

Read/Write Devices

5

5.1 Introduction

5.1.1 SLG with RS 232 Serial Interface

Application area

The SLG with the RS 232 serial interface represents the communication interface between practically any superordinate computer systems/PCs and the mobile data storage unit (MDS).

In accordance with customer-specific requirements, the following variants are available:

- SLG D10 ANT D5
- SLG D11 ANT D5
- SLG D12

A robust housing and the high degree of protection (IP65) permit deployment in the most severe industrial environments.

Design and functions

The SLG is connected via a serial interface (RS 232) of the PC, which permits communication with PCs or external PLCs. Commands and the data to be written or read are converted via a modulator/demodulator circuit.

The amount of data that can be transferred between SLG and MDS depends on the following factors.

- The speed at which the MDS moves through the SLG's transmission window (antenna)
- The length of the transmission window

Use of the C++ library permits the SLG to be programmed quickly using applications under Windows 9x/2000 and NT 4.0.

Table 5-1 Table providing an overview of the SLG with an RS 232 serial interface

SLG Type	Working distance S_a (depending on MDS)	Limit distance S_a (dependent on the MDS)	Temperature range (during operation)	SLG dimensions (L x W x H) in mm	Antenna dimensions (L x W x H) in mm	Protection rating
SLG D10 ANT D5	0 to 380 mm	450 mm	-20 to +55 °C	320 x 145 x 100	340 x 325 x 38	IP65
SLG D11 ANT D5	0 to 240 mm	300 mm	-20 to +70 °C	160 x 80 x 40	340 x 325 x 38	IP65
SLG D12	0 to 120 mm	150 mm	-20 to +70 °C	160 x 80 x 40	–	IP65

Definition of IP65

- Protection against penetration of dust (i.e. dust-proof)
- Full protection against touch
- Protection against water jet

Configuration
SLG – MDS
(via RS 232)

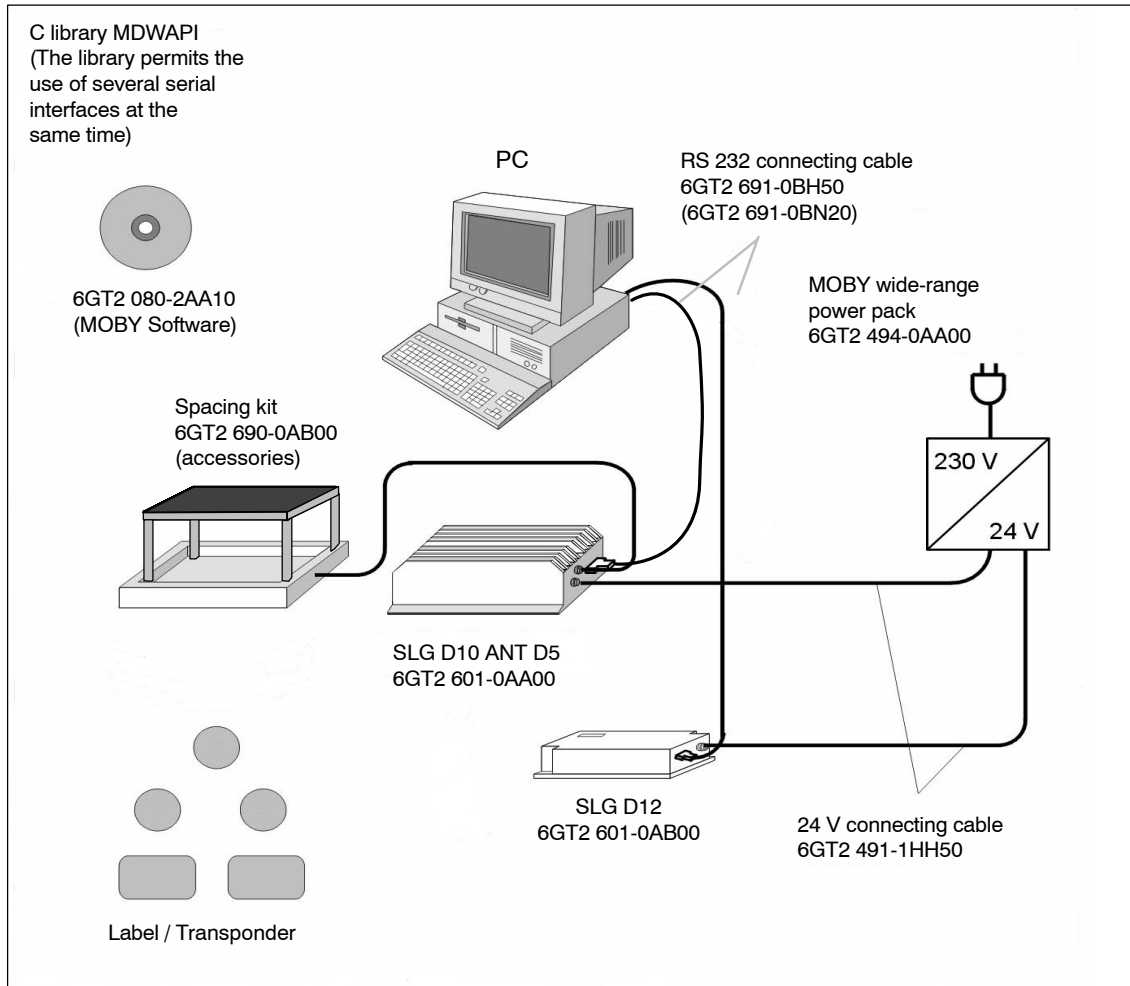


Figure 5-1 SLG – MDS configuration via RS 232

Programming of the SLG D 10, SLG D 11, and SLG D 12

Communication at the serial interface between the SLG and the superordinate computer system (host) takes place by means of an asynchronous 8-bit binary protocol. The frames are secured by means of a CRC 16.

Can be run on PC models as of the Pentium 2 processor with a serial interface and a Windows 9x/2000/NT 4.0 operating system.

The SLG is connected to a serial interface of the computer. Users work with the PC interfaces COM 1 and/or COM 2; 8 interfaces can be run with additional hardware.

A 32-bit library (MDWAPI for Windows 9x/2000 and NT 4.0) and a programming guide are available to the user for programming (Software MOBY CD).

For computers that do not run under Windows (e.g. UNIX), the communication specification is described in the programming guide (MDWAPI).

Parameter defaults

The configuration parameters are described in the programming guide (MDWAPI).

Table 5-2 Ordering data for the MOBY software

	Order No.
MOBY Software	6GT2 080-2AA10

Note

on MOBY software and licensing

When you purchase an ASM or SLG interface module, this does not include software or documentation. The “**Software MOBY**” CD-ROM, which contains all the available FBs/FCs for SIMATIC, C libraries for Windows, demo programs, etc., can be ordered **additionally**.

The CD-ROM also includes the complete set of MOBY documentation (German, English, and in some cases French) in PDF format. When you purchase an ASM or SLG interface module, the price for use of the software including documentation on the “Software MOBY” CD-ROM is included. The purchaser obtains the right to make copies (duplication license) as needed for customer applications or system development for the plant.

The enclosed contract also applies to the use of software products for a one-off charge.

5.1.2 SLG with RS 422 for SIMATIC S7 and PROFIBUS-DPV1

Application area The SLG D1xS provides inductive communication with the mobile data storage units (MDSs) and the serial link to the interface modules (ASMs). Various SLGs – for short, medium, and long distances to the MDS – are available to meet customer requirements.

- SLG D10S ANT D5
- SLG D11S ANT D5
- SLG D12S

A robust housing and the high degree of protection (IP65) permit deployment in the most severe industrial environments.

Design and functions The SLG executes commands received from the interface module. These commands and the data to be read or written are converted via an appropriate modulator/demodulator circuit. Communication between MDS and the SLG takes place via inductive alternating fields.

The amount of data that can be transferred between SLG and MDS depends on the following factors.

- The speed at which the MDS moves through the transmission window of the SLG's antenna
- The length of the transmission window
- The MDS type

Table 5-3 Table providing an overview of the SLG with an RS 422 interface

SLG Type	Working distance S_a (depending on MDS)	Limit distance S_a (dependent on the MDS)	Temperature range (during operation)	SLG dimensions (L x W x H) in mm	Antenna dimensions (L x W x H) in mm	Protection rating
SLG D10S ANT D5	0 to 380 mm	450 mm	-20 to +55 °C	320 x 145 x 100	340 x 325 x 38	IP65
SLG D11S ANT D5	0 to 240 mm	300 mm	-20 to +70 °C	160 x 80 x 40	340 x 325 x 38	IP65
SLG D12S ¹	0 to 120 mm	150 mm	-20 to +70 °C	160 x 80 x 40	–	IP65

1 Integrated antenna

Definition of IP65

- Protection against penetration of dust (i.e. dust-proof)
- Full protection against touch
- Protection against water jet

5.1.3 Troubleshooting

What should you do if nothing works?

1. Check the supply voltage directly on the SLG connector using a measuring instrument.
2. Check the cabling to the PC
 - Do the SLG and PC have the same physical interface?
 - Is the polarity of the connecting cable correct (RS 232)? (RxD of the SLG must be connected to TxD of the PC and vice versa)
 - Is the cable shield applied correctly?

Error messages

Error messages are described in the programming guide (MDWAPI).

SLG range too low

If the SLG range is too low, check:

- The power supply unit/switched-mode power supply unit (see Section 3.4 on electrical interference)
- Whether there are monitors or other sources of interference in the vicinity (see Section 3.4)
- Whether there is metal in the immediate vicinity (see Section 3.3)
- To attain optimal read/write distances for the ANT D 5, a metal plate is required at a distance of 100 mm (see Table 3-8 and 3-9).

5.2 SLG D10 ANT D5

Application area

The SLG D10 ANT D5 is a high-performance read/write device with a serial interface and a separate antenna, designed specifically for storage, logistics, and distribution applications. It is designed for a range of up to 600 mm (depending on the label). The read/write device has an RS 232 serial interface (RS 422 interface on request), which permits communication with PCs or external PLCs.

For simple and rapid programming there is a C library available to the user that can be used under Windows 9x, 2000, and NT. The SLG D10 ANT D5 is multitag capable.



Figure 5-2 Read/write device SLG D10 ANT D5

Ordering data

Table 5-4 Ordering data for the SLG D10 ANT D5

	Order No.
Read/write device SLG D10 ANT D5 with an RS 232 serial interface for standard PCs, with a separate antenna	6GT2 601-0AA00
Accessories:	
Spacer kit for ANT D5	6GT2 690-0AB00
MOBY wide-range power pack	6GT2 494-0AA00
Cables and connectors	See Section 3.6

Technical data

Table 5-5 Technical data of the SLG D10 ANT D5

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz Transponder in accordance with ISO 15693 (e.g. I-Code, Tag-it, my-d)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 232 (RS 422 on request) Asynchronous 8 bit 9600 bps to 115.2 kbps (adjustable) CRC 16
Output power	4 W
SLG - MDS read/write distances	Typically 450 mm (see field data) ¹
Software functions Programming	MDS: Read, write, initialize, access rights, multitag Windows 9x, 2000, and NT, with available 32-bit DLL
Multitag	Yes
Anti-collision speed	Approx. 20 labels/s identifiable in parallel
Power supply	24 VDC $\pm 5\%$
Current consumption Operation Transient making current	0.9 A 2.8 A/50 ms
Line length, SLG – PC With RS 232 With RS 422 Antenna line length	30 m 300 m 3.60 m
Digital inputs/outputs	None
Housing Dimensions (in mm) For antenna [L x W x H] For electronic components [L x W x H] Color Material Connector Antenna (can be connected to the SLG)	340 x 325 x 38 320 x 145 x 100 (without connector) Black Anthracite Plastic ASA Aluminum TNC connector
Mounting of SLG Mounting of antenna	4 M6 screws 4 M5 screws
Ambient temperature in operation in transit and storage	-20 °C to +55 °C -25 °C to +70 °C

Table 5-5 Technical data of the SLG D10 ANT D5

Protection rating in accordance with EN 60529 SLG and antenna	IP65
Shock in accordance with EN 60721-3-7 Class 7M2	30 g
Total shock response spectrum type II	
Vibration in accordance with EN 60721-3-7 Class 7M2	1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)
Weight, approx.	
SLG	3500 g
Antenna	1000 g
Certifications	Radio EN 300 330 CE Safe for pacemakers

- 1 To ensure optimal field data in a metallic environment, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

Caution

The antenna cable is prepared in advance. If the cable is changed, the warranty and CE marking become invalid.

