SIEMENS

SIMATIC Ident
RFID systems
ANT 3
Compact Operating Instructions

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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1 Features

ANT 3	Characteristics	
	Area of application	Small assembly lines
	Writing/reading distance	up to 50 mm (depending on the transponder)
	Connecting cable	3 m (plug-in antenna cable)
	Connectable readers	RF250R / RF350R
	Degree of protection	IP67

2 Ordering data

Table 2-1 Ordering data ANT 3

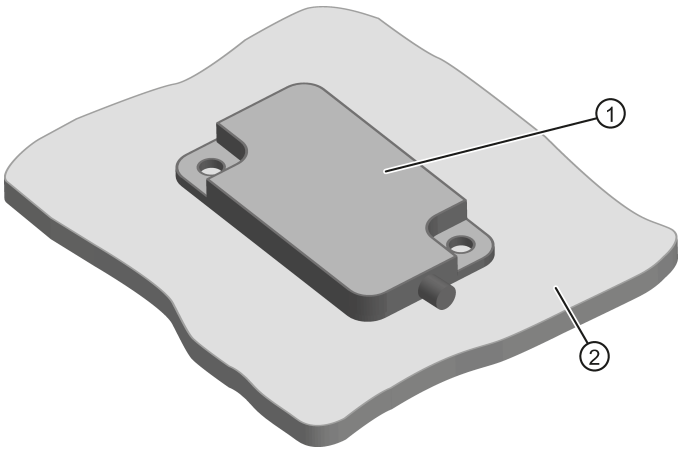
Antenna	Article number
ANT 3 (incl. one plug-in antenna cable 3 m)	6GT2398-1CD40-0AX0
ANT 3 (without antenna cable)	6GT2398-1CD30-0AX0

Table 2-2 Ordering data ANT 3 accessories

Accessories	Article number
Antenna cable, 3 m	6GT2398-0AH30

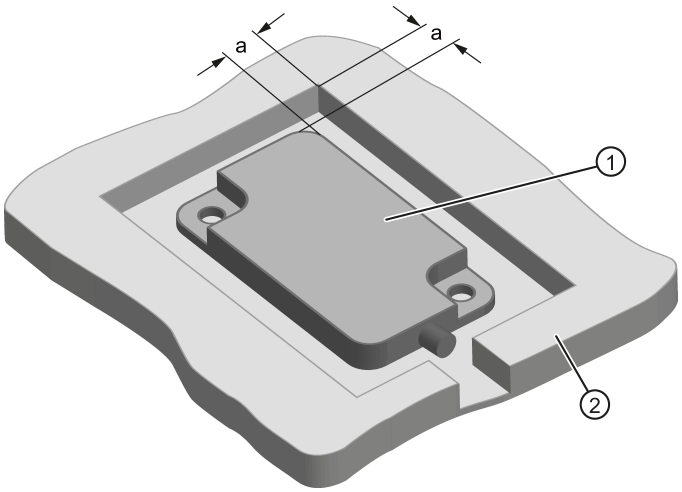
3 Mounting on/in metal

The tuning of the ANT 3 antenna is optimized for mounting on metal.



① ANT 3
② Metal

Figure 3-1 ANT 3 mounted on metal



① ANT 3
② Metal
a = 10 mm

Figure 3-2 ANT 3 flush-mounted in metal

4 Operating / limit distances

The operating / limit distances listed in the following table relate to an ANT 3 mounted on metal.

Table 4-1 Operating / limit distances of the transponders

	RF250R with ANT 3 Operating distance (S_a)	RF250R with ANT 3 Limit distance (S_g)	RF350R with ANT 3 Operating distance (S_a)	RF350R with ANT 3 Limit distance (S_g)
RF320T	--	--	1 ... 16	20
RF330T (without metal)	--	--	1 ... 16	20
RF330T (with metal)	--	--	1 ... 16	0
RF330T (in metal - 10 mm clearance all around)	--	--	1 ... 15	18
RF330T (in metal - 0 mm clearance all around)	--	--	1 ... 12	15
RF340T	--	--	2 ... 32	40
RF350T	--	--	2 ... 35	42
MDS D124	0 ... 32	40	0 ... 35	42
MDS D160	0 ... 16	20	0 ... 16	20
MDS D324	0 ... 32	40	0 ... 32	40
MDS D422	0 ... 12	15	0 ... 12	15
MDS D423 (without metal)	0 ... 20	25	0 ... 24	30
MDS D423 (on metal)	0 ... 24	30	0 ... 25	32
MDS D423 (in metal - 10 mm clearance all around)	0 ... 24	30	0 ... 25	32
MDS D423 (in metal - 0 mm clearance all around)	0 ... 16	20	0 ... 18	22
MDS D424	0 ... 42	48	0 ... 45	50
MDS D425	0 ... 16	20	0 ... 16	20
MDS D428	0 ... 25	32	0 ... 25	32
MDS D460	0 ... 18	25	0 ... 18	25

All values are in mm

5 Minimum spacing

Note

Extension of the data transmission time if distance values are undershot

If the distance values specified in the tables are undershot, it is possible that the inductive fields will be affected. In this case, the data transmission time can increase unpredictably or a command is aborted with an error.

