

# SIEMENS

## SIMATIC sensors


### RFID systems MOBY D / RF200 / RF300

#### MDS D339

Compact Operating Instructions

## MDS D339

### Characteristics

MDS D339	Characteristics	
	Field of application	Applications in production automation with high temperature demands (up to +220 °C) Typical application areas: <ul style="list-style-type: none"><li>• Paintshops and their preparatory treatments</li><li>• Primer coat, electrolytic dip area, cataphoresis with the associated drying furnaces</li><li>• Top coat area with drying furnaces</li><li>• Washing areas at temperatures &gt; 85 °C</li><li>• Other applications with higher temperatures</li></ul>
	Memory	1024 bytes of EEPROM/gross 992 bytes of user memory
	Read/write range	See Chapter Field data (Page 4).
	Mounting on metal	With spacer; recommended distance from metal ≥ 30 mm
	ISO standard	ISO 15693
	High degree of protection	IP68, IPx9K
	Material	Plastic PPS; silicone-free

### Ordering data

Table 1 Ordering data for MDS D339

	Order number
MDS D339	6GT2600-3AA10

Table 2 Ordering data for MDS D339 accessories

MDS D139 accessories	Order number
Spacers	6GT2690-0AA00
Quick change holder	6GT2690-0AH00

### Safety instructions for the device/system

NOTICE
This device/system may only be used for the application instances that have been described in the catalog and the technical documentation "MOBY D System Manual ( <a href="http://support.automation.siemens.com/WW/view/en/13628689/0/en">http://support.automation.siemens.com/WW/view/en/13628689/0/en</a> )" and only in combination with third-party devices and components recommended and/or approved by Siemens.

## Mounting on metal

Direct mounting of the MDS D339 on metal is not allowed. A distance of  $\geq 30$  mm is recommended. This can be achieved using spacers, see Mounting options (Page 3).

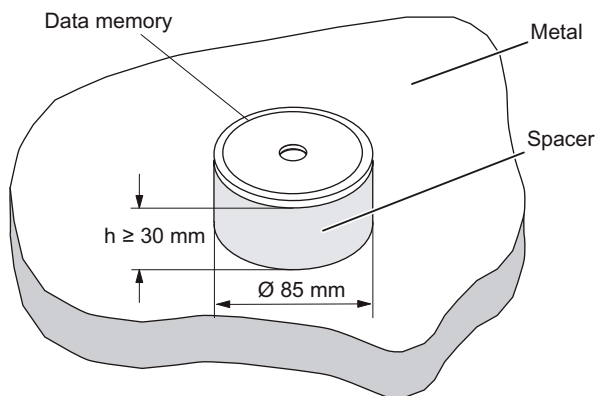


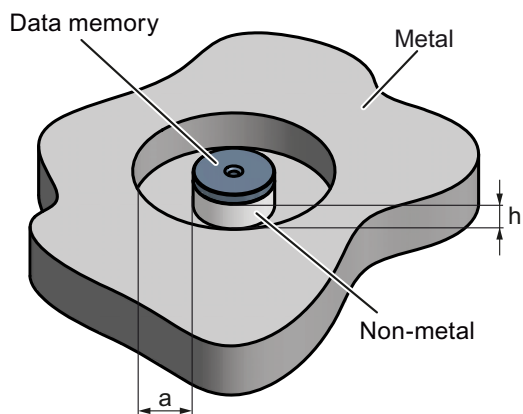
Figure 1 MDS D339: Mounting on metal

### Note

If the minimum guide values ( $h$ ) are not observed, a reduction of the field data results. It is possible to mount the MDS with metal screws (M5). This has no tangible impact on the range. It is recommended that a test is performed in critical applications.

## Mounting in metal

It is possible to mount the MDS D339 in metal. With large antennas, for example ANT D5, this leads to a reduction of ranges.



$a = 100$  mm

$h = 30$  mm

Figure 2 MDS D339: Mounting in metal

# Mounting options

## Spacer with fixing screw

<b>CAUTION</b>
<b>Damage to the MDS due to improper mounting</b>
To secure the device when mounting with the spacer (6GT2690-0AA00), use a stainless steel M5 screw a nut, and a lock nut. When mounting, make sure that the has MDS 1 mm play. This avoids damage to the MDS at high temperatures (expansion coefficients) and ensures it is securely mounted long-term.
In higher temperatures ( $> +80\text{ }^{\circ}\text{C}$ ), observe the expansion coefficients of all materials in order to prevent damage to the MDS due to fastening.

The spacer is made of the thermoplastic PPS.