Field data

Table 5-6 Field data of the SLG D10 ANT D5

Limit distance (S_g)	Max. 450 mm (dependent on transponder)
Working distance (S_a)	0 to 380 mm (dependent on transponder)
Length of the transmission window (L_d)	320 mm
Width of the transmission window (W)	128 mm
Minimum distance from ANT D5 to ANT D5	≥ 2 m

Transmission window

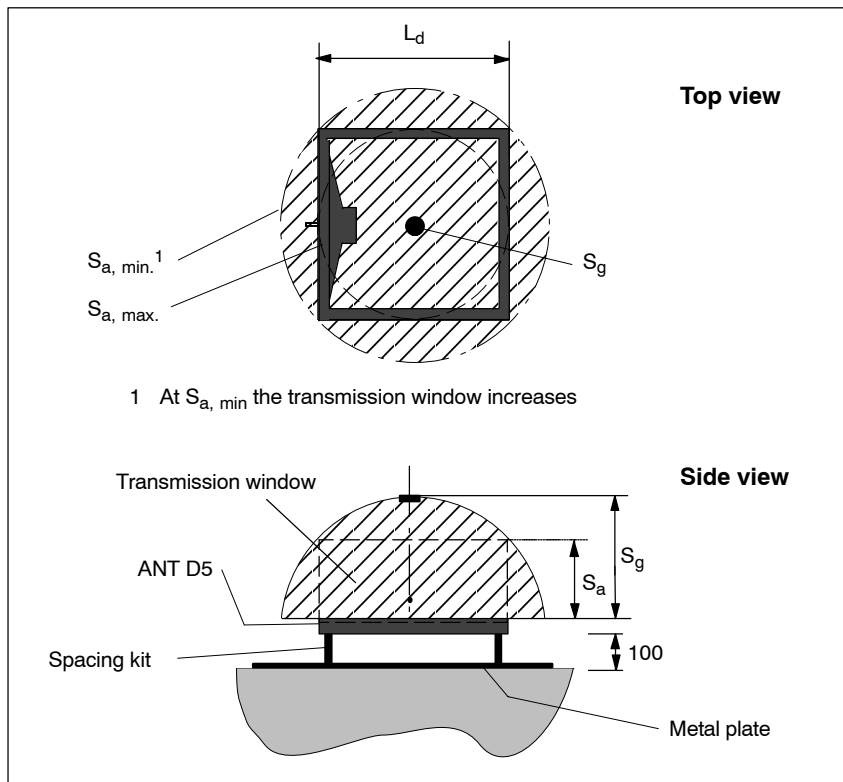


Figure 5-3 Transmission window with the SLG D10 ANT D5

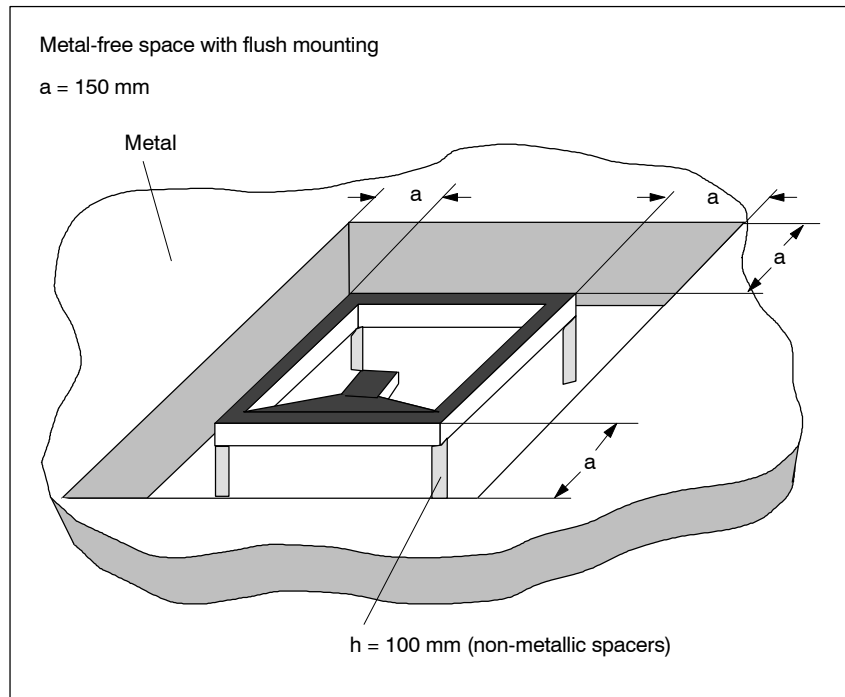
Metal-free space

Figure 5-4 Metal-free space for the SLG D10 ANT D5

FCC information

Made in Germany
 SIEMENS MOBY D SLG D10
 FCC ID NXW-MOBYD-SLGD10

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of the distance D

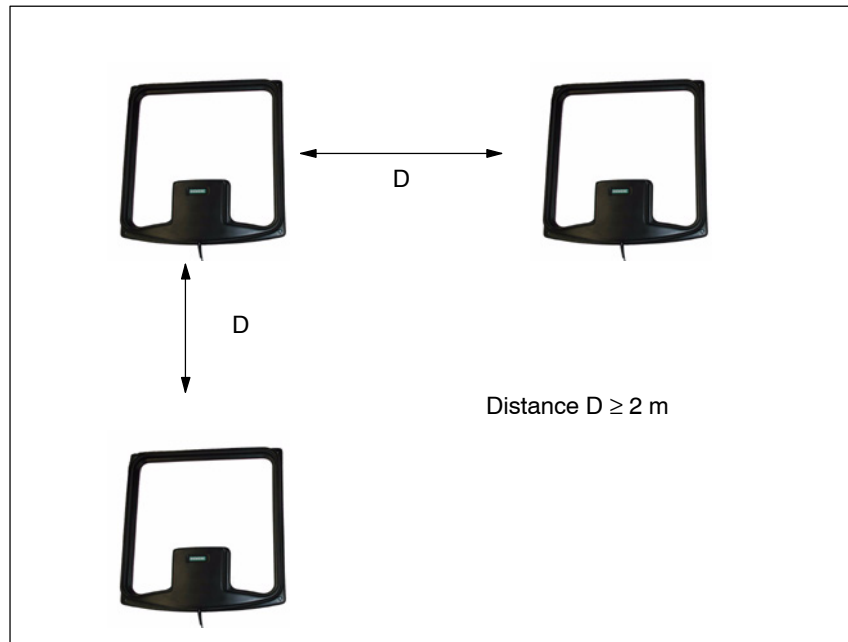


Figure 5-5 Distance D: SLG D10 ANT D5

**Dimensions
(in mm)**

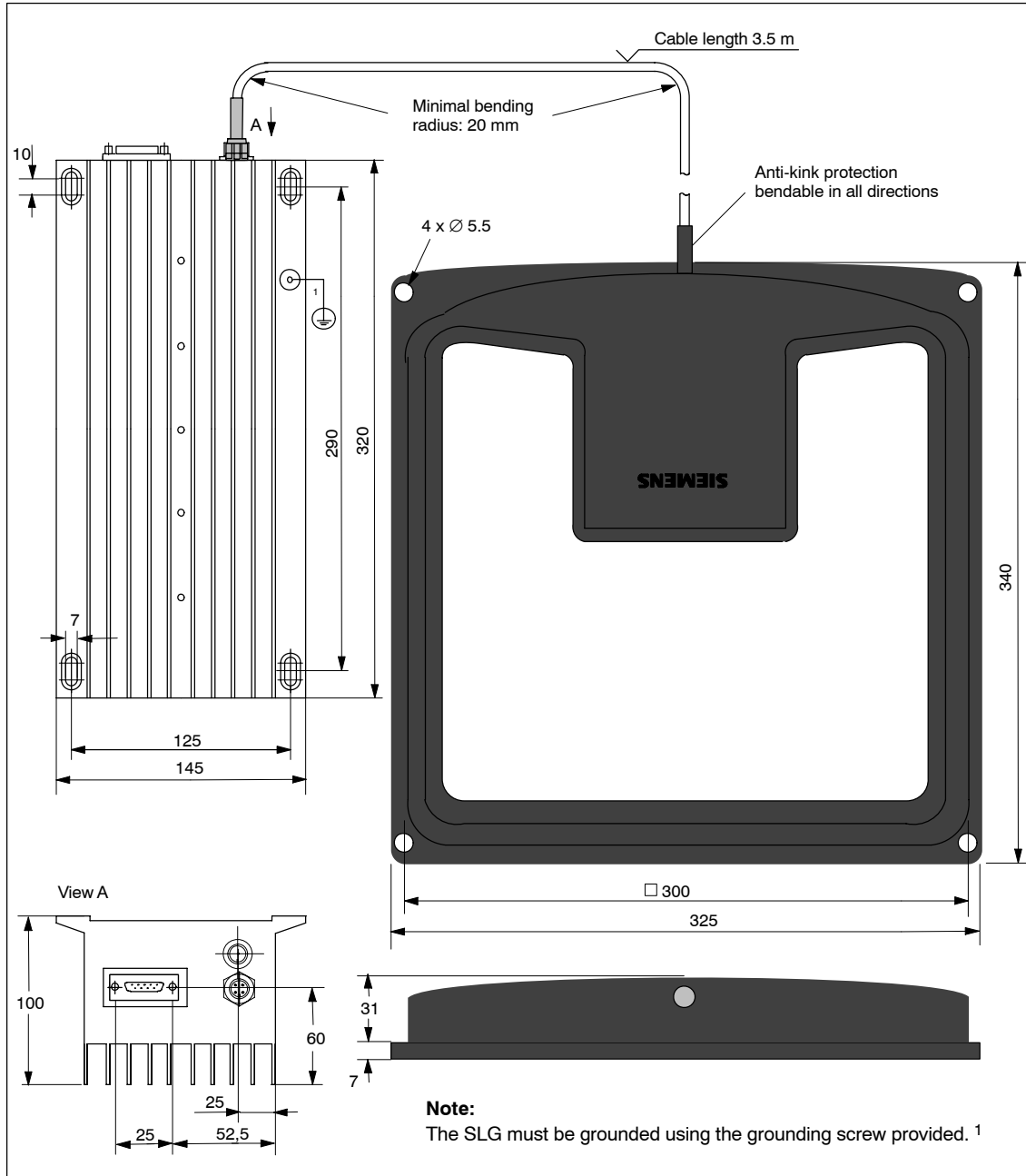


Figure 5-6 Dimensioned drawing of the SLG D10 ANT D5

Note

In order to ensure optimal field data in surroundings where there is metal as well, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

Spacing kit for the MOBY D ANT D5

Table 5-7 Ordering data for the spacing kit MOBY D ANT D5

	Order No.
Spacing kit for the ANT D5 made of aluminum with plastic spacers including fixing screws	6GT2 690-0AB00
Individual parts	Quantity
Aluminum plate 380 x 380 x 2	1
Plastic bolts 100 x 20	4
Countersunk head screws M5 x 12	4
Cylinder head screws M5 x 15	4
Washer for M5	4
Spring lock washer for M5	4