For this reason, please observe the values in the tables.

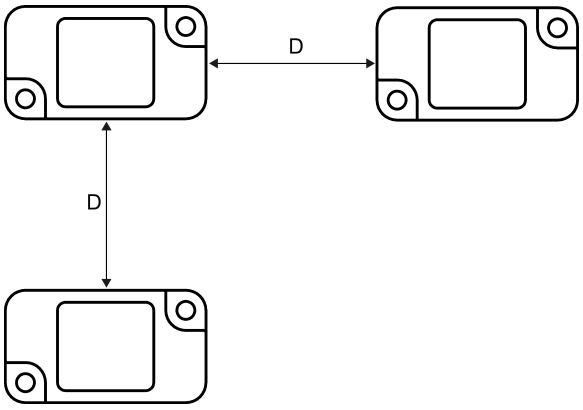
Minimum distances from transponder to transponder (without multitag mode)

Table 5-1 Minimum distances transponder edge to transponder edge

	MDS D124 / MDS D160 / MDS D324 / MDS D423 / MDS D424 / MDS D428 / MDS D460	MDS D422 / MDS D425	RF320T / RF330T / RF340T / RF350T
RF250R with ANT 3	> 80 mm	> 60 mm	--
RF350R with ANT 3	> 80 mm	> 60 mm	> 50 mm

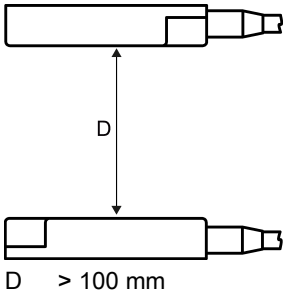
All values are in mm

Minimum distances from antenna to antenna



D > 60 mm (with 2 antennas)
> 80 mm (with 3 antennas)

Figure 5-1 Minimum distance for ANT 3



D > 100 mm

Figure 5-2 Face-to-face distance between two ANT 3s

6 Technical data

	6GT2398-1CD30-0AX0 6GT2398-1CD40-0AX0
Product type designation	ANT 3
Electrical data	
Maximum write/read distance ANT ↔ Transponder (S_g)	50 mm
Interfaces	
Plug connection	M8, 4-pin socket on antenna side
Mechanical specifications	
Housing	
• Material	• Plastic PA6-V0
• Color	• Black
MTBF	1,2 × 10^8 h
Permitted ambient conditions	
Ambient temperature	
• During operation	• -25 °C ... +70 °C
• During transportation and storage	• -40 °C ... +85 °C
Degree of protection to EN 60529	IP67
Shock-resistant to EN 60721-3-7, Class 7 M3	50 g [1)]
Vibration-resistant to EN 60721-3-7, Class 7 M3	20 g [1)]
Design, dimensions and weight	
Dimensions (L × W × H)	
• Housing without antenna connector	• 50 × 28 × 10 mm
• Housing with antenna connector	• 240 × 28 × 10 mm
Weight	
• Housing with antenna connector	• Approx. 35 g
• Housing with antenna connector and antenna cable	• Approx. 160 g
Type of mounting	2 x M4 screws
Cable length	3 m (plug-in antenna cable)

1) Warning: The values for shock and vibration are maximum values and must not be applied continuously.

7 Dimension drawing

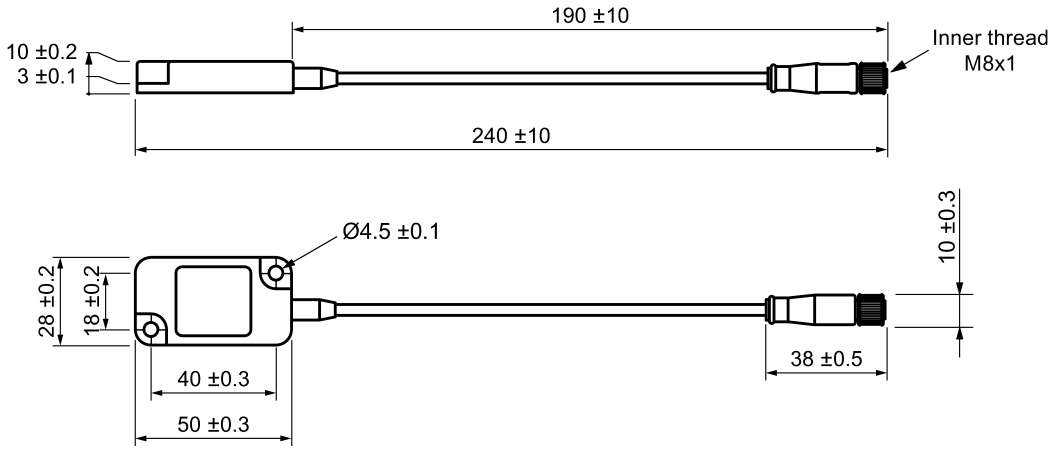


Figure 7-1 Dimension drawing ANT 3 (all values in mm)

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