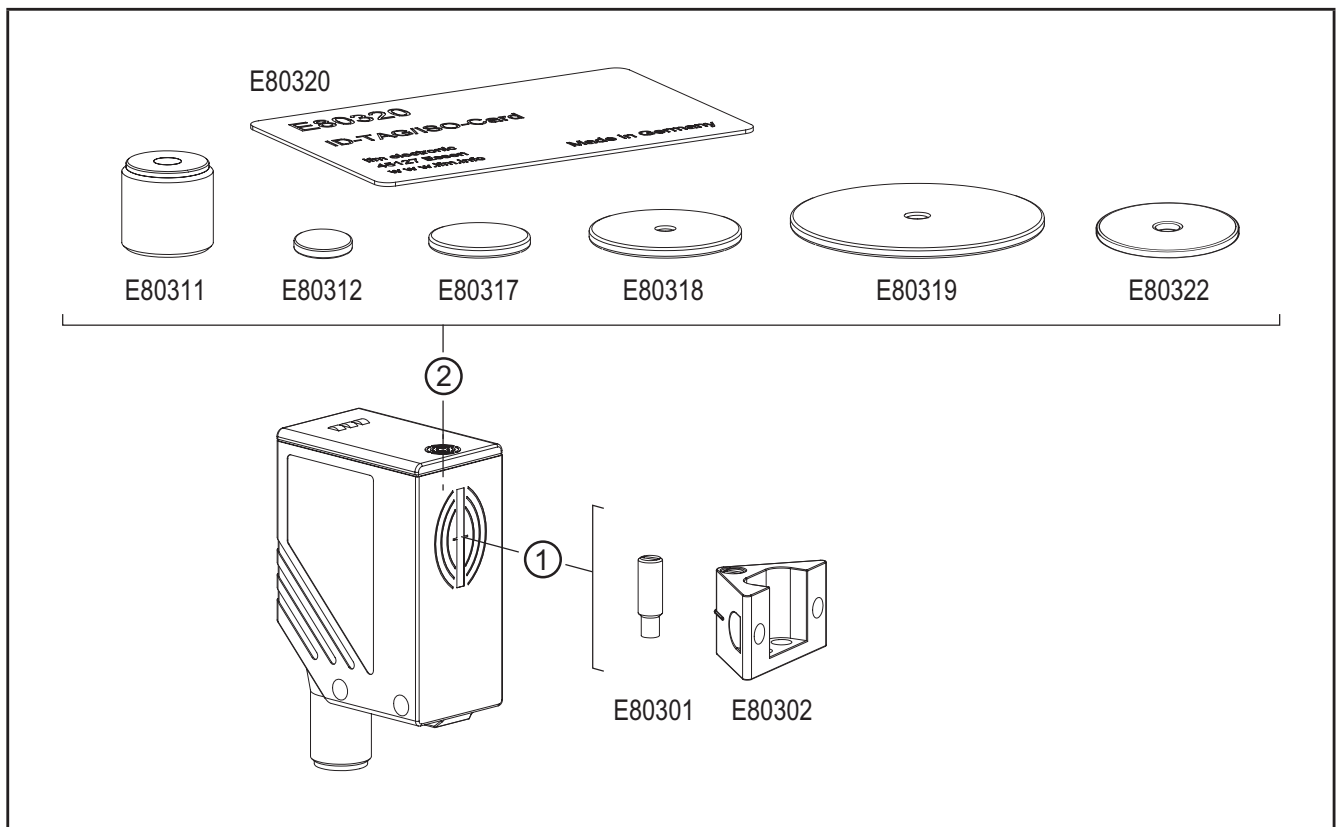
2 General installation instructions



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 or upper side of the read/write head (attribution of the ID tags see below).
- ▶ Ensure in dynamic applications that the ID tags pass the middle of the antenna symbol.