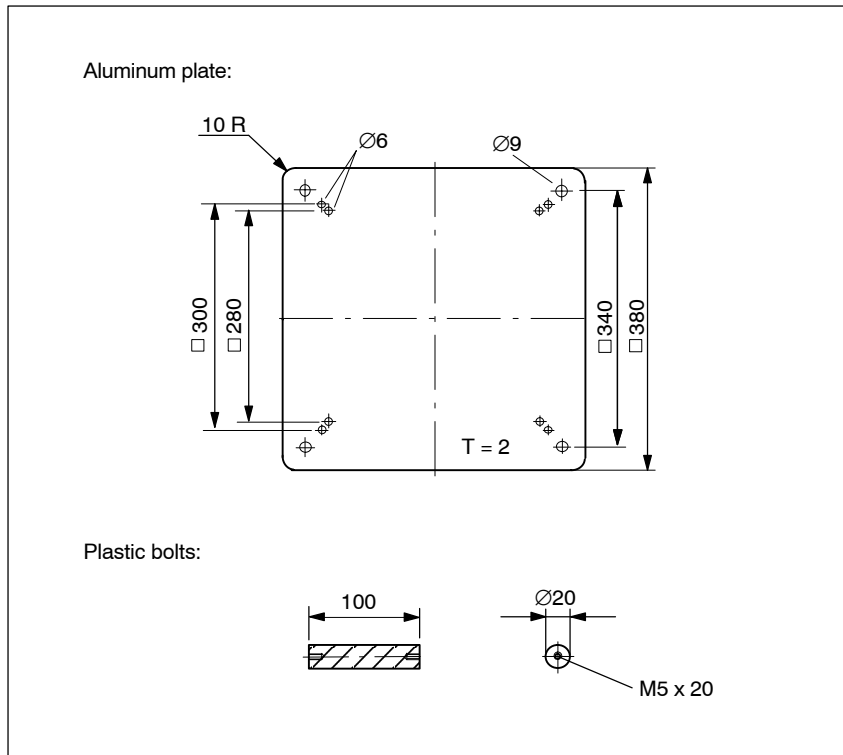


Figure 5-7 Dimensioned drawing for the spacing kit for the MOBY D ANT D5

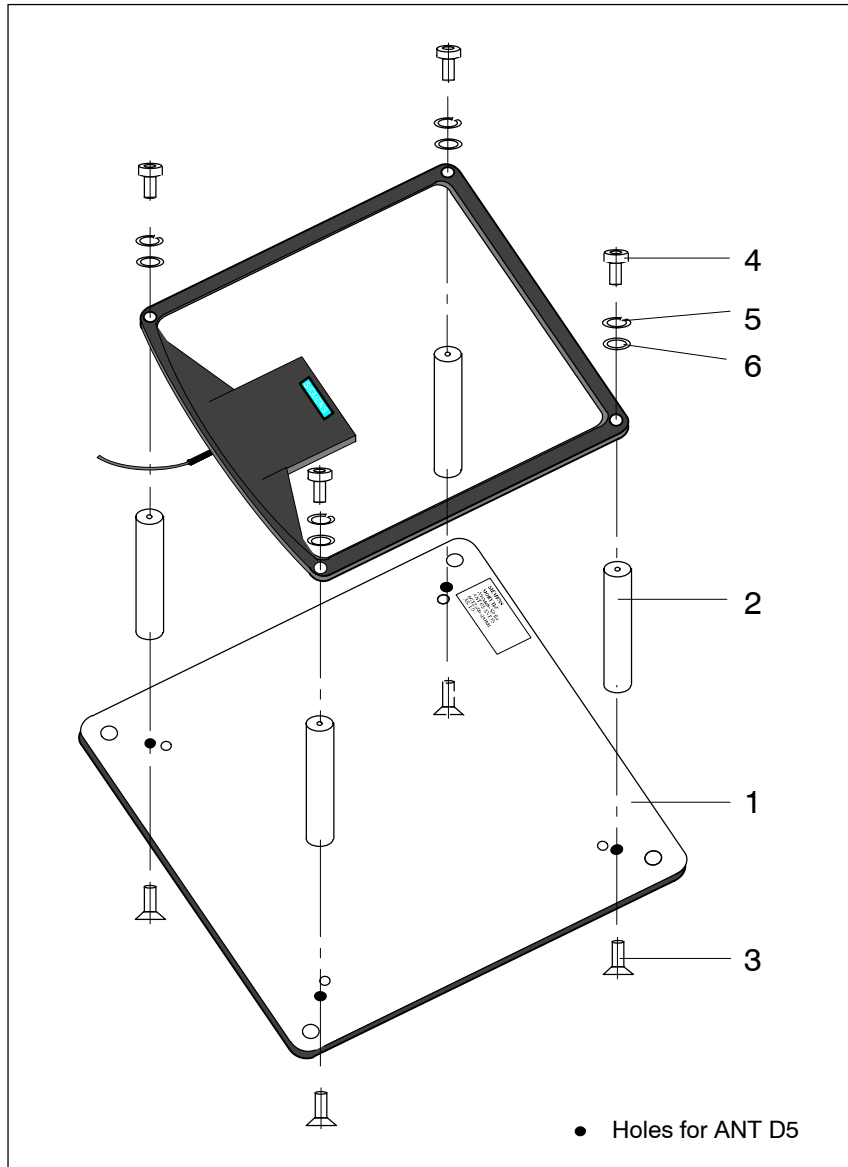


Figure 5-8 Mounting diagram for spacer kit

5.3 SLG D11 ANT D5

Application area

The SLG D11 ANT D5 is a medium-performance read/write device with a serial interface and a separate antenna, designed specifically for storage, logistics, and distribution applications. It is designed for a range of up to 300 mm (depending on the label).

The read/write device has an RS 232 serial interface (RS 422 interface on request), which permits communication with PCs or external PLCs.

For simple and rapid programming there is a C library available to the user that can be used under Windows 9x, 2000, and NT. The SLG D11 ANT D5 is multitag capable.



Figure 5-9 Read/write device SLG D11 ANT D5

Ordering data

Table 5-8 Ordering data for the SLG D11 ANT D5

	Order No.
Read/write device SLG D11 ANT D5 with an RS 232 serial interface for standard PCs, with a separate antenna	6GT2 601-0AC00
Accessories:	
ANT D5 spacer kit	6GT2 690-0AB00
MOBY wide-range power pack	6GT2 494-0AA00
Cable and connector	See Section 3.6

Technical data

Table 5-9 Technical data of the SLG D11 ANT D5

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz Transponder in accordance with ISO 15693 (e.g. I-Code, Tag-it, my-d)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 232 (RS 422 on request) Asynchronous 8 bit 9600 bps to 38.4 kbps (adjustable) CRC 16
Output power	1 W
SLG - MDS read/write distances	Typically 300 mm (see field data) ¹
Software functions Programming	MDS: Read, write, initialize, access rights, multitag Windows 9x, 2000, and NT, with available 32-bit DLL
Multitag	Yes
Anti-collision speed	Approx. 20 labels/s identifiable in parallel
Power supply Nominal value Permissible range	24 VDC 20 to 30 VDC
Current consumption Operation Transient making current	150 mA 600 mA
Line length, SLG – PC With RS 232 Antenna line length	30 m 3.60 m
Digital inputs/outputs	None
Housing Dimensions (in mm) For antenna [L x W x H] For electronic components [L x W x H] Color Antenna SLG housing Material Antenna SLG housing Connector Antenna (can be connected to the SLG)	340 x 325 x 38 160 x 80 x 40 (without connector) Black Anthracite Plastic ASA Plastic (PA 12) TNC connector
Mounting of SLG Mounting of antenna	2 M5 screws 4 M5 screws

Table 5-9 Technical data of the SLG D11 ANT D5

Ambient temperature in operation in transit and storage	-25 °C to +70 °C -25 °C to +70 °C
Protection rating in accordance with EN 60529 SLG and antenna	IP65
Shock in accordance with EN 60721-3-7 Class 7M2 Total shock reply spectrum type II	30 g
Vibration in accordance with EN 60721-3-7 Class 7M2	1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)
Weight, approx. SLG Antenna	600 g 1000 g
Certifications	Radio EN 300 330 CE Safe for pacemakers

- 1 To ensure optimal field data in a metallic environment, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

Caution

The antenna cable is prepared in advance. If the cable is changed, the warranty and CE marking become invalid.

Field data

Table 5-10 Field data of the SLG D11 ANT D5

Limit distance (S_g)	Max. 300 mm (dependent on transponder)
Working distance (S_a)	0 to 240 mm (dependent on transponder)
Length of the transmission window (L_d)	300 mm
Width of the transmission window (W)	120 mm
Minimum distance from ANT D5 to ANT D5	≥ 2 m

