ifm electronic

CE

Mounting and installation instructions

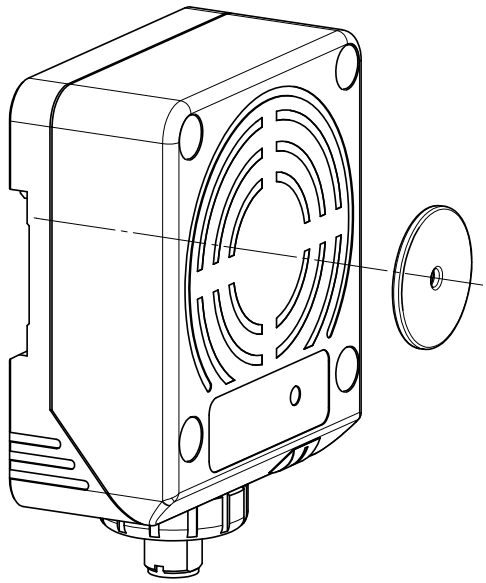
Positioning of the ID tags to the read/write head

UK

Installation of the ID tags in/on metal

efector190®

DTA30x and E803xx



704390 / 01 04 / 2010

Contents

1 Preliminary note

1.1 Scope

This document describes the ideal positioning of the ID tags (RFID transponders) E803xx to the read/write heads DTA30x as well as the read/write distances that can be obtained when the ID tags are installed in/on metal.

DTA300: DTSLF DCRWASUS01 (= read/write head)
DTA301: DTSLF DCROASUS01 (= 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

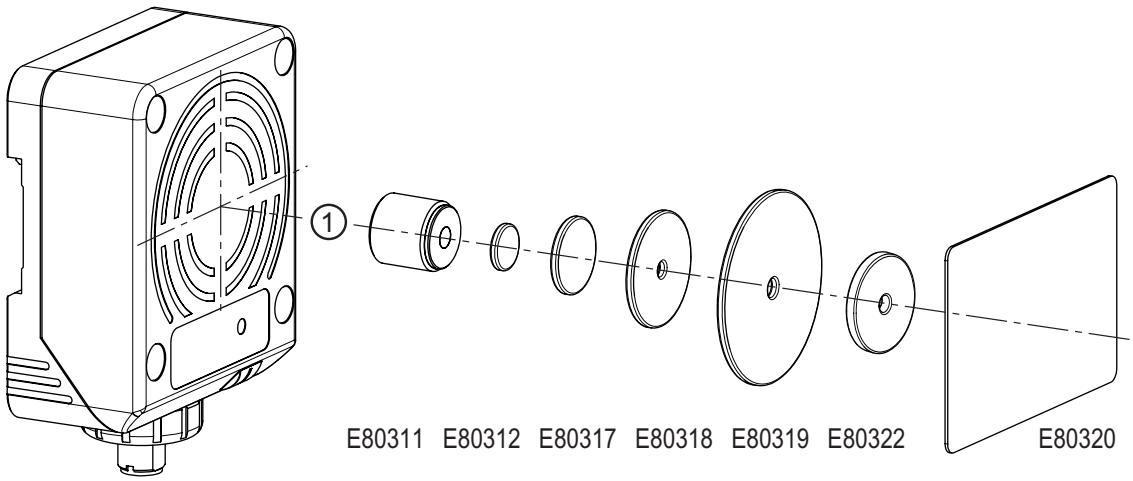
Installation instructions DTS125:
www.ifm.com → Data sheet direct → e.g. DTA300 → Additional data

2 General installation instructions

UK

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.