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1: Positioning front side

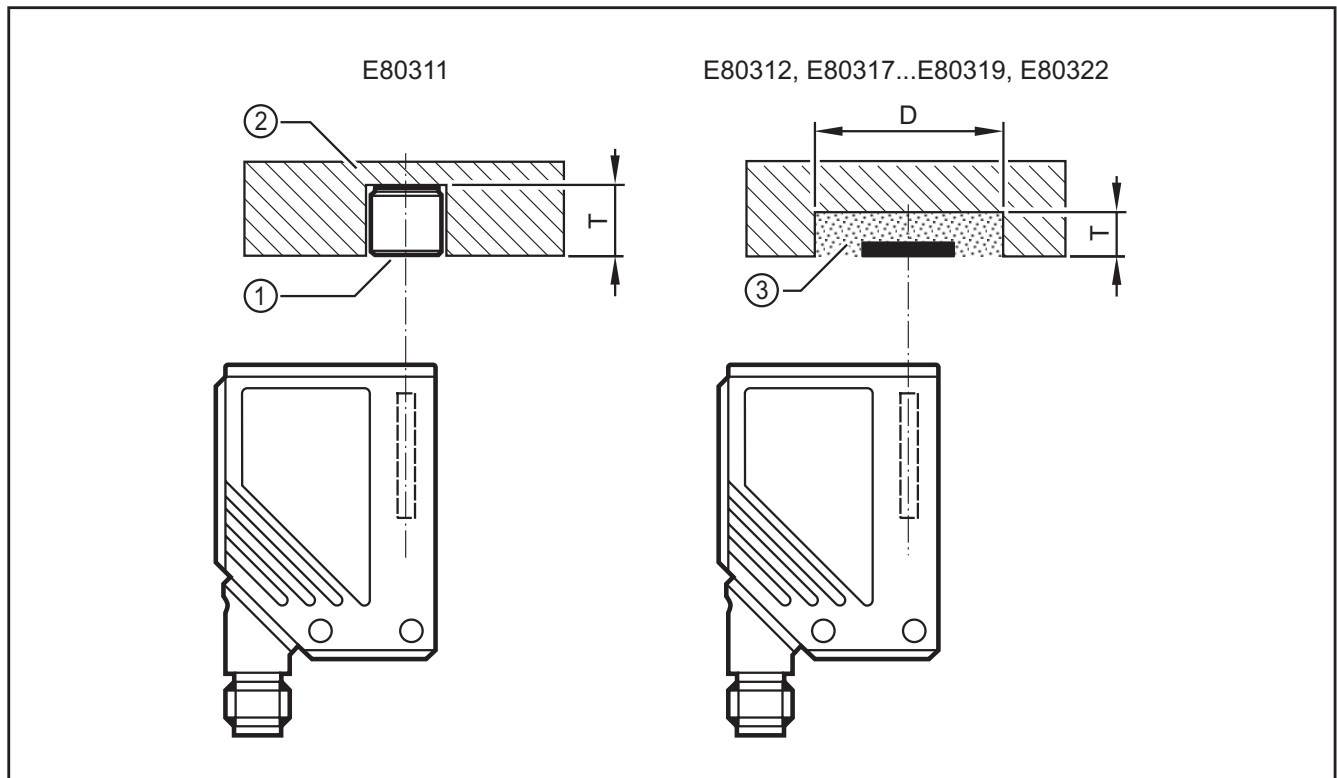
2: Positioning overhead

Marking middle of the antenna = middle of the ID tag

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



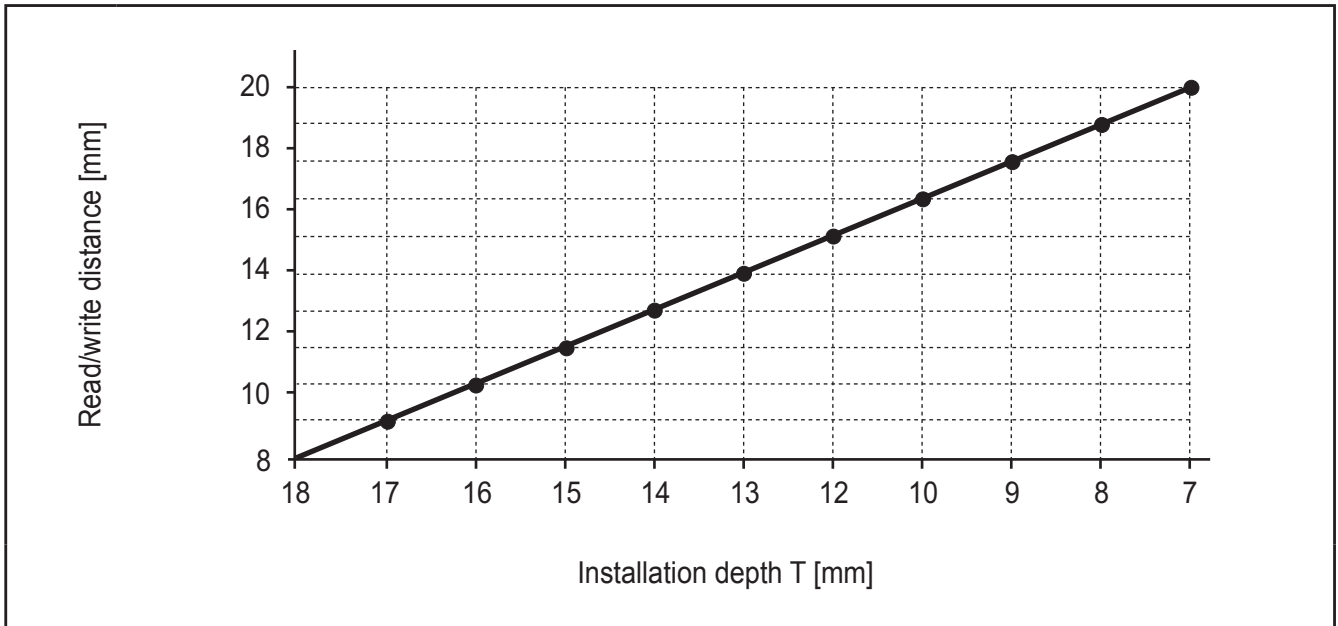
- 1: Type label of the ID points towards the read/write head
 2: Metal
 3: non-metallic filling compound

ID tag	Diameter of the recess D [mm]	Depth T [mm]
E80311*	M18	≤ 18 (18 = flush)
E80312	≥ 15	≥ 6
E80317	≥ 25	≥ 6
E80318	≥ 35	≥ 6
E80319	≥ 55	≥ 8
E80322	≥ 32	≥ 6