Transmission window

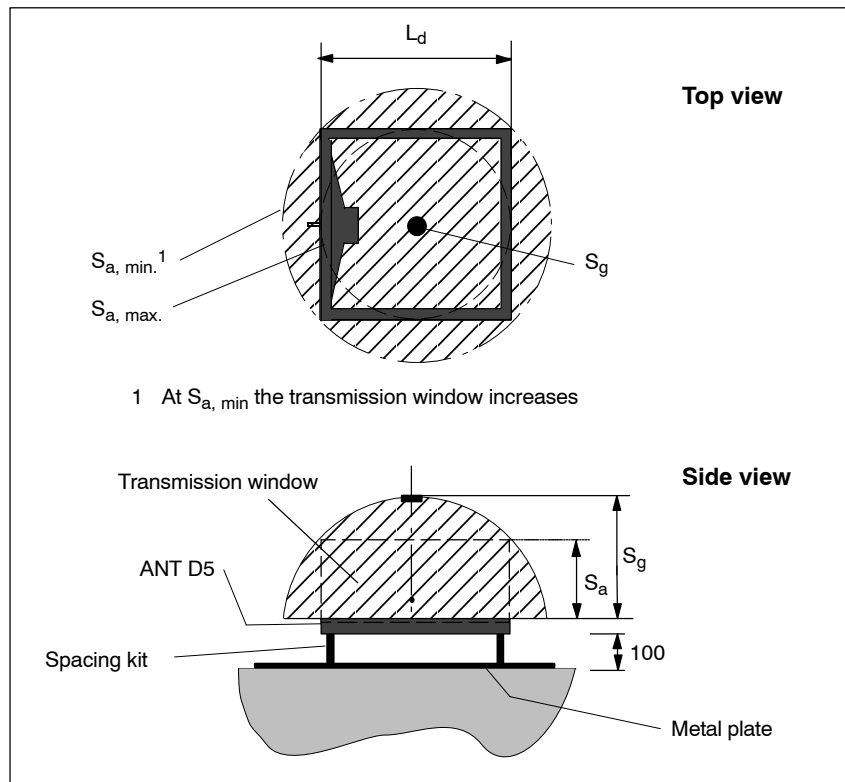


Figure 5-10 Transmission window with the SLG D11 ANT D5

Metal-free space

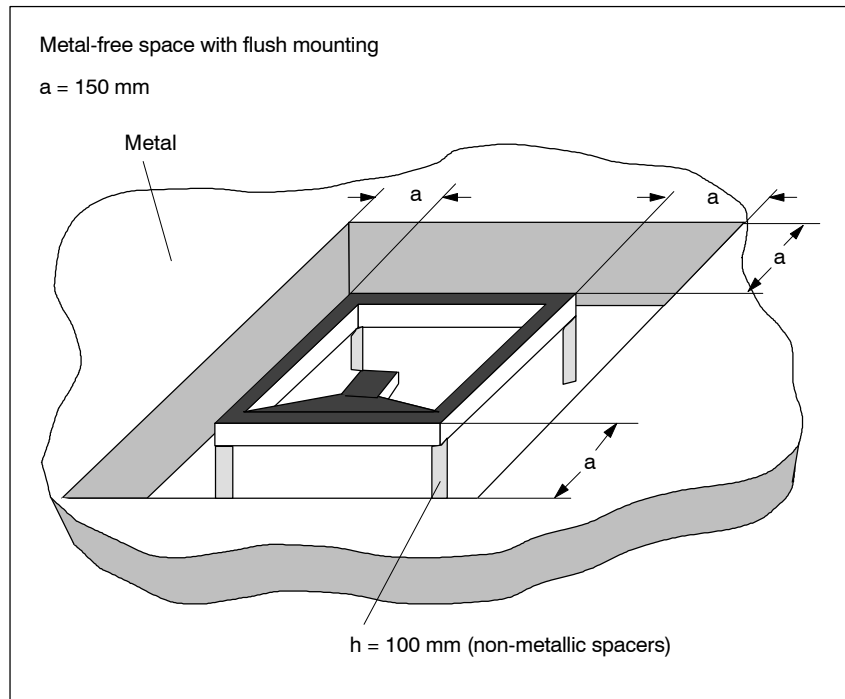


Figure 5-11 Metal-free space for the SLG D11 ANT D5

FCC information

Made in Germany
SIEMENS MOBY D SLG D11
FCC ID NXW-MOBYD-SLGD11

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of the distance D

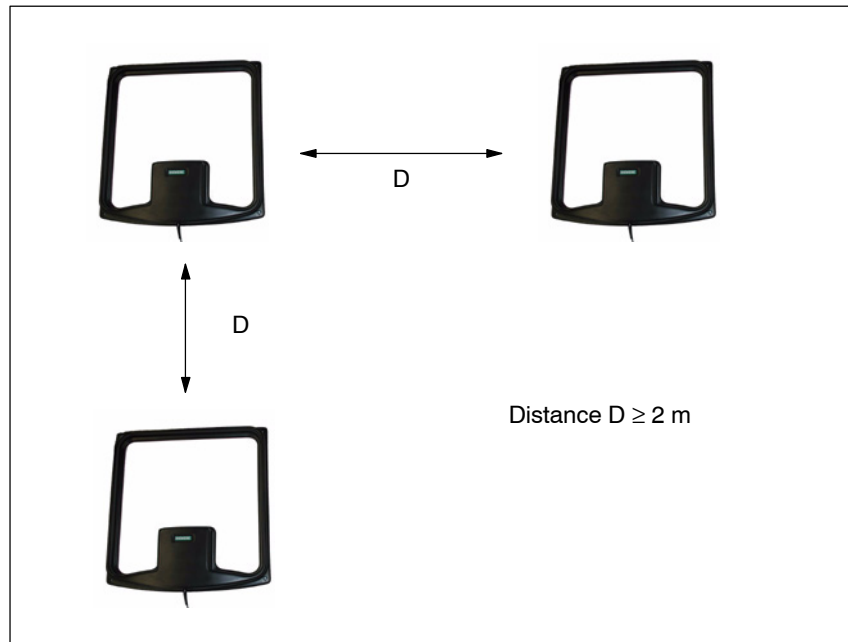


Figure 5-12 Distance D: SLG D11 ANT D5

**Dimensions
(in mm)**

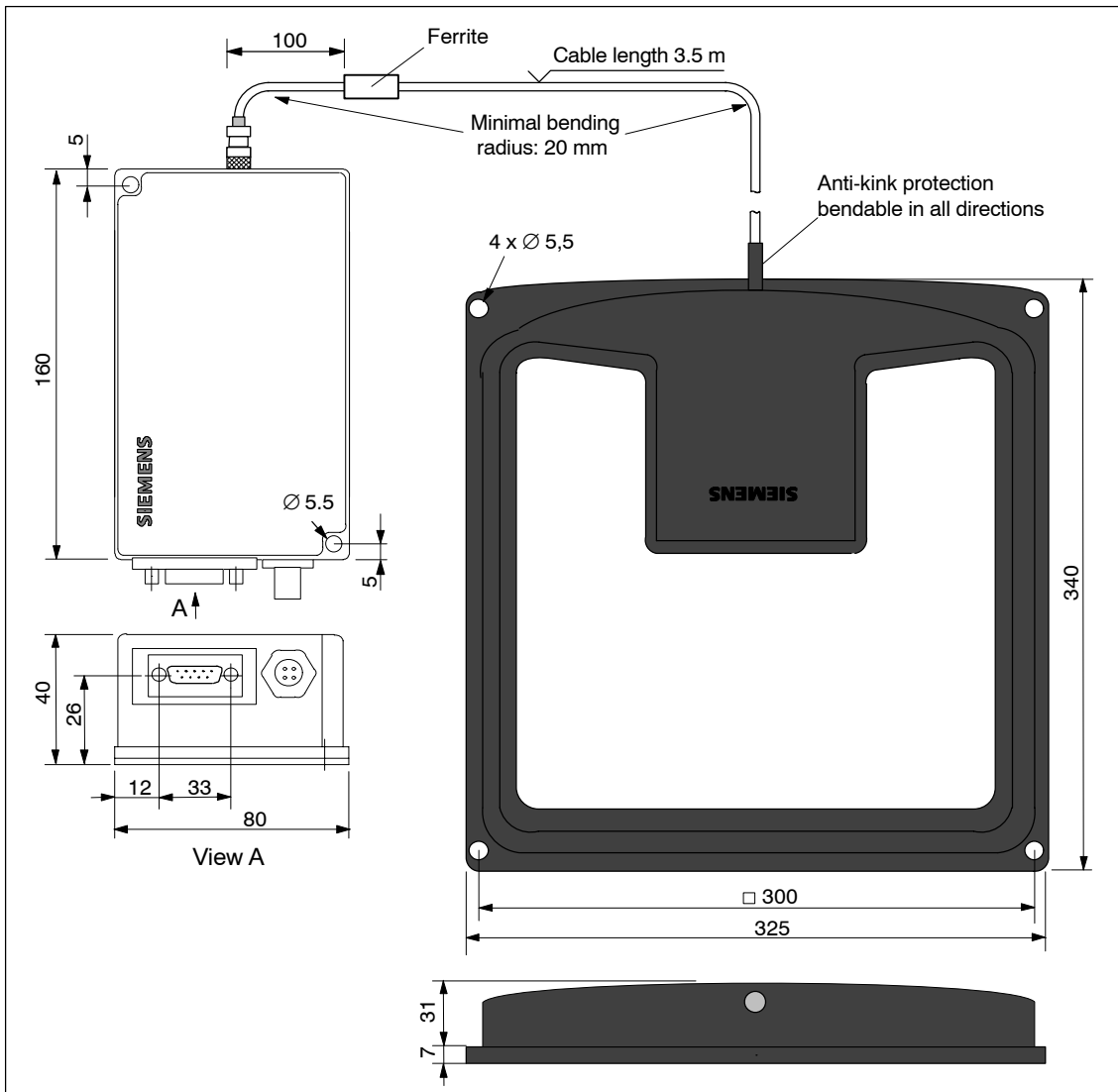


Figure 5-13 Dimensioned drawing of the SLG D11 ANT D5

Note

In order to ensure optimal field data in surroundings where there is metal as well, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

**MOBY D ANT D5
spacer kit**

see Chapter 5.2

5.4 SLG D12

Application area

The SLG D12 is a medium-performance read/write device with a serial interface and an integrated antenna, designed for a range of up to 150 mm. The read/write device has an RS 232 serial interface (RS 422 interface on request), which permits communication with PCs or external PLCs.

For simple and rapid programming there is a C library available to the user that can be used under Windows 9x, 2000, and NT. The SLG D12 is multitag capable.



Figure 5-14 Read/write device SLG D12

Ordering data

Table 5-11 Ordering data for the SLG D12

	Order No.
Read/write device SLG D12 With an RS 232 serial interface for standard PCs, with an integrated antenna	6GT2 601-0AB00
Accessories:	
MOBY wide-range power pack	6GT2 494-0AA00
Cables and connectors	See Section 3.6

Technical data

Table 5-12 Technical data of the SLG D12

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz Transponder in accordance with ISO 15693 (e.g. I-Code, Tag-it, my-d)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 232 (RS 422 on request) Asynchronous 8 bit 9600 bps to 38.4 kbps (adjustable) CRC 16
SLG - MDS read/write distances	Typically 150 mm (see field data)
Software functions Programming	MDS: Read, write, initialize, access rights, multitag Windows 9x, 2000, and NT, with available 32-bit DLL
Multitag	Yes
Anti-collision speed	Approx. 20 labels/s identifiable in parallel
Power supply Nominal value Permissible range	24 VDC 20 to 30 VDC
Current consumption Operation Transient making current	150 mA 600 mA
Line length, SLG – PC With RS 232	30 m
Digital inputs/outputs	None
Housing Dimensions (L x B x H) in mm, without connector Color Material	160 x 80 x 40 Anthracite Plastic (PA 12)
Mounting	2 M5 screws
Ambient temperature in operation in transit and storage	-25 °C to +70 °C -25 °C to +70 °C
Protection rating in accordance with EN 60529 Shock in accordance with EN 60721-3-7 Class 7 M2 Total shock reply spectrum type II Vibration in accordance with EN 60721-3-7 Class 7M2	IP65 30 g 1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)

Table 5-12 Technical data of the SLG D12

Weight, approx.	500 g
Certifications	Radio EN 300 330 CE Safe for pacemakers

Field data

Table 5-13 Field data SLG D12

Limit distance (S_g)	Max. 150 mm (dependent on transponder)
Working distance (S_a)	0 to 120 mm (dependent on transponder)
Length of the transmission window (L_d)	120 mm
Width of the transmission window (W)	48 mm
Minimum distance from SLG D12 to SLG D12	≥ 500 mm

