



# Gateway 0362151x

## Version Information for GSD File SM\_SLGW.GSD

Technical Information





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## **SIEB & MEYER Worldwide**

For questions regarding our products and technical problems please contact us.

SIEB & MEYER AG  
Auf dem Schmaarkamp 21  
21339 Lueneburg  
Germany

Phone: +49 4131 203 0  
Fax: +49 4131 203 2000  
[info@sieb-meyer.de](mailto:info@sieb-meyer.de)  
<http://www.sieb-meyer.com>

SIEB & MEYER Shenzhen Trading Co. Ltd.  
Room A208 2/F,  
Internet Innovation and Creation Services Base Building (2),  
No.126, Wanxia road, Shekou, Nanshan district,  
Shenzhen City, 518067  
P.R. China

Phone: +86 755 2681 1417 / +86 755 2681 2487  
Fax: +86 755 2681 2967  
[info@sieb-meyer.cn](mailto:info@sieb-meyer.cn)  
<http://www.sieb-meyer.cn>

SIEB & MEYER Asia Co. Ltd.  
5 Fl, No. 578, Sec. 1  
Min-Sheng N. Road  
Kwei-Shan Hsiang  
Guishan Dist., Taoyuan City 33393  
Taiwan

Phone: +886 3 311 5560  
Fax: +886 3 322 1224  
[info@sieb-meyer.tw](mailto:info@sieb-meyer.tw)



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# 1 Version Information on GSD File SM\_SLGW.GSD

## Note

In this document the designations **in** and **out** refer to the viewpoint of the PLC on the gateway. That means, depending on the protocol the PLC sends 14 or 16 bytes to the gateway (out) and receives always 16 bytes from the gateway (in).

## 1.1 GSD File Versions

The descriptions in the GSD files are to be selected according to the used gateway and its software. The GSD file is detected via the device version.

The following table describes the GSD file versions in chronological order:

| Version | Date       | Description  |
|---------|------------|--|
| 1.100   | 2008-11-17 | GSD file of the SERVOLINK 4 gateway for single-axis drive amplifiers and Profibus with a 16 byte output area and a 16 byte input area per module                                   |
| 1.101   | 2009-07-30 | Double-axis drive amplifiers added   |
| 1.102   | 2014-09-19 | New data format <i>14 bytes out / 16 byte in</i> added<br>Existing modules renamed in "DS402..."   |
| 1.103   | 2015-02-03 | Length specifications changed:<br><ul style="list-style-type: none"> <li>▶ Max_Module: 11 → 12</li> <li>▶ Max_Input_Len: 184 → 192</li> <li>▶ Max_Output_Len: 184 → 176</li> </ul> |

## 1.2 Profibus Telegram Formats

The gateway expects data of the format *little endian*. Depending on the used PLC the data must be swapped accordingly. The program example S7\_SD2S\_1Drive uses the function blocks FB\_ReadData and FB\_WriteData to swap the data.

### 1.2.1 Telegram Format *16 Bytes Out / 16 Bytes In* (Standard)

The telegram format *16 bytes out / 16 bytes in* refers to the S7 SD2 SERVOLINK4 Drive Protocol. This format is used by standard.

*16 bytes out* (reference value telegram: PLC → gateway):

| Byte     | Description          |
|----------|----------------------|
| 0 ... 1  | Control word         |
| 2 ... 3  | Reserved             |
| 4 ... 5  | Reference speed      |
| 6 ... 7  | Current limitation   |
| 8        | Reserved             |
| 9 ... 15 | Service data channel |

*16 bytes in* (actual value telegram: gateway → PLC):

| Byte    | Description |
|---------|-------------|
| 0 ... 1 | Status word |

| Byte      | Description          |
|-----------|----------------------|
| 2 ... 5   | Actual position      |
| 6 ... 7   | Actual speed         |
| 8 ... 9   | Current actual value |
| 10 ... 15 | Service data channel |

## 1.2.2 Telegram Format *14 Bytes Out / 16 Bytes In* (Option)

The telegram format *14 bytes out / 16 bytes in* is available for optional use. Compared to the standard telegram the Profibus reference value telegram does not contain the two reserved bytes after the control word. The gateway adds these two bytes automatically and sends the 16 byte telegram via SERVOLINK 4 to the SD2x drives.