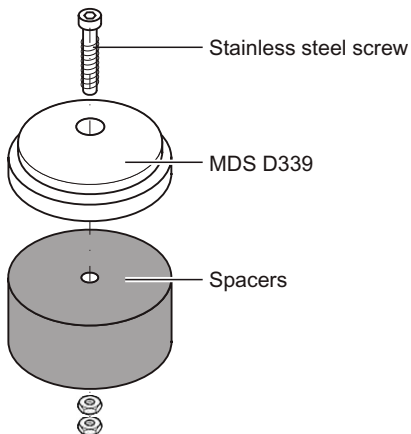
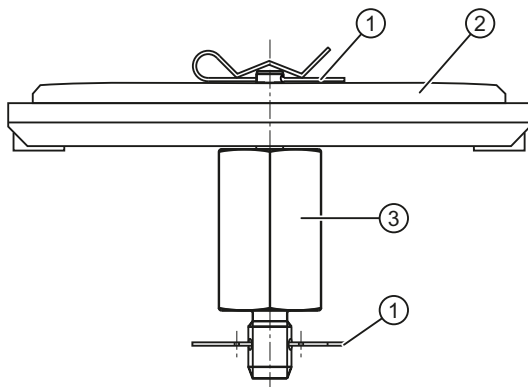


Figure 3 MDS D339: Mounting with a spacer

## Quick change holder with spring cotter pins

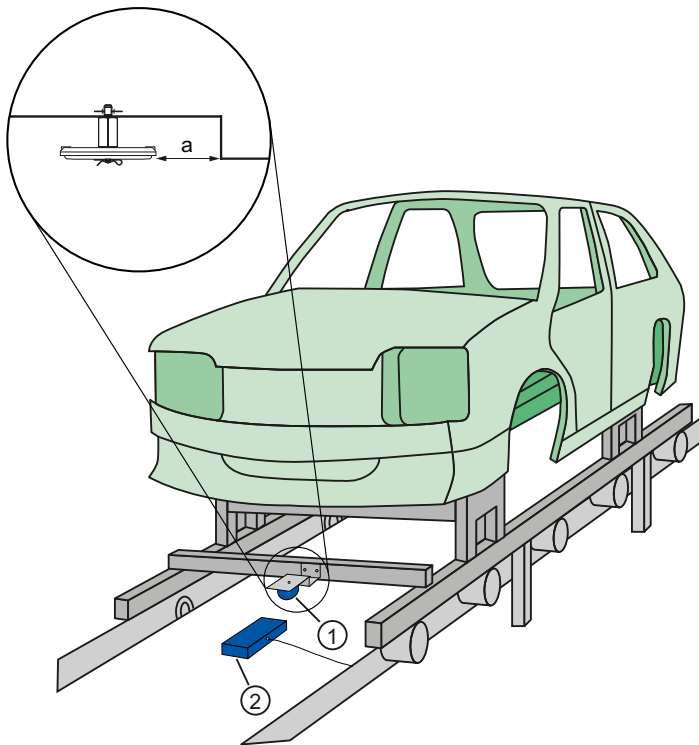
The transponder is fixed in the quick change holder (6GT2690-0AH00) with two spring cotter pins. The quick change holder is made of stainless steel (V2A).



- ① Spring cotter pin
- ② Transponder
- ③ Quick change holder

Figure 4 MDS D339: Quick change holder

## Example of an application with an MDS D339



- ① MDS D139 / D339  
Mount the MDS flush with the lower edge of the support, minimum clearance  $a = 50$  mm
- ② Reader (for example RF380R / SLG D12S)

Figure 5 MDS D339: Application example

## Field data

Table 3 Field data for MDS D339

	Operating distance ( $S_a$ )	Limit distance ( $S_g$ )	Transmission window ( $L_x/L_y$ )	Minimum distance from MDS to MDS
SLG D10/D10S ANT D5	0 ... 300 mm	380 mm	Ø 320 mm	≥ 1 m
SLG D10/D10S ANT D6	0 ... 400 mm	480 mm	520 × 420 mm	≥ 1.5 m
SLG D10/D10S ANT D10	0 ... 300 mm	380 mm	1050 × 350 mm	≥ 2 m
SLG D11/D11S ANT D5	0 ... 180 mm	220 mm	Ø 300 mm	≥ 1 m
SLG D12/D12S	0 ... 90 mm	110 mm	120 × 60 mm	≥ 0.5 m
RF260R	10 ... 70 mm	80 mm	Ø 110 mm	≥ 0.3 m
RF340R	10 ... 75 mm	85 mm	Ø 115 mm	≥ 0.3 m
RF350R ANT 1	5 ... 90 mm	105 mm	Ø 130 mm	≥ 0.3 m
RF 380R	25 ... 160 mm	190 mm	220 × 210 mm	≥ 0.5 m