Transmission window

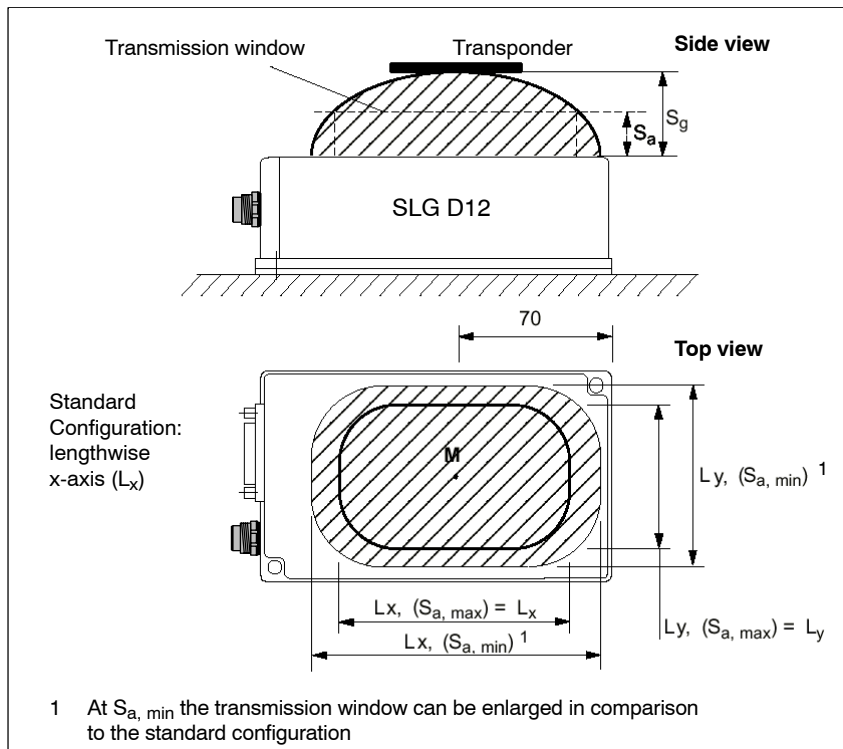


Figure 5-15 Transmission window of the SLG D12

Metal-free space

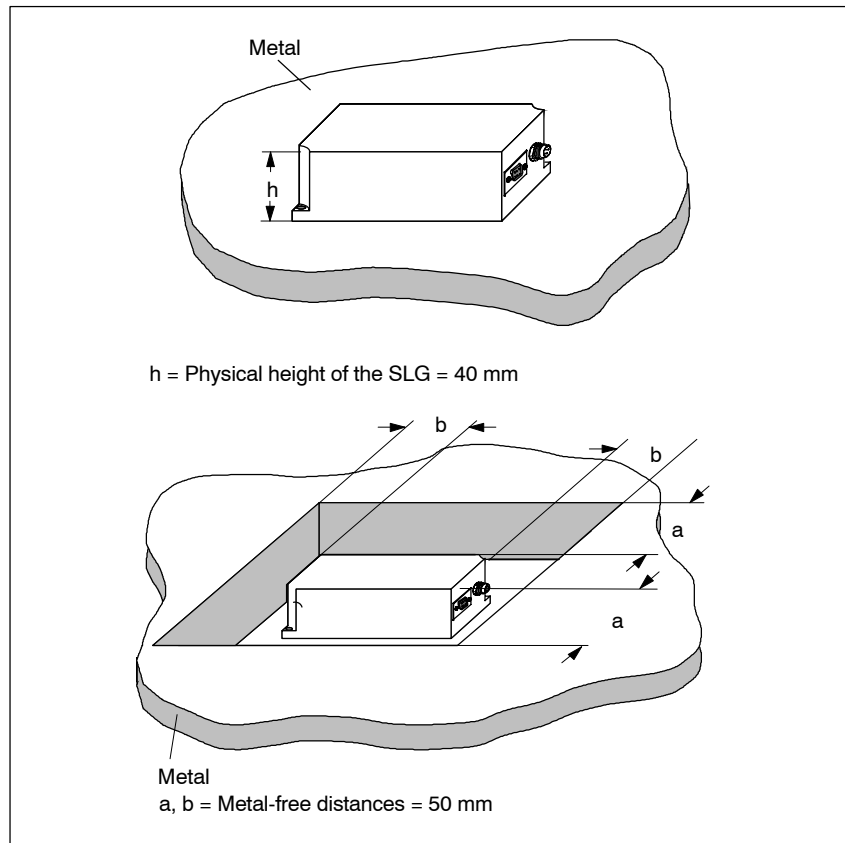


Figure 5-16 Metal-free space of SLG D12

FCC information

Made in Germany
SIEMENS MOBY D SLG D12
FCC ID NXW-MOBYD-SLGD12

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of distance D

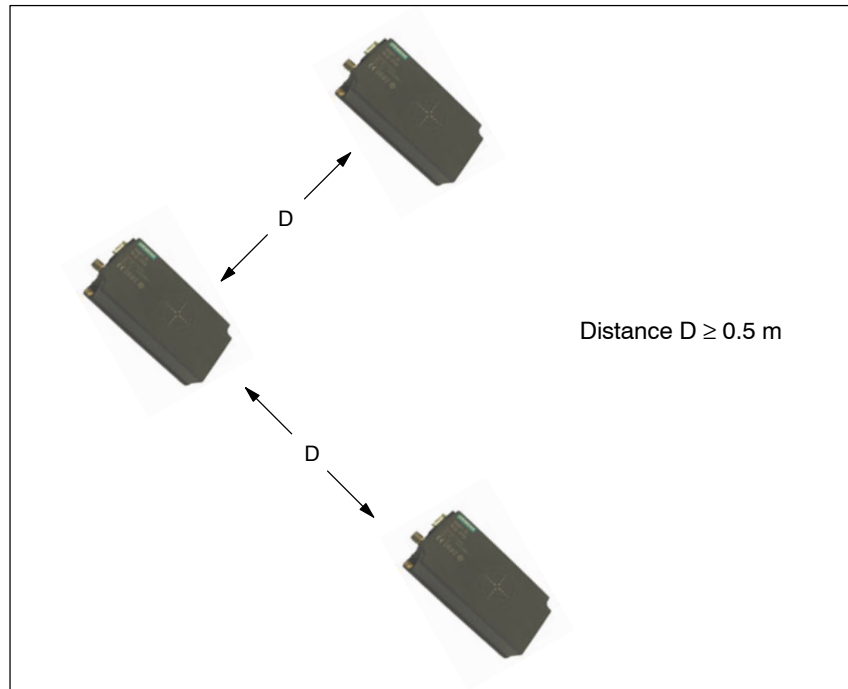


Figure 5-17 Distance D: SLG D12

**Dimensions
(in mm)**

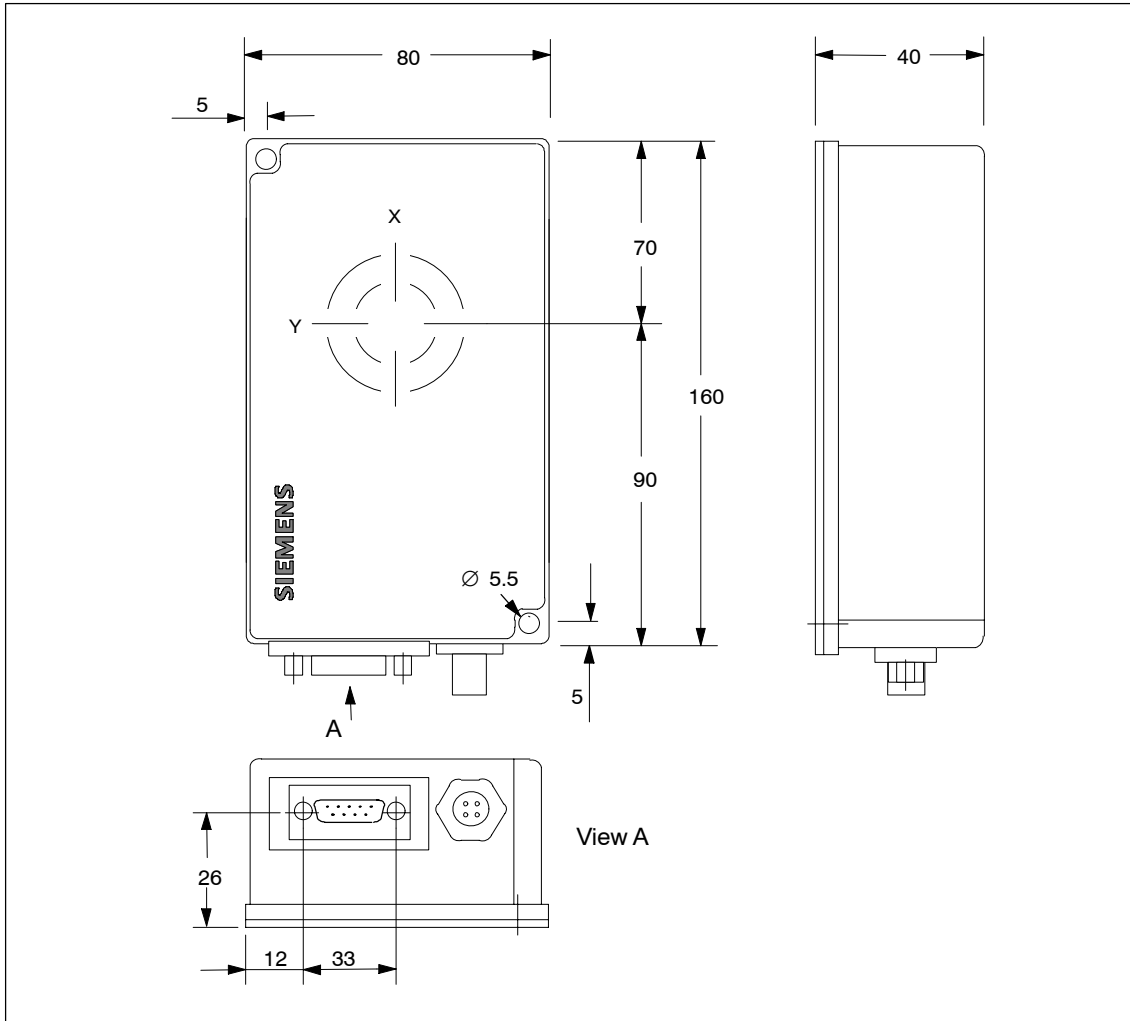


Figure 5-18 Dimensioned drawing of the SLG D12

5.5 SLG D10S ANT D5

Application area

The SLG D10S ANT D5 is a high-performance read/write device with a serial interface and a separate antenna, designed specifically for storage, logistics, and distribution applications. It is designed for a range of up to 600 mm (depending on the label). The read/write device has an RS 422 serial interface, which permits communication via interface modules (ASM 452, ASM 473 und ASM 475) to the SIMATIC S7 or PROFIBUS-DPV1.

FC 45 is available to the user for simple and rapid programming.

Due to the high degree of protection (IP65) and the use of high-quality materials, the SLG D10S ANT D5 ensures trouble-free use even under the most extreme industrial conditions.



Figure 5-19 Read/write device SLG D10S ANT D5

Ordering data

Table 5-14 Ordering data for the SLG D10S ANT D5

	Order No.
Read/write device SLG D10S ANT D5 With an RS 422 serial interface for connecting to an ASM 452, ASM 473, and ASM 475, with separate antenna	6GT2 602-0AA00
Accessories: ANT D5 spacer kit MOBY wide-range power pack Cables and connectors	6GT2 690-0AB00 6GT2 494-0AA00 See Section 3.6

Technical data

Table 5-15 Technical data of the SLG D10S ANT D5

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz <ul style="list-style-type: none"> • I-Code1 (e. g. MDS D139, MDS D160) • Transponder in accordance with ISO 15693 (e. g. I-Code SLI, Tag-it HFI, my-d SRF 55V10P)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 422 Asynchronous 8 bit 19.2 bps to 115.2 kbps (ASM-dependent) CRC 16
Output power	4 W
SLG-MDS read/write distances	Typically 450 mm (see field data) ¹
Software functions Programming Transmission protocol	Read, write, initialize MDS The command Repeat is not permissible. The user has a maximum buffer of 256 bytes in the SLG for pipelining. Hence, a command string can only contain as many individual commands as such that the sum of the header and user data fields lengths of the individual messages does not exceed this value. The FC 45 limits the length of the user data fields to 233 bytes per individual message. FC 45 3964 R
Multitag	in preparation
Power supply	24 VDC \pm 5%

Table 5-15 Technical data of the SLG D10S ANT D5

Current consumption	
Operation	0.9 A
Transient making current	2.8 A/50 ms
Line length (SLG – SIMATIC S7)	
With RS 422	300 m
Antenna line length	3.60 m
Digital inputs/outputs	None
Housing	
Dimensions (in mm)	
For antenna [L x W x H]	340 x 325 x 38
For electronic components [L x W x H]	320 x 145 x 100 (without connector)
Color	Antenna SLG housing
	Black Anthracite
Material	Antenna SLG housing
	Plastic ASA Aluminum
Connector	
Antenna (can be connected to the SLG)	TNC connector
Mounting of SLG	4 M6 screws
Mounting of antenna	4 M5 screws
Ambient temperature	
in operation	-20 °C to +55 °C
in transit and storage	-25 °C to +70 °C
Protection rating in accordance with EN 60529	
SLG and antenna	IP65
Shock in accordance with EN 60721-3-7 Class 7M2	30 g
Total shock response spectrum type II	
Vibration in accordance with EN 60721-3-7 Class 7M2	1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)
Weight, approx.	
SLG	3500 g
Antenna	1000 g
Certifications	Radio EN 300 330 CE Safe for pacemakers

- 1 To ensure optimal field data in a metallic environment, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

Caution

The antenna cable is prepared in advance. If the cable is changed, the warranty and CE marking become invalid.

Note

After the ANT D5 antenna is removed from the SLG and connected again (screwed on), an `init_run` must be executed.