To use this option you require a gateway with the according firmware and the device version 0.001 or higher.

*14 bytes out* (reference value telegram: PLC → gateway):

| Byte     | Description          |
|----------|----------------------|
| 0 ... 1  | Control word         |
| 2 ... 3  | Reference speed      |
| 4 ... 5  | Current limitation   |
| 6        | Reserved             |
| 7 ... 13 | Service data channel |

*16 bytes in* (actual value telegram: gateway → PLC):

| Byte      | Description          |
|-----------|----------------------|
| 0 ... 1   | Status word          |
| 2 ... 5   | Actual position      |
| 6 ... 7   | Actual speed         |
| 8 ... 9   | Current actual value |
| 10 ... 15 | Service data channel |

## 2 Exchange of GSD File in S7 Software

These instructions apply to the SIMATIC STEP7 version V5.5 + SP1.

### 2.1 Delete old device in the project

1. Open SIMATIC Manager.
2. Select and open the project in SIMATIC Manager.
3. Select the hardware (HW Config opens).
4. Take note of the gateway settings.
5. Delete gateway in PROFIBUS line.
6. Save and translate the hardware configuration.
7. Close HW Config.
8. Close SIMATIC Manager.

### 2.2 Delete old GSD file on the hard disk

1. Open Windows Explorer.
2. Select the drive with the S7 software and navigate to the GSD directory, e.g. `<drive>:\<Program Files>\Siemens\Step7\S7DATA\GSD`.
3. Delete the file `SM_SLGW.GSD`.

### 2.3 Add new GSD file on the hard disk

- ⇒ Download the new GSD file `SM_SLGW.GSD` from the SIEB & MEYER website and copy it to a temporary directory.

### 2.4 Install the new GSD file in the hardware configuration

1. Open SIMATIC Manager.
2. Select and open the project in SIMATIC Manager.
3. Select the hardware (HW Config opens).
4. Select the menu "Options → Install GSD File...".
5. In the installation window select the option "from the directory" in the list box.
6. Select the temporary directory via "Browse" and confirm the selection.
7. Confirm the Warning.
8. Confirm the message for the successful installation.
9. Close the installation window.
10. Select the menu "Options → Update Catalog".

## **2.5 Add the new device in the project**

1. In the catalog select "PROFIBUS-DP → Additional Field Devices → General → SERVOLINK4 Gateway Vx.xxx".
2. Drag and drop the device in the PROFIBUS line.
3. Make the noted settings for the new gateway.
4. In the catalog open the structure of "SERVOLINK4 Gateway Vx.xxx" and select the desired module.
5. Drag and drop the module to a free slot position.
6. Save and translate the new hardware configuration.
7. Upload the hardware configuration into the PLC.
8. Close HW Config.
9. Close SIMATIC Manager.

## 3 Device Versions

You find the device version on the type plate of the gateway, to the right of the type designation. The number before the point indicates the hardware version. The numbers after the point indicate the software version.

Within the same hardware version you can carry out a software update. Make sure that the software version Vx.xxx contains the correct hardware version (number before the point). After the update, you must change the device version accordingly. This can be done handwritten on the type plate of the device.

You can exchange an older gateway with a lower hardware version (e.g. device version 0.XXX) for a newer gateway (device version 1.XXX or higher) when you consider the GSD file version.