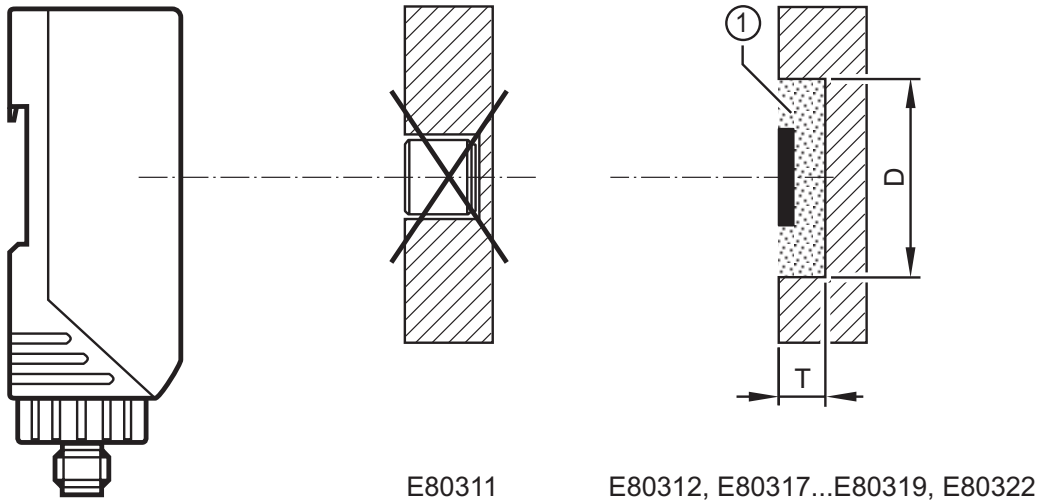
1: Marking middle of the antenna = middle of the ID tag

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: non-metallic filling compound

ID tag	Diameter of the recess D [mm]	Depth T [mm]
E80311*	M18	≤ 10
E80312	≥ 46	≥ 12
E80317	≥ 34	≥ 8
E80318	≥ 36	
E80319	≥ 50	
E80322	≥ 36	≥ 10

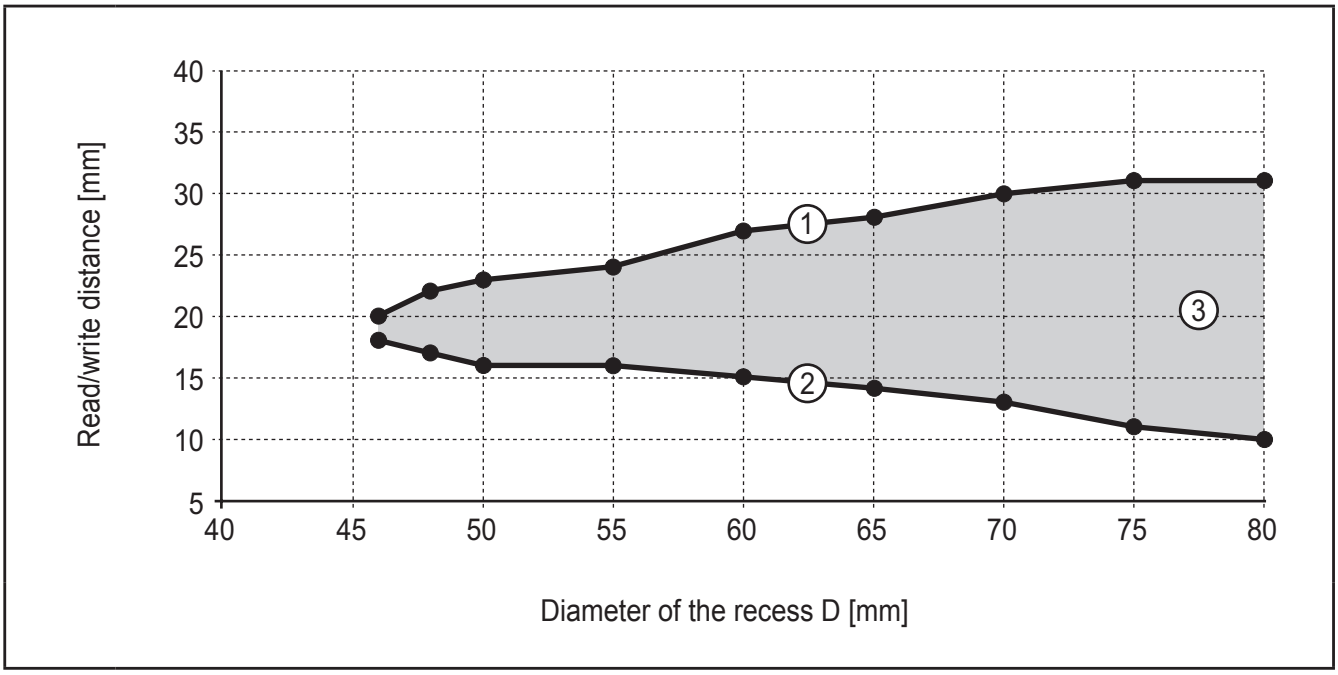
*) ID tag in threaded housing for screw mounting