# Technical specifications

Table 4 Technical specifications of MDS D339

Memory size	1024 bytes		
Memory configuration	<ul style="list-style-type: none"> <li>• Serial number</li> <li>• Configuration memory</li> <li>• Application memory</li> </ul>		
	<ul style="list-style-type: none"> <li>• 8 bytes (fixed code)</li> <li>• 24 bytes</li> <li>• 992 bytes</li> </ul>		
Storage technology	EEPROM		
Memory organization	Refer to the MOBY D system manual or RF300 section "Memory configuration of the ISO tags"		
Data retention at +40 °C	10 years		
MTBF	2 x 10 <sup>6</sup> hours		
Read cycles	Unlimited		
Write cycles at +40 °C	<ul style="list-style-type: none"> <li>• minimum</li> <li>• typical</li> </ul>		
	<ul style="list-style-type: none"> <li>• 100.000</li> <li>• 1.000.000</li> </ul>		
Read/write distance (S <sub>g</sub> )	See table Field data (Page 4).		
Distance from metal	min. 30 mm (approx. 30% reduction of the field data)		
Multitag capability	Yes		
Power supply	Inductive power transmission (without battery)		
Degree of protection to EN 60529	IP68 <sup>1)</sup> IPx9K <sup>2)</sup>		
Shock according to EN 60721-3-7, Class 7M3 Total shock response spectrum, Type II	50 g		
Vibration-resistant to EN 60721-3-7, Class 7M3	20 g		
Torsion and bending load	Not permissible		
Enclosure dimensions	<ul style="list-style-type: none"> <li>• Dimensions (D x H)</li> <li>• Color</li> <li>• Material</li> </ul>		
	<ul style="list-style-type: none"> <li>• 85 mm (±0.5) x 15 mm (-1.0)</li> <li>• Black</li> <li>• PPS plastic, silicone-free</li> </ul>		
Fixing	1 x stainless steel screw, thread M5 <sup>3)</sup>		
Tightening torque	1.5 Nm <sup>4)</sup>		
Ambient temperature	• During operation	-25 °C to +100 °C	Permanent
		+120 °C to +140 °C	20% reduction in the limit distance
		+200 °C <sup>5)</sup>	Tested up to 5000 hours or 3000 cycles
		+220 °C	Tested up to 2000 hours or 1500 cycles
	• Transport and storage	-40 °C to +100 °C	
Weight	Approx. 50 g		

1) 2 hours, 2 m, +20 °C

2) steam jet: 150 mm; 10 to 15 l/min; 100 bar; 75 °C

3) See section Mounting options

4) max. torque when securing the MDS. When used in higher temperatures (> +80 °C), remember the expansion coefficients of all materials (see section Mounting options).

5) Note that no processing is possible at temperatures of +140 °C or higher.

## Use of the MDS D339 in hazardous areas

The MDS D339 mobile data memory is classed as a piece of simple, electrical equipment and can be operated in Protection Zone 2, Device Group II, Category 3G.

The following requirements of the Directive 94/9/EC are fulfilled:

EN 60079-0:2006, EN 60079-15:2005, EN 61241-0:2006, EN 61241-1:2004

### Identification



II 3 G Ex nA II T2

II 3 D Ex tD A22 IP68 T 210°C

KEMA 09 ATEX 0133 X

Ta: -25 ... +220°C

### WARNING

**Gefahr durch elektrostatische Entladungen**  
**Potential electrostatic charging hazard**  
**Danger potentiel de charges électrostatiques**

### NOTICE

#### Installations- und Betriebsbedingungen für den Ex-Schutzbereich:

- Der Einsatz des Gerätes in der Nähe von stark ladungserzeugenden Prozessen ist untersagt.
- Das Gerät ist mechanisch geschützt zu montieren.
- Die Montage muss auf einem geerdeten, leitenden Untergrund erfolgen.
- Die Reinigung darf nur mit feuchtem Tuch erfolgen.

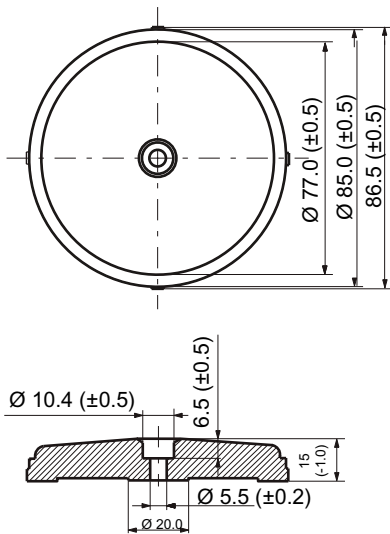
#### Installation and operating conditions for hazardous areas:

- Use of the equipment in the vicinity of processes generating high charges is not allowed.
- The equipment must be mechanically protected when installed.
- Installation must be performed on a grounded and conductive mounting surface.
- Cleaning only with a wet cloth

#### Conditions d'installation et de mise en oeuvre pour la zone de protection Ex :

- L'utilisation de l'appareil près de processus générant de fortes charges est interdite.
- L'appareil doit être monté de manière à être protégé mécaniquement.
- Le montage doit être effectué sur un socle conducteur mis à la terre.
- Nettoyage uniquement avec un chiffon humide

## Dimensional drawing



Dimensions in mm

Figure 6 Dimension drawing of the MDS D339

## Cleaning the mobile data memory

### NOTICE

Do not clean the transponder with mechanical tools, sand-blasting or pressure hose. These cleaning methods result in damage to the transponder.

Clean the transponder only with the cleaning agents listed in the section "Chemical resistance of the MDS".

## Service & support

### Technical support

- Phone: + 49 (0) 911 895 7222
- Fax: + 49 (0) 911 895 7223
- E-mail (<mailto:support.automation@siemens.com>)
- Internet: Online support request form: ([www.siemens.com/automation/support-request](http://www.siemens.com/automation/support-request))

### Service & support at IA/DT

Support homepage ([www.siemens.com/automation/service&support](http://www.siemens.com/automation/service&support))

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