### 3.1 Device Versions of the Gateway 0362151

#### Device version 0.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version     | Date       | Content / Changes   | GSD File | Status <sup>(1)</sup> |
|----------------|----------------------|------------|---------------------|----------|-----------------------|
| 0.000          | servolinkGateway.mcs | 04.12.2009 | Software 16/16 byte | V1.101   | ✓                     |
|                |                      |            |                     | V1.102   | ✓                     |
|                |                      |            |                     | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.

✗ = Data transfer is not correct.

#### Device version 1.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version        | Date       | Content / Changes   | GSD File | Status <sup>(1)</sup> |
|----------------|-------------------------|------------|---|----------|-----------------------|
| 1.000          | 0362151A_1p000_v002.mcs | 04.02.2015 | Software 14/16 byte, 12 modules, certified by TÜV   | V1.101   | ✗                     |
|                |                         |            |   | V1.102   | ✓                     |
|                |                         |            |   | V1.103   | ✓                     |
| 1.000          | 0362151A_1p000_v003.mcs | 06.10.2015 | Downward compatibility to older GSD files   | V1.101   | ✓                     |
|                |                         |            |   | V1.102   | ✓                     |
|                |                         |            |   | V1.103   | ✓                     |
| 1.002          | 0362151A_1p000_v004.mcs | 06.06.2016 | Debouncing of the switches  | V1.103   | ✓                     |
| 1.003          | 0362151A_1p000_v005.mcs | 30.11.2016 | Checking of the transposed identifier 0x9F 0x9F 0xAD 0xAD   | V1.103   | ✓                     |
| 1.004          | 0362151A_1p000_v006.mcs | 05.09.2017 | OSSD monitoring changed to avoid error E20  | V1.103   | ✓                     |
| 1.005          | 0362151A_1p000_v007.mcs | 17.11.2017 | Reading of configuration files from PROFIBUS corrected  | V1.103   | ✓                     |
| 1.006          | 0362151A_1p000_v008.mcs | 22.05.2019 | Display of the gateway system error in byte 14 to fieldbus system also in case of a SERVOLINK failure<br>Filtering of the OSSD signals with regard to error E20 | V1.103   | ✓                     |
| 1.007          | 0362151A_1p000_v009.mcs | 20.09.2019 | Filtering of the OSSD signals with regard to error E06  | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.

✗ = Data transfer is not correct.



## Device version 2.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version        | Date       | Content / Changes  | GSD File | Status <sup>(1)</sup> |
|----------------|-------------------------|------------|--|----------|-----------------------|
| 2.000          | 0362151A_2p000_v001.mcs | 23.03.2023 | Software adaptations for the modified hardware<br>Deleting data in SERVOLINK when telegram ID is not set in the fieldbus | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.

✗ = Data transfer is not correct.

## 3.2 Device Versions of the Gateway 0362151A

### Device version 0.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version             | Date       | Content / Changes  | GSD File | Status <sup>(1)</sup> |
|----------------|------------------------------|------------|--|----------|-----------------------|
| 0.000          | ServolinkGateway_XC6S_V1.mcs | 06.06.2013 | Firmware created   | V1.101   | ✓                     |
|                |                              |            |  | V1.102   | ✓                     |
|                |                              |            |  | V1.103   | ✓                     |
|                | ServolinkGateway_XC6S_V5.mcs | 04.11.2013 | Software 16/16 byte  | V1.101   | ✓                     |
|                |                              |            |  | V1.102   | ✓                     |
|                |                              |            |  | V1.103   | ✓                     |
|                | 0362151A_00_V007.mcs         | 06.11.2014 | Software 14/16 byte, 11 modules                                  | V1.101   | ✗                     |
|                |                              |            |  | V1.102   | ✓                     |
|                |                              |            |  | V1.103   | ✓                     |
| 0.001          | 0362151A_00_V007.mcs         | 06.11.2014 | Software 14/16 byte, 11 modules                                  | V1.101   | ✗                     |
|                |                              |            |  | V1.102   | ✓                     |
|                |                              |            |  | V1.103   | ✓                     |
| 0.002          | 0362151A_0p001_v008.mcs      | 11.03.2016 | 12 modules   | V1.101   | ✓                     |
|                |                              |            |  | V1.102   | ✓                     |
|                |                              |            |  | V1.103   | ✓                     |
| 0.003          | 0362151A_0p000_v009.mcs      | 30.11.2016 | Checking of the transposed identifier<br>0x9F 0x9F 0xAD 0xAD     | V1.103   | ✓                     |
| 0.004          | 0362151A_0p000_v010.mcs      | 11.09.2017 | Showing of gateway system error in<br>byte 14 to fieldbus system | V1.103   | ✓                     |
| 0.005          | 0362151A_0p000_v011.mcs      | 12.10.2017 | OSSD monitoring changed to avoid error<br>E20                    | V1.103   | ✓                     |
| 0.006          | 0362151A_0p000_v012.mcs      | 17.11.2017 | Reading of configuration files from<br>PROFIBUS corrected        | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.