3.2 Read/write distances for flush installation in metal

3.2.1 E80311

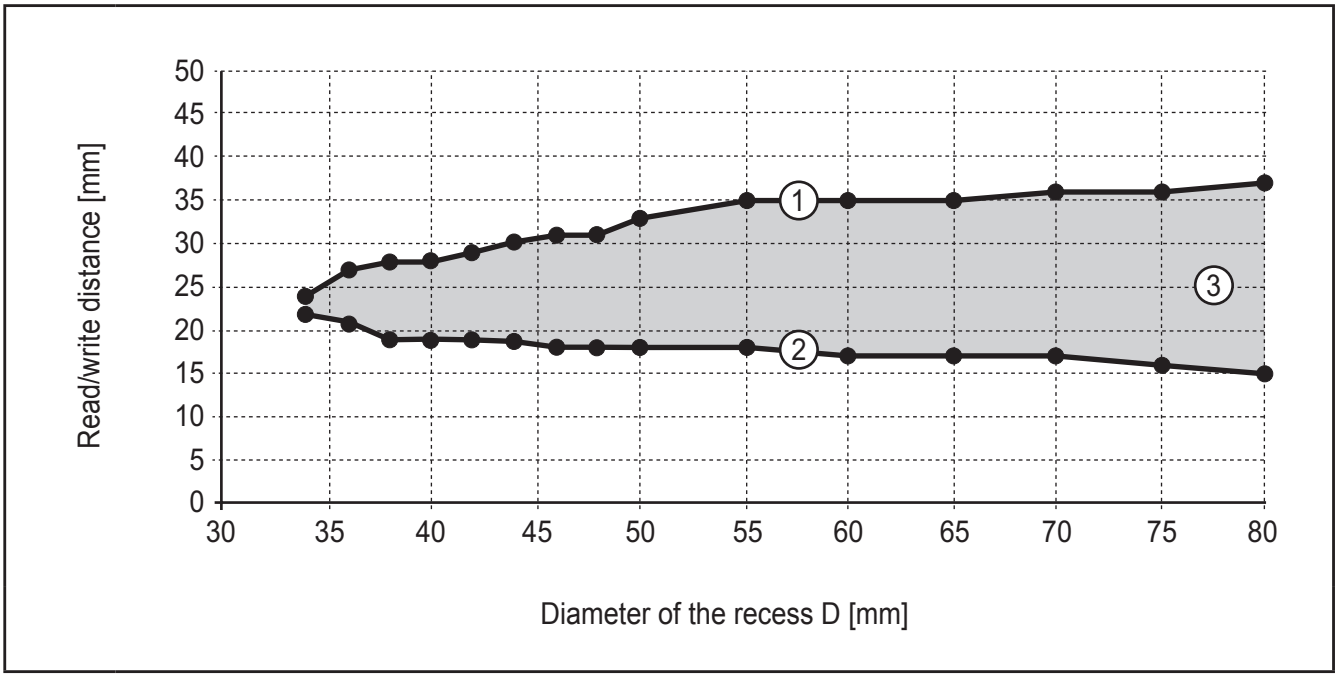
Flush installation in combination with DTA30x not reasonable (→ 4 ID tag at a distance from the metal).

