



MOBY® U
Read/Write Device - SLG U92 with FCC

Product Sheet

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A&D SE PS 3, R. Völler



Description

The SLG U92 is a read/write device with integrated antenna for long range applications. It is designed especially for the automotive industry and industrial production plants. It uses the transmission frequency of 2.4 GHz of the worldwide approved ISM frequency band. This permits transmission distances from just a few centimeters to up to three meters with a very low sending power of < 50 mV/m at distance of 3 m and high net transmission speeds of up to 8 Kbytes per second. Transmission frequency, robust modulation procedures and check routines can be selected so that electromagnetic interference can be disregarded, and error-free data transmission and integrity are still ensured. The antenna field of the SLG can be activated and deactivated via function call or automatically with a proximity switch during communication with an MDS.

MOBY U technology stops familiar interference during UHF transmissions such as reflection, interference and over-the-horizon transmissions. The specially designed antennas provide a homogeneous transmission field and ensure 100% detection of mobile data memories (MDSs). This makes expensive shielding and antenna setting unnecessary.

With its mobile data memories MDS U524 and MDS U589 (up to +220°C, cyclic) and 32 Kbytes of storage space, MOBY U meets the prerequisites for a transparent solution in the automotive industry.

The SLG U92 offers inexpensive system integration via coupling to:

- Proven MOBY interface modules (ASM) for PROFIBUS-DP-V1 and SIMATIC S7
- Directly to standard PC, SICOMP or PC-PLC

Software tools such as the SIMATIC S7 functions (FC) and C library (MOBY API) for applications under Windows 98/NT make implementation in the particular application simple.

The powerful but easy-to-use filehandler with logical file addressing which we all know from MOBY I is directly integrated in the SLG U92 with expanded functionality. The commands MOVE and LOAD from the MOBY I filehandler are a thing of the past. The SLG always fetches the required file management information directly from the MDS. MOBY U can be run in three stages.

1. MOBY U can be run with standard settings, with unchanged filehandler functions and without the MOVE and LOAD commands for existing system solutions with MOBY I.
2. Only a few expanded commands are required for changes in the standard settings and the requirements of diagnostic data