Field data

Table 5-16 Field data of the SLG D10S ANT D5

Limit distance (S_g)	Max. 450 mm (dependent on transponder)
Working distance (S_a)	0 to 380 mm (dependent on transponder)
Length of the transmission window (L_d)	320 mm
Width of the transmission window (W)	128 mm
Minimum distance from ANT D5 to ANT D5	≥ 2 m

Transmission window

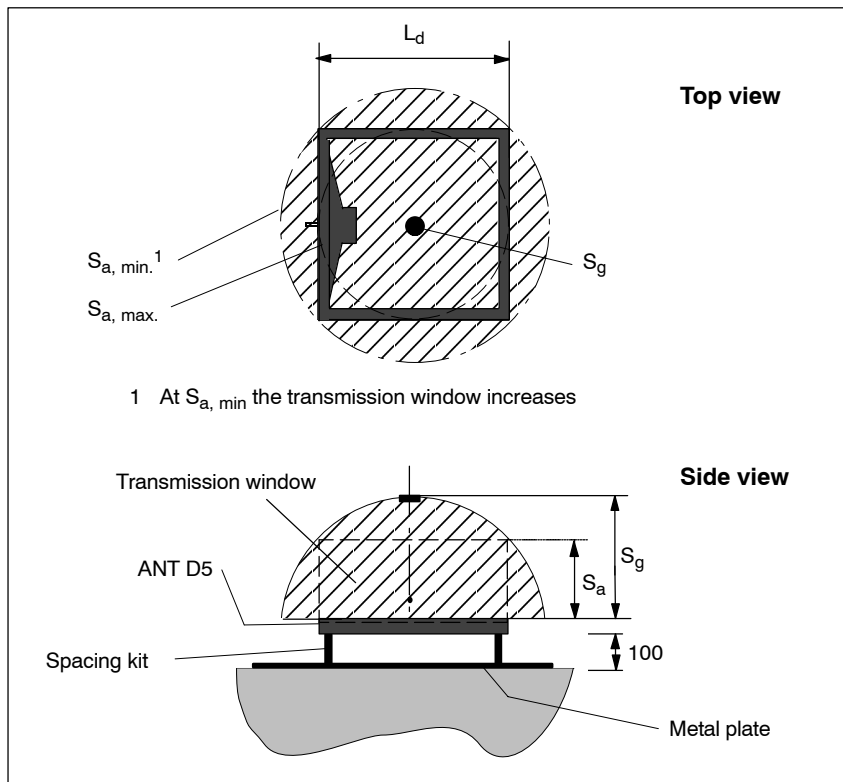


Figure 5-20 Transmission window with the SLG D10S ANT D5

Metal-free space

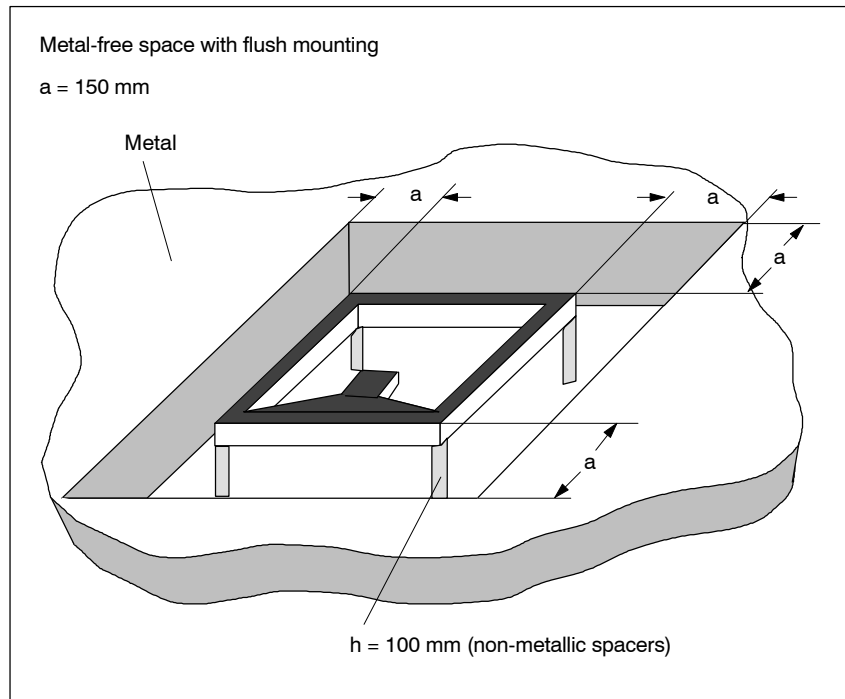


Figure 5-21 Metal-free space for the SLG D10S ANT D5

FCC information

Made in Germany
SIEMENS MOBY D SLG D10S
FCC ID NXW-MOBYD-SLGD10

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of the distance D

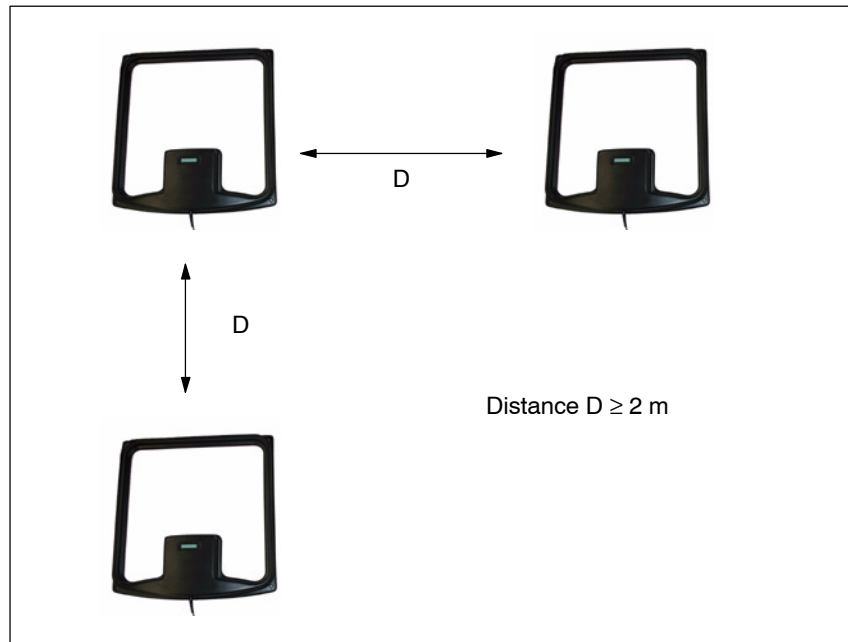


Figure 5-22 Distance D: SLG D10S ANT D5

**Dimensions
(in mm)**

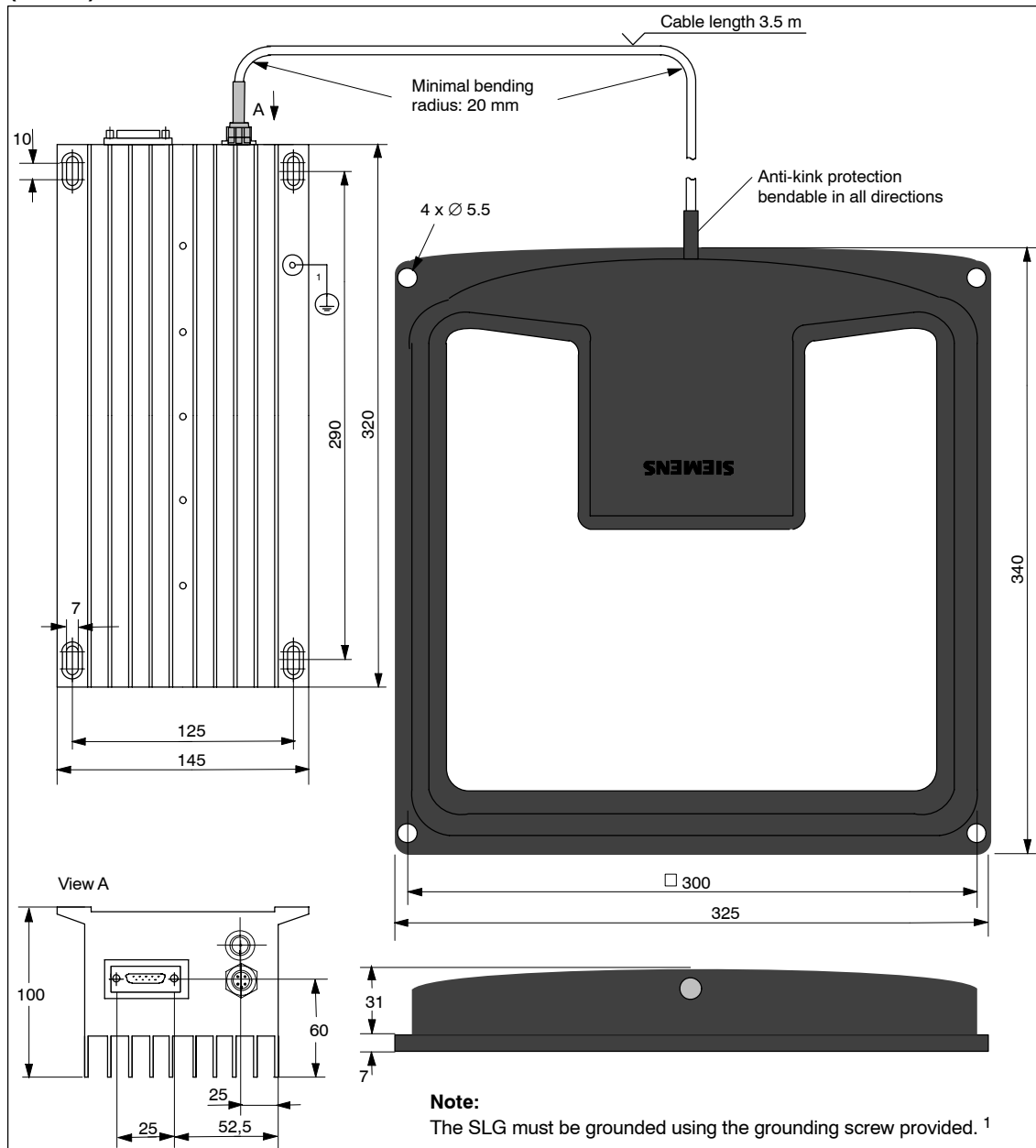


Figure 5-23 Dimensioned drawing of the SLG D10S ANT D5

Note

In order to ensure optimal field data in surroundings where there is metal as well, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

**MOBY D ANT D5
spacer kit**

see Chapter 5.2

5.6 SLG D11S ANT D5

Application area

The SLG D11 ANT D5 is a medium-performance read/write device with a serial interface and a separate antenna, designed specifically for storage, logistics, and distribution applications. It is designed for a range of up to 300 mm (depending on the label).

The read/write device has an RS 422, serial interface, which permits communication via interface modules (ASM 452, ASM 473 und ASM 475) to the SIMATIC S7 or PROFIBUS-DPV1.

FC 45 is available to the user for simple and rapid programming.

A robust housing and the high degree of protection (IP65) permit deployment in the most severe industrial environments.



Figure 5-24 Read/write device SLG D11S ANT D5

Ordering information

Table 5-17 SLG D11S ANT D5 ordering information

	Order No.
Read/write device SLG D11S ANT D5 With an RS 422 serial interface for connecting to an ASM 452, ASM 473 and ASM 475, with separate antenna	6GT2 602-0AC00
Accessories:	
Spacer kit for ANT D5	6GT2 690-0AB00
MOBY DC 24 V wide-range power pack	6GT2 494-0AA00
Cables and connectors	See Section 3.6

Technical data

Table 5-18 SLG D11S ANT D5 technical data

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz <ul style="list-style-type: none"> • I-Code1 (e. g. MDS D139, MDS D160) • Transponder in accordance with ISO 15693 (e. g. I-Code SLI, Tag-it HFI, my-d SRF 55V10P)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 422 Asynchronous 8 bit 19.2 kBaud CRC 16
Output power	1 W
SLG – MDS read/write distances	Typically 300 mm (see field data) ¹
Software functions Programming Transmission protocol	MDS read, write, initialize Command strings are not permitted. The Repeat command has not been implemented. The greatest possible length of the user data field in a command is 233 bytes. FC 45 3964 R
Multitag	No
Power supply Operation Permissible range	24 VDC 20 V to 30 VDC
Current consumption Operation Transient making current	150 mA 600 mA
Line length (SLG – SIMATIC S 7) With RS 422 Antenna line length	300 m 3.60 m
Digital inputs/outputs	None

Table 5-18 SLG D11S ANT D5 technical data

Housing		
Dimensions (in mm)		
	For antenna [L x W x H]	340 x 325 x 38
	for the electronics [L x B x H]	160 x 80 x 40 (without connector)
Color	Antenna	Black
	SLG housing	Anthracite
Material	Antenna	Plastic ASA
	SLG housing	Plastic (PA 12)
Connector		
	Antenna (can be connected to the SLG)	TNC connector
Mounting of SLG		2 M5 screws
Mounting of antenna		4 M5 screws
Ambient temperature		
	in operation	-25 °C to +70 °C
	in transport and storage	-25 °C to +70 °C
Protection rating in accordance with EN 60529		
	SLG and antenna	IP65
Shock in accordance with EN 60721-3-7 Class 7M2		30 g
Total shock reply spectrum type II		
Vibration in accordance with EN 60721-3-7 Class 7M2		1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)
Weight, approx.		
	SLG	Approx. 600 g
	Antenna	Approx. 1000 g
Certifications		Radio EN 300 330 CE Safe for pacemakers