3.2.2 E80312



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

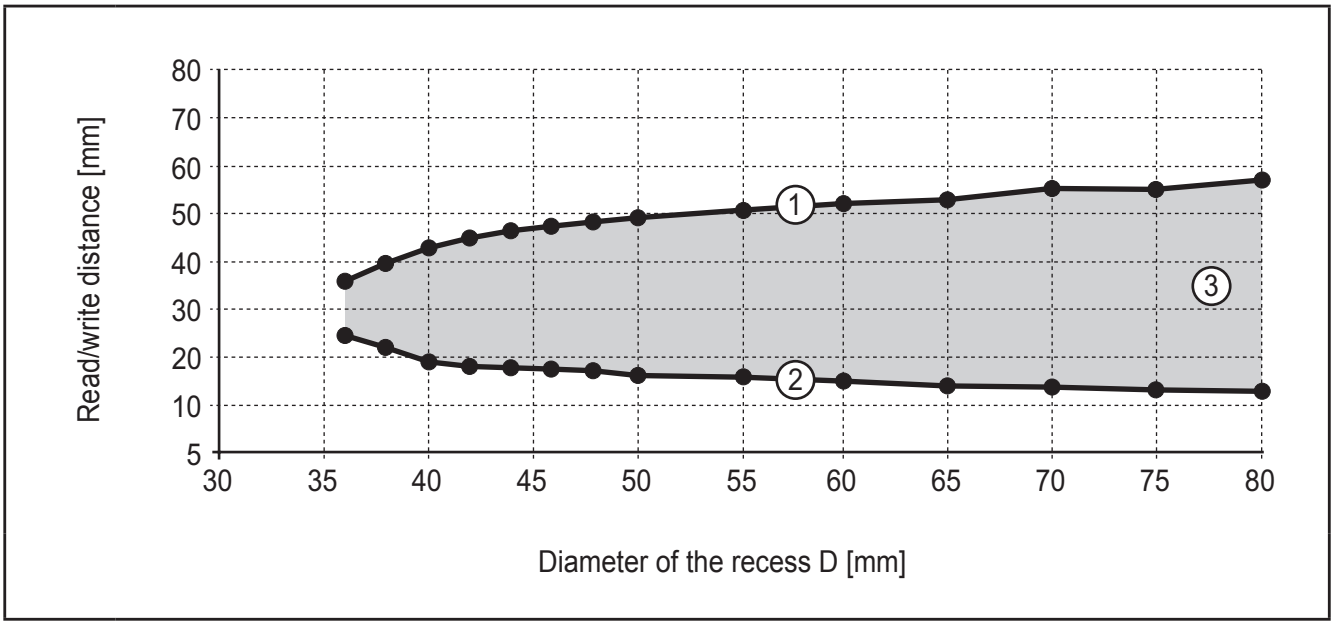
3.2.3 E80317



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