*) ID tag in threaded housing for screw mounting

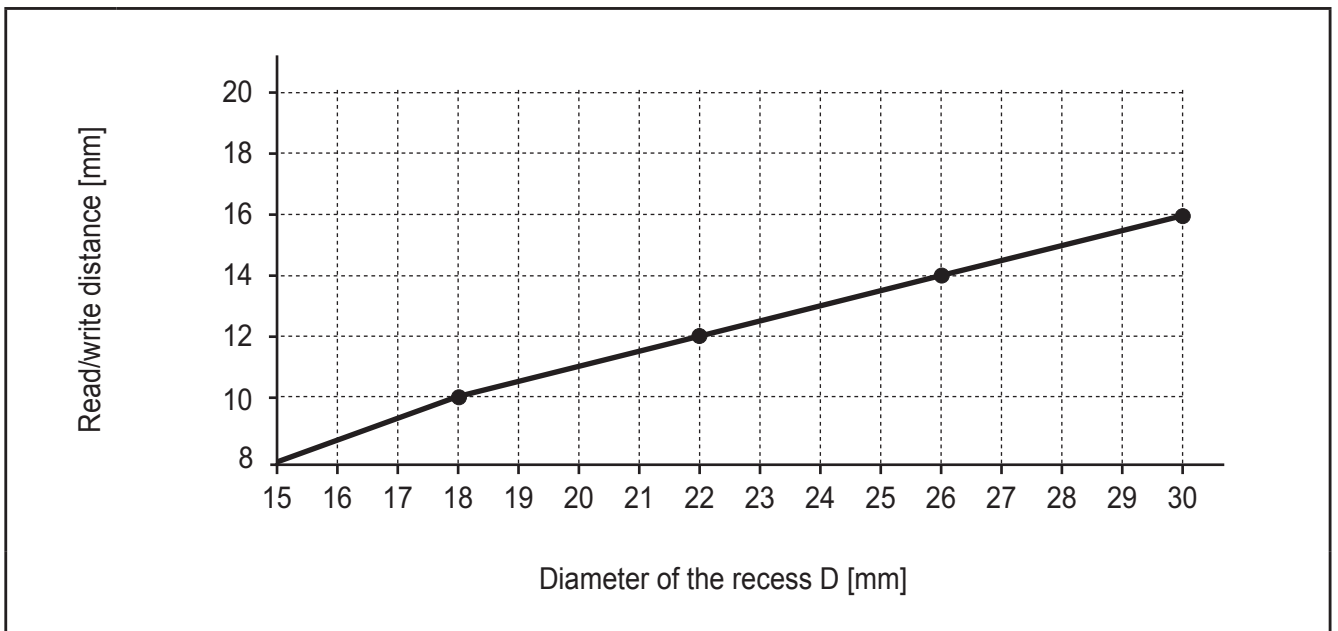
3.2 Read/write distances for flush installation in metal

3.2.1 E80311



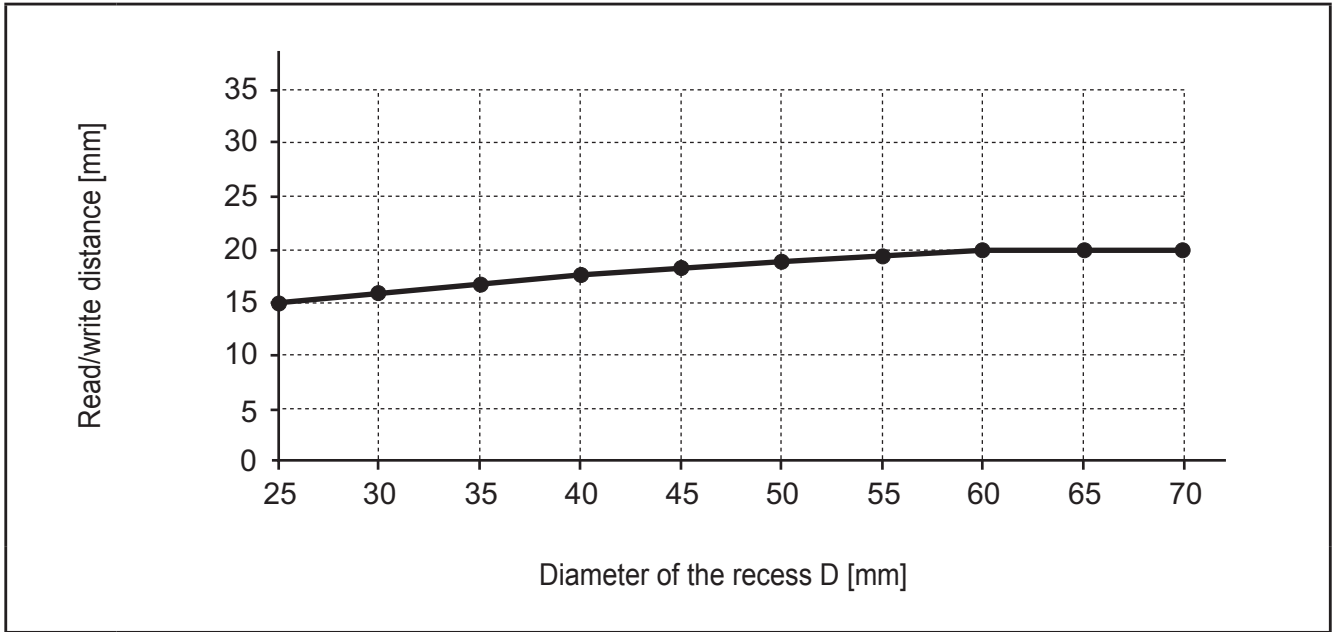
Installation depth T = 18 mm = flush installation