1 To ensure optimal field data in a metallic environment, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

Field data

Table 5-19 SLG D11S ANT D5 field data

Limit distance (S_g)	Max. 300 mm (dependent on transponder)
Working distance (S_a)	0 to 240 mm (dependent on transponder)
Length of the transmission window (L_d)	300 mm

Table 5-19 SLG D11S ANT D5 field data

Width of the transmission window (W)	120 mm
Minimum distance from ANT D5 to ANT D5	≥ 2 m

Transmission window

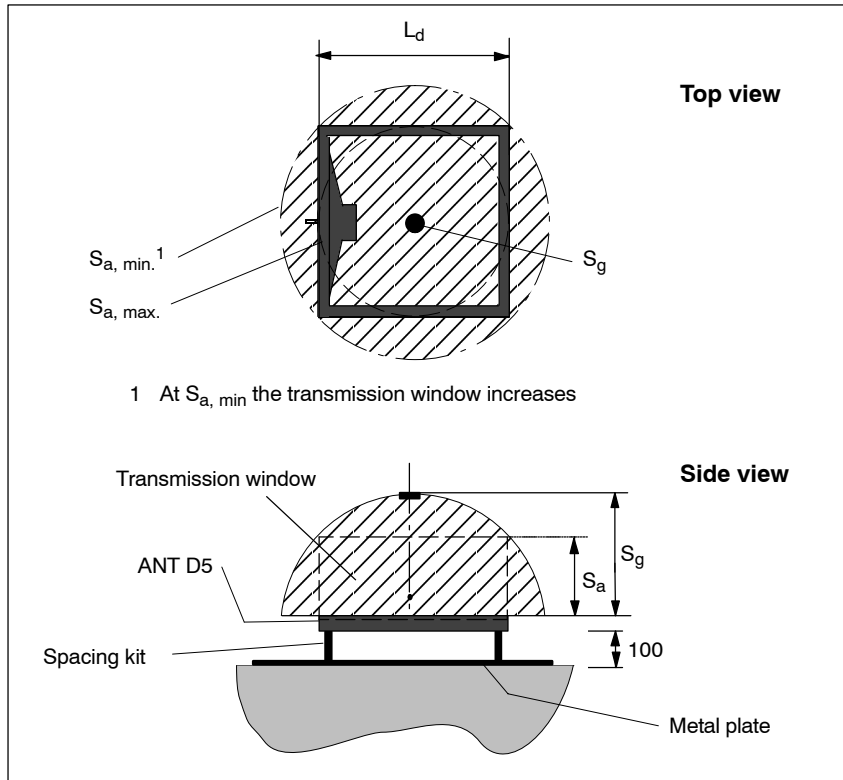


Figure 5-25 SLG D11S ANT D5 transmission window

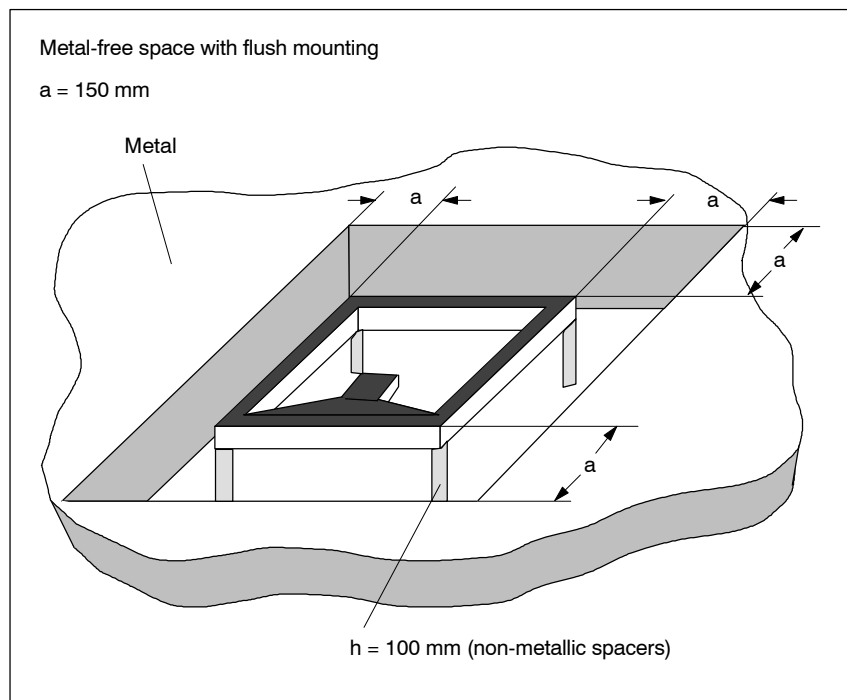
Metal-free space

Figure 5-26 SLG D11S ANT D5 metal-free space

FCC information

Made in Germany
SIEMENS MOBY D SLG D11S
FCC ID NXW-MOBYD-SLGD11

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of the distance D

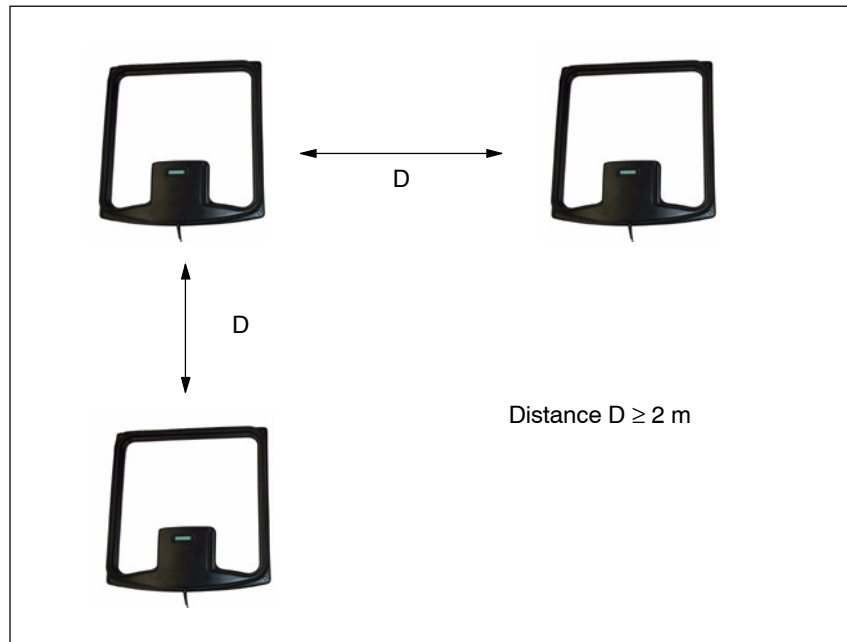


Figure 5-27 Distance D: SLG D11S ANT D5

Dimensions (in mm)

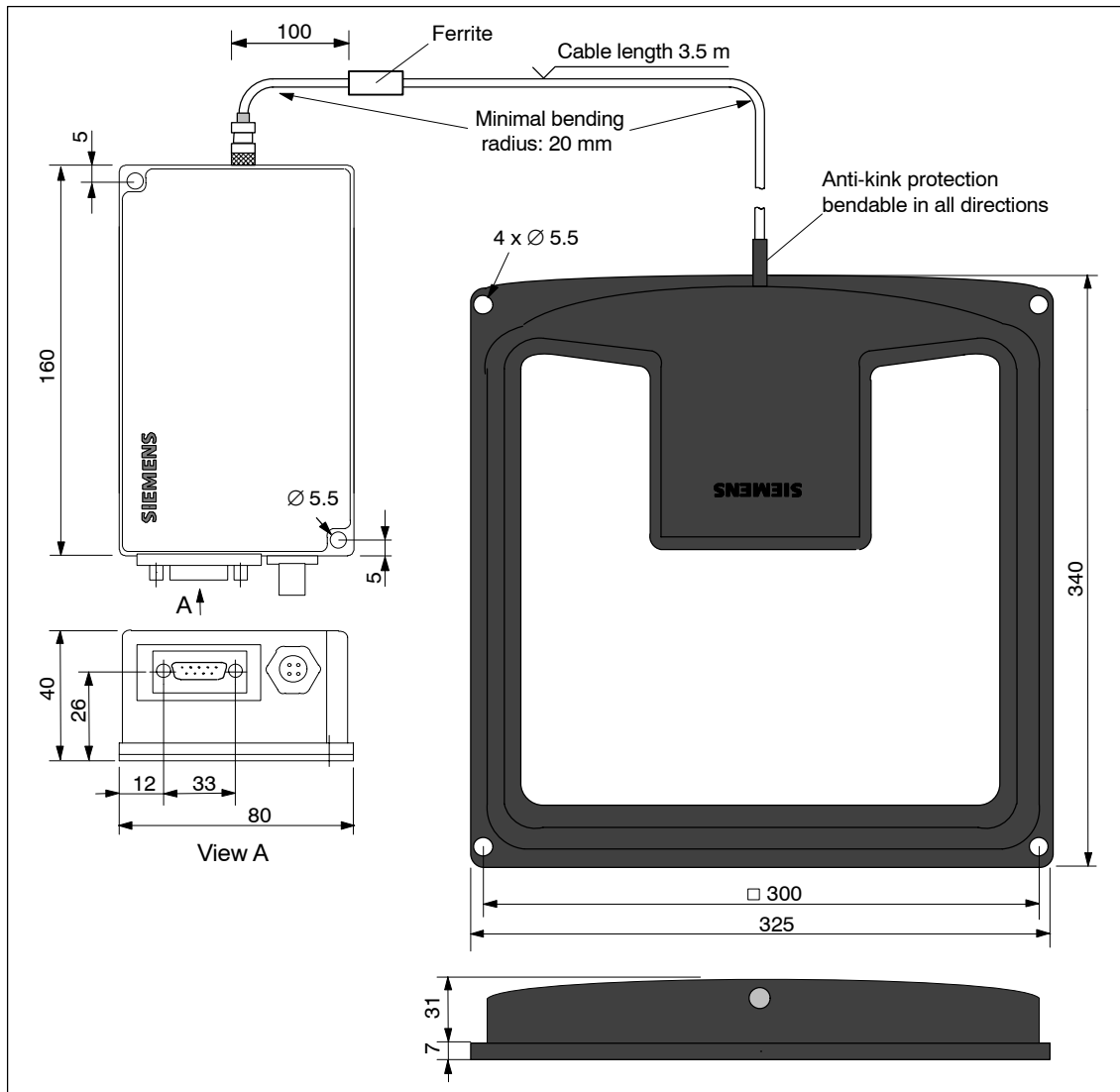


Figure 5-28 SLG D11S ANT D5 dimensioned drawing

Note

In order to ensure optimal field data in surroundings where there is metal as well, the ANT D5 is calibrated at the factory at a distance of 100 mm from metal.

MOBY D ANT D5 spacer kit

See Chapter 5.2

5.7 SLG D12S

Application area

The SLG D12 is a medium-performance read/write device with a serial interface and an integrated antenna, designed for a range of up to 150 mm (depending upon the label). The read/write device has an RS 422 serial interface, which permits communication via interface modules (ASM 452, ASM 473 und ASM 475) to the SIMATIC S7 or PROFIBUS-DP-V1.

FC 45 is available to the user for simple and rapid programming. A robust housing and the high degree of protection (IP65) permit deployment in the most severe industrial environments.