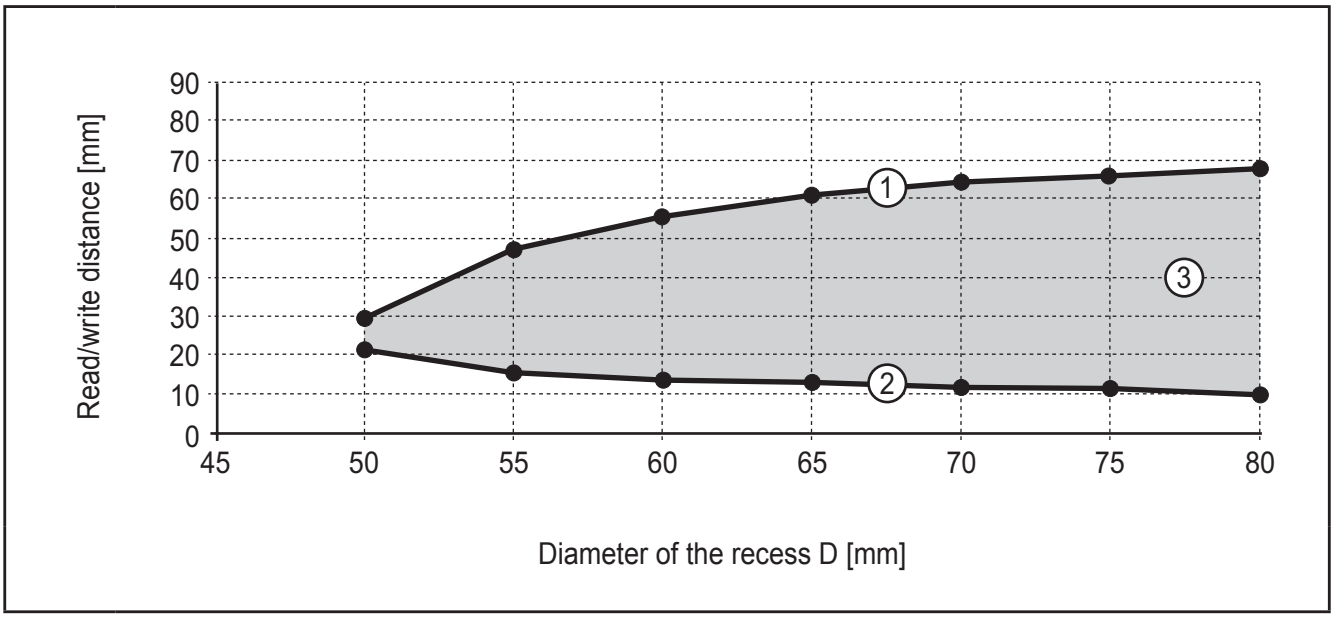
UK

3.2.4 E80318



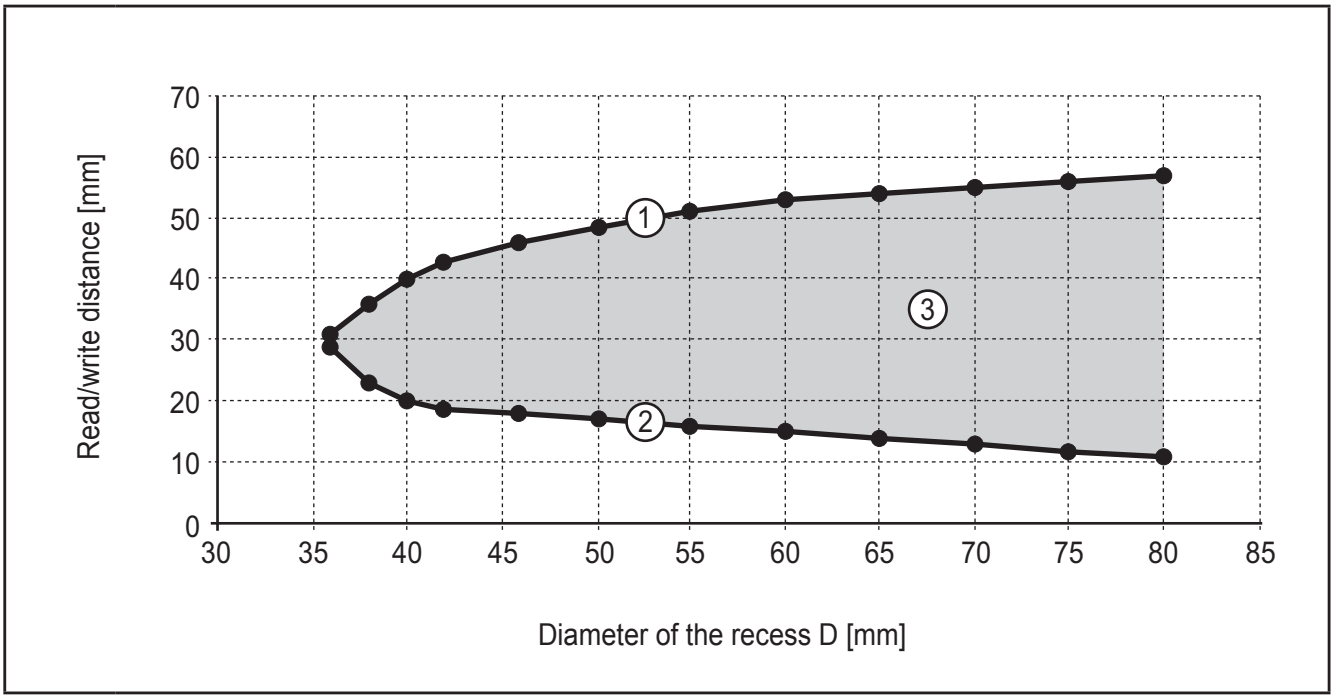
1: Upper limit
2: Lower limit
3: Read/write area