3.2.2 E80312

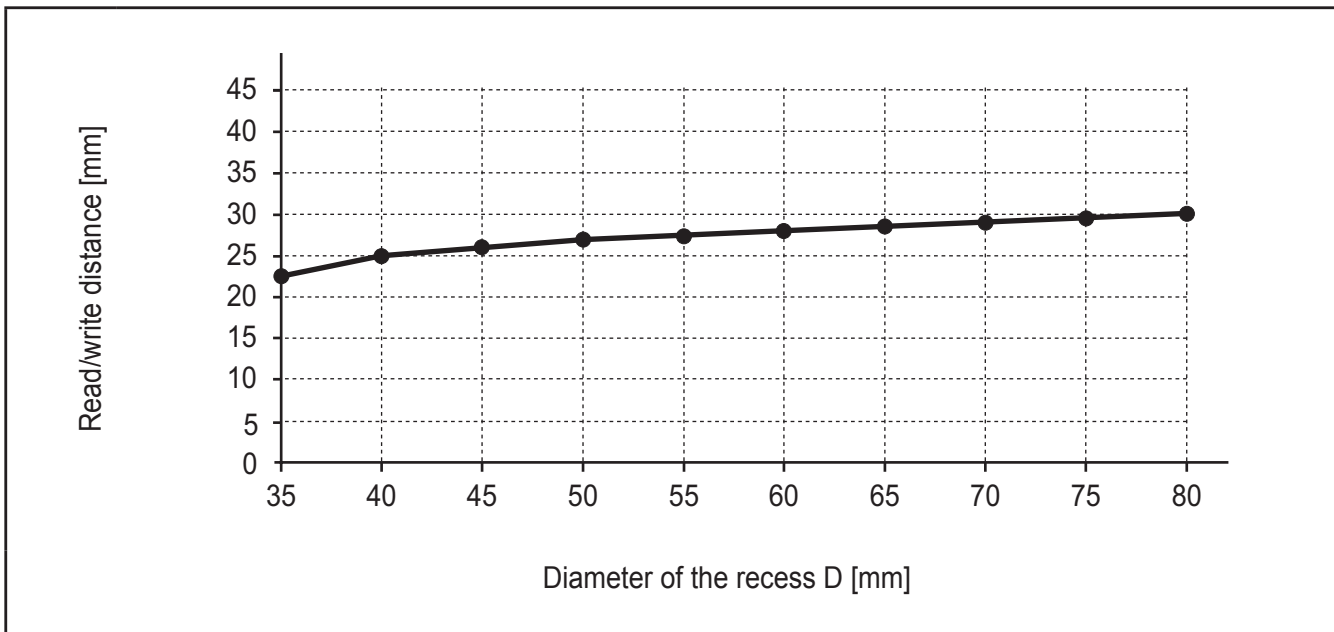


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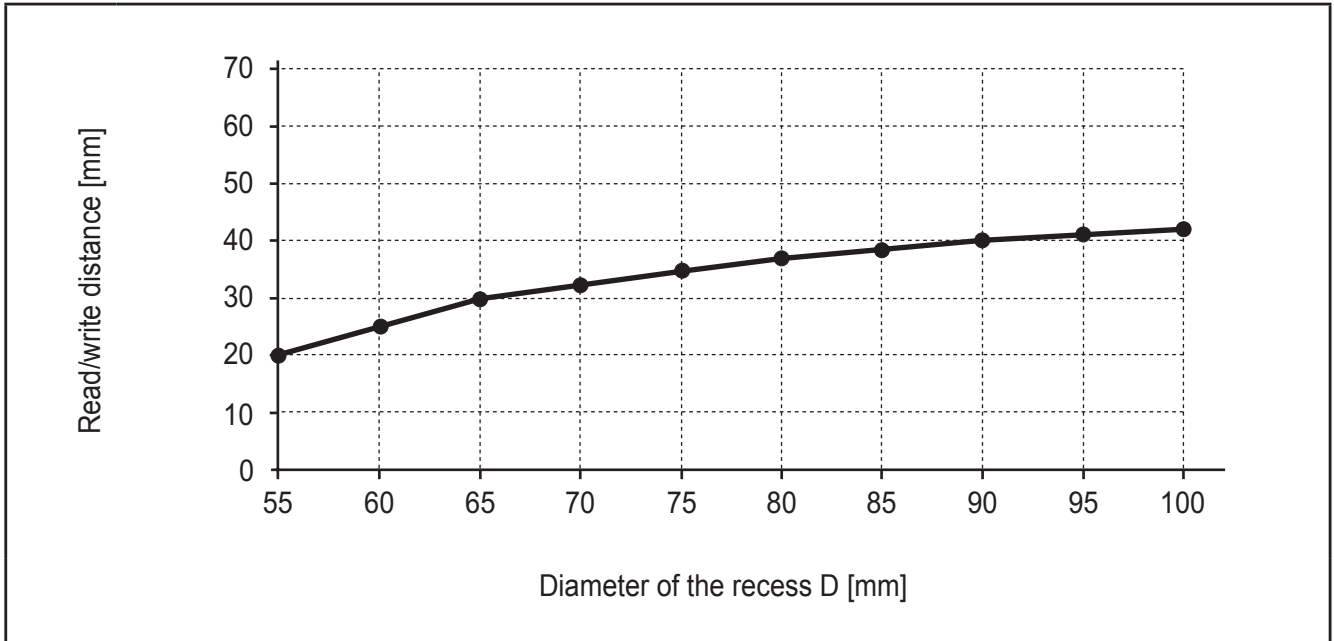
3.2.3 E80317



3.2.4 E80318

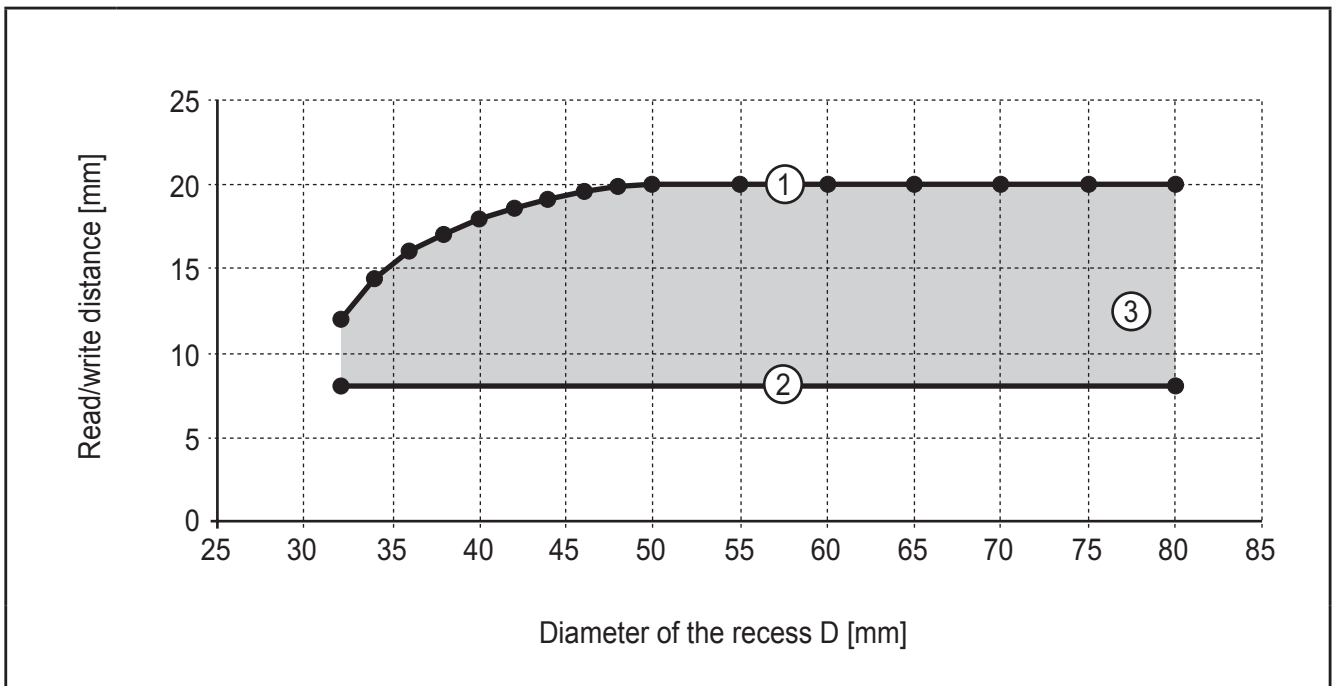


3.2.5 E80319



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3.2.6 E80322

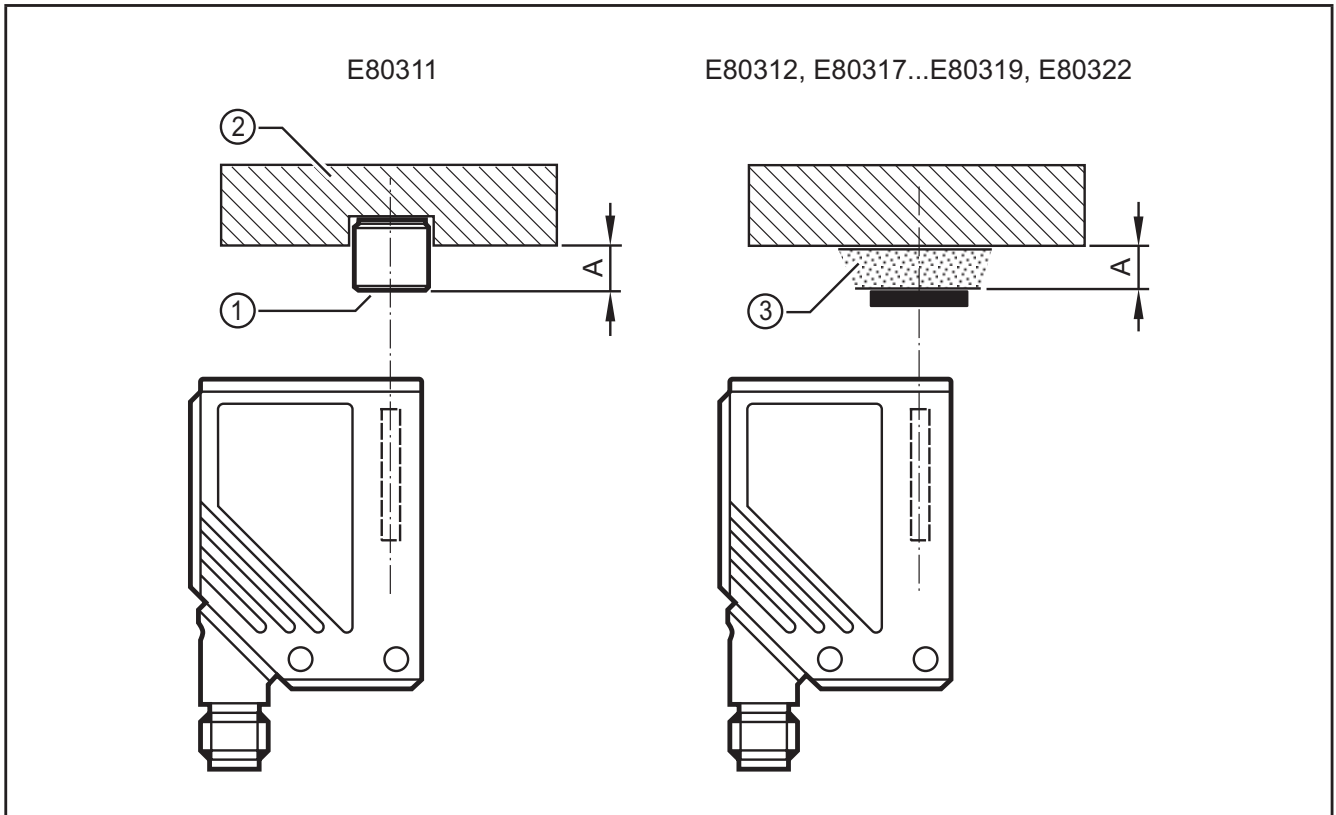


- 1: Upper limit
- 2: Lower limit
- 3: Read/write area

4 ID tag at a distance from the metal

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

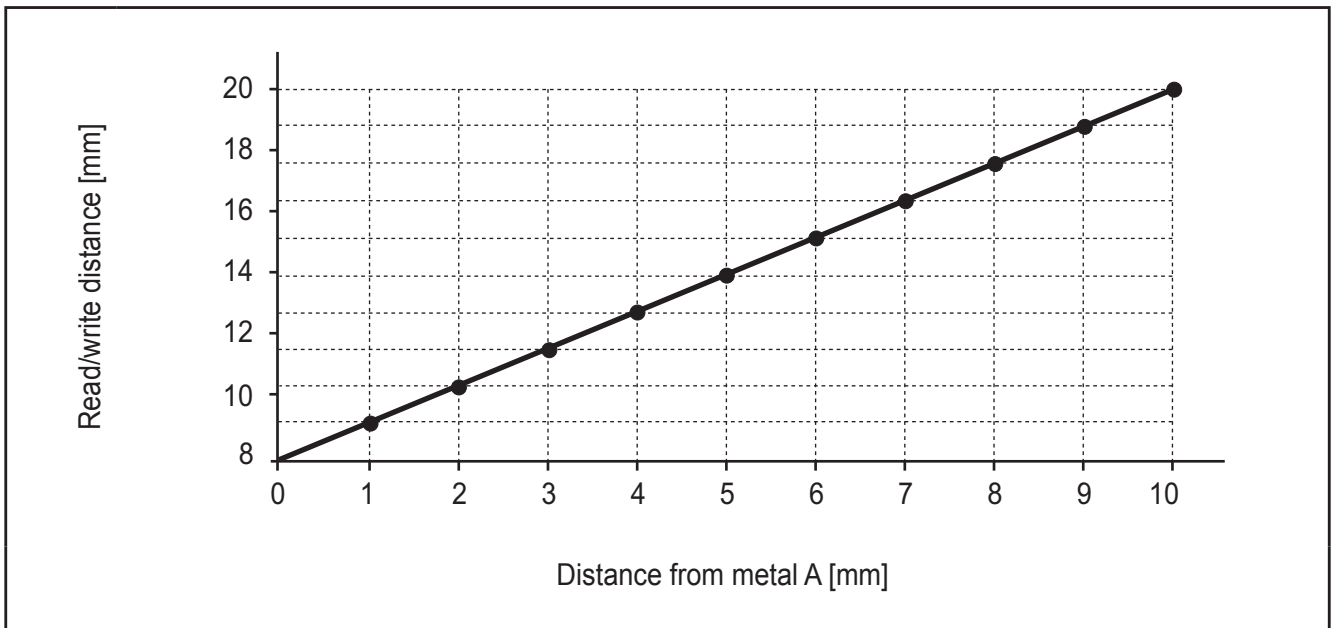
4.1 Installation dimensions



- 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

4.2.2 E80301, E80312...E80322

ID tag	Distance from metal A [mm]		
	5	10	15
E80301	20	20	20
E80312	17	20	20
E80317	20	23	26
E80318	30	33	36
E80319	35	45	50
E80322	32	35	38

Read/write distances in mm

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