Figure 5-29 SLG D12S read/write device

Ordering information

Table 5-20 SLG D12S ordering information

	Order No.
SLG D12S read/write device With an RS 422 serial interface for connecting to an ASM 452, ASM 473 und ASM 475, with integrated antenna	6GT2 602-0AB00
Accessories: MOBY DC 24 V wide-range power pack Cables and Connectors	6GT2 494-0AA00 See Section 3.6

Technical data

Table 5-21 SLG D12S technical data

Inductive interface to MDS Transmission frequency Supported transponders	13.56 MHz <ul style="list-style-type: none">I-Code1 (e. g. MDS D139, MDS D160)Transponder in accordance with ISO 15693 (e. g. I-Code SLI, Tag-it HFI, my-d SRF 55V10P)
Serial interface to user Transmission protocol Data transmission speed Data backup	RS 422 Asynchronous 8 bit 19.2 kBaud CRC 16
Output power	1 W
SLG – MDS read/write distances	Typically 150 mm (see field data)
Software functions Programming Transmission protocol	MDS read, write, initialize Command strings are not permitted. The Repeat command has not been implemented. The greatest possible length of the user data field in a command is 233 bytes. FC 45 3964 R
Multitag	No
Power supply Operation Permissible range	24 VDC 20 V to 30 VDC
Current consumption Operation Transient making current	150 mA 600 mA
Line length (SLG – SIMATIC S 7) With RS 422	300 m
Digital inputs/outputs	None
Housing Dimensions (L x B x H) in mm, without connectors Color Material	160 x 80 x 40 Anthracite Plastic (PA 12)
Mounting	2 M5 screws
Ambient temperature in operation in transit and storage	–25 °C to +70 °C –25 °C to +70 °C

Table 5-21 SLG D12S technical data

Protection rating in accordance with EN 60529	IP65
Shock in accordance with EN 60721-3-7 Class 7 M2 Total shock response spectrum Type II	30 g
Vibration in accordance with EN 60721-3-7 Class 7M2	1 g (9 to 200 Hz)/ 1.5 g (200 to 500 Hz)
Weight, approx.	600 g
Certifications	Radio EN 300 330 CE Safe for pacemakers

Field data

Table 5-22 SLG D12S field data

Limit distance (S_g)	Max. 150 mm (dependent on transponder)
Working distance (S_a)	0 to 120 mm (dependent on transponder)
Length of the transmission window (L_d)	120 mm
Width of the transmission window (W)	48 mm
Minimal distance from SLG D12S to SLG D12S	≥ 500 mm

Transmission window

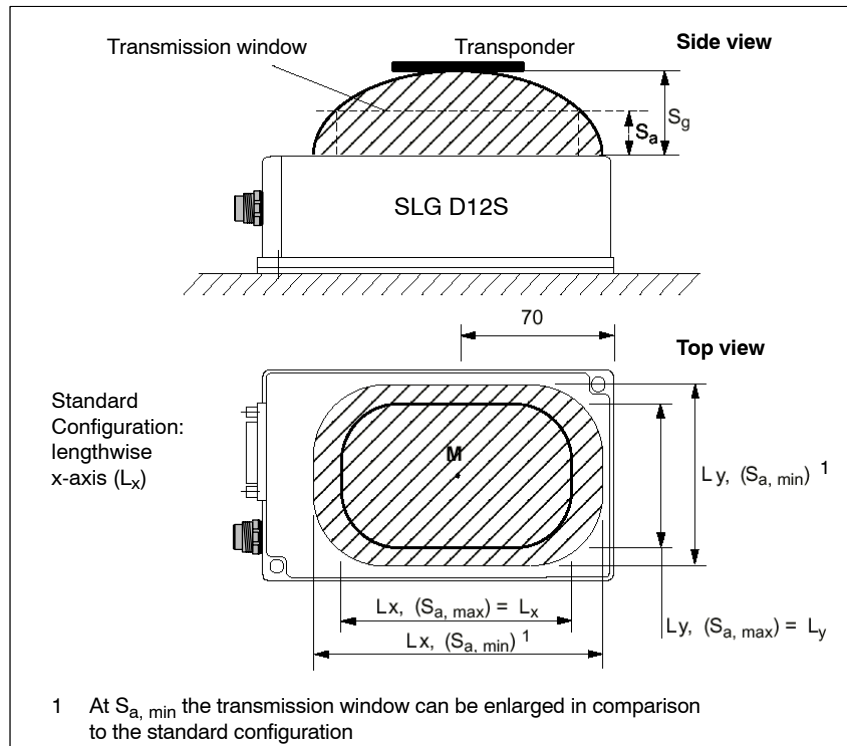


Figure 5-30 Transmission window of the SLG D12S

Metal-free space

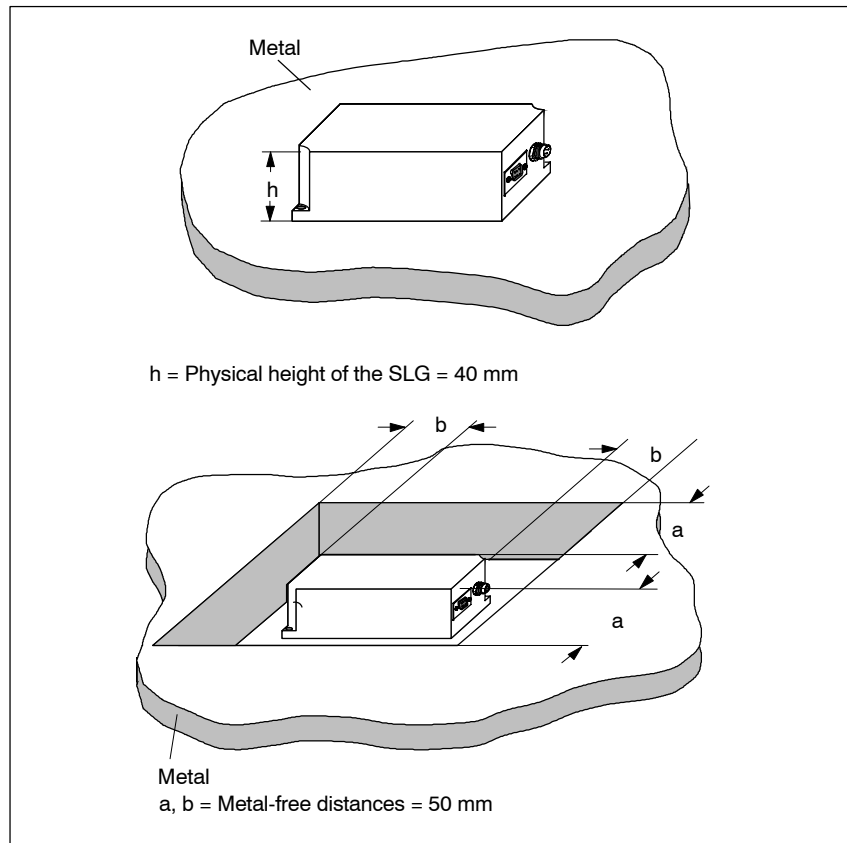


Figure 5-31 SLG D12S metal-free space

FCC information

Made in Germany
SIEMENS MOBY D SLG D12S
FCC ID NXW-MOBYD-SLGD12

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Definition of the Distance D

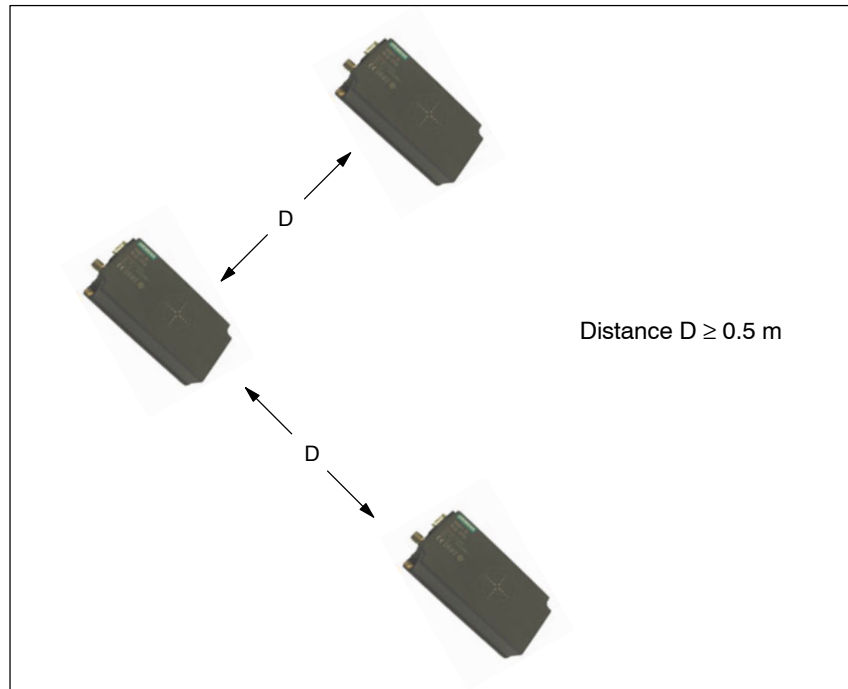


Figure 5-32 Distance D: SLG D12S

Dimensions (in mm)

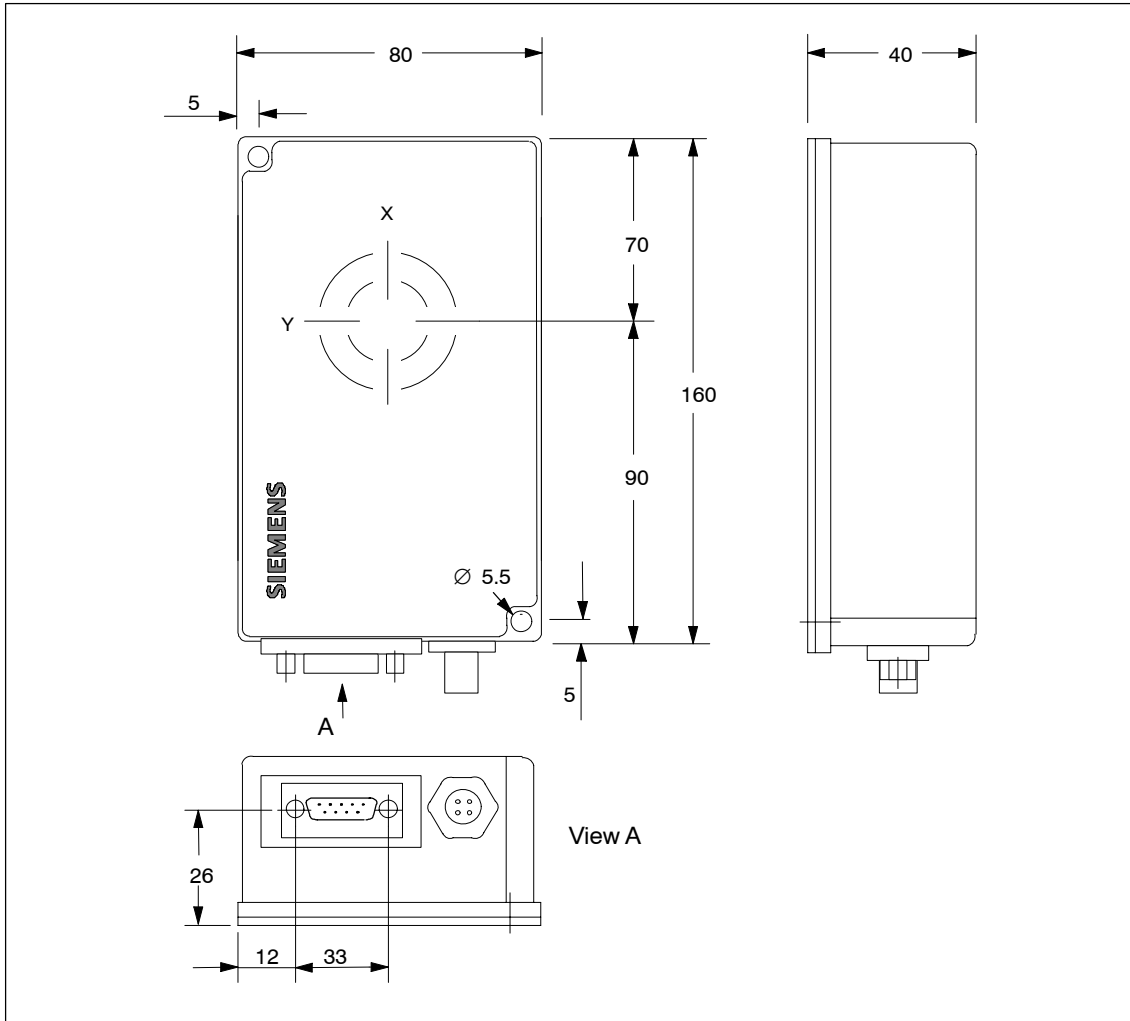


Figure 5-33 Dimensioned drawing SLG D12S