✗ = Data transfer is not correct.

### Device version 1.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version        | Date       | Content / Changes                                 | GSD File | Status <sup>(1)</sup> |
|----------------|-------------------------|------------|---|----------|-----------------------|
| 1.000          | 0362151A_1p000_v002.mcs | 04.02.2015 | Software 14/16 byte, 12 modules, certified by TÜV | V1.101   | ✗                     |
|                |                         |            |   | V1.102   | ✓                     |
|                |                         |            |   | V1.103   | ✓                     |
|                | 0362151A_1p000_v003.mcs | 06.10.2015 | Downward compatibility to older GSD files         | V1.101   | ✓                     |
|                |                         |            |   | V1.102   | ✓                     |
|                |                         |            |   | V1.103   | ✓                     |

| Device version | Firmware version        | Date       | Content / Changes   | GSD File | Status <sup>(1)</sup> |
|----------------|-------------------------|------------|---|----------|-----------------------|
| 1.001          | 0362151A_1p000_v004.mcs | 06.06.2016 | Debouncing of the switches  | V1.101   | ✓                     |
|                |                         |            |   | V1.102   | ✓                     |
|                |                         |            |   | V1.103   | ✓                     |
| 1.002          | 0362151A_1p000_v005.mcs | 30.11.2016 | Checking of the transposed identifier 0x9F 0x9F 0xAD 0xAD   | V1.103   | ✓                     |
| 1.003          | 0362151A_1p000_v006.mcs | 05.09.2017 | Showing of gateway system error in byte 14 to fieldbus system;<br>OSSD monitoring changed to avoid error E20  | V1.103   | ✓                     |
| 1.004          | 0362151A_1p000_v007.mcs | 17.11.2017 | Reading of configuration files from PROFIBUS corrected  | V1.103   | ✓                     |
| 1.005          | 0362151A_1p000_v008.mcs | 22.05.2019 | Display of the gateway system error in byte 14 to fieldbus system aslo in case of a SERVOLINK failure<br>Filtering of the OSSD signals with regard to error E20 | V1.103   | ✓                     |
| 1.006          | 0362151A_1p000_v009.mcs | 20.09.2019 | Filtering of the OSSD signals with regard to error E06  | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.  
 ✗ = Data transfer is not correct.

## Device version 2.XXX

The GSD file **SM\_SLGW.GSD V1.103** is used for all device versions.

| Device version | Firmware version        | Date       | Content / Changes  | GSD File | Status <sup>(1)</sup> |
|----------------|-------------------------|------------|--|----------|-----------------------|
| 2.000          | 0362151A_2p000_v001.mcs | 23.03.2023 | Software adaptations for the modified hardware<br>Deleting data in SERVOLINK when telegram ID is not set in the fieldbus | V1.103   | ✓                     |

<sup>(1)</sup> ✓ = Data transfer is correct.  
 ✗ = Data transfer is not correct.