3.2.5 E80319



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

3.2.6 E80322

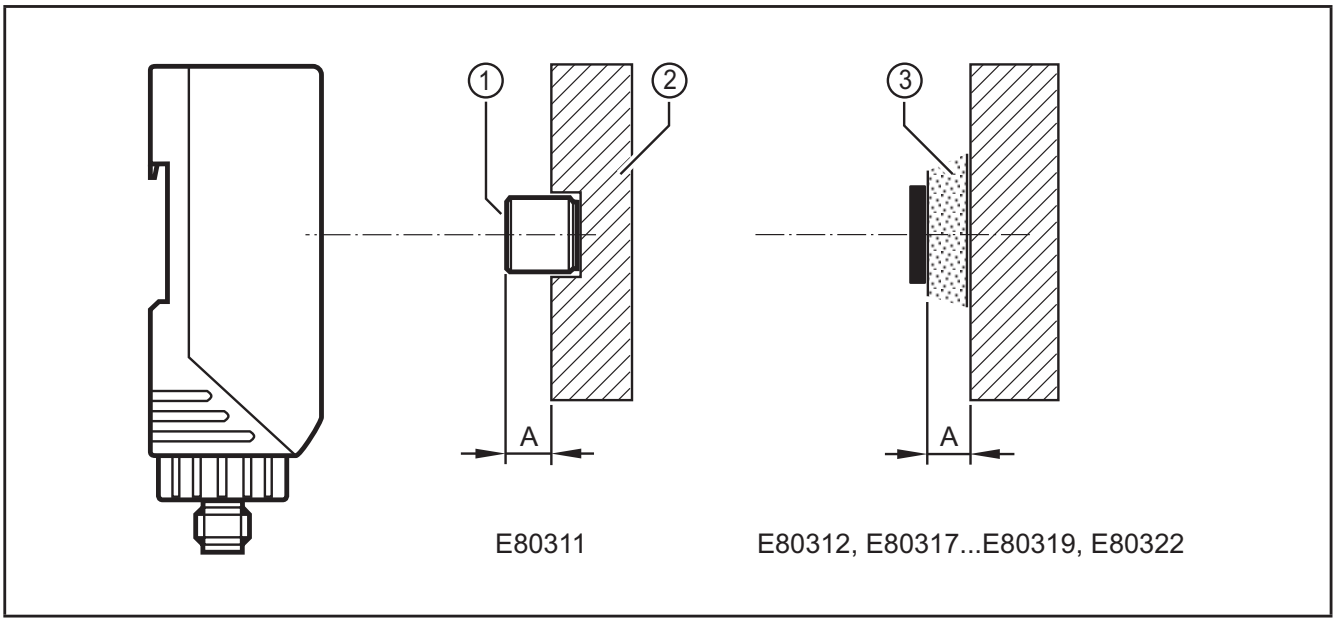


1: Upper limit
2: Lower limit
3: Read/write area

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

ID tag	Distance from metal A [mm]					
	7	8	9	10	12	14
E80311	12...20	10...24	8...26	6...28	4...30	0...35

4.2.2 E80312...E80322

ID tag	Distance from metal A [mm]		
	5	10	15
E80312	25	30	35
E80317	35	40	45
E80318	–	65	70
E80319	70	80	90
E80320	75	80	85
E80322	60	65	70

Read/write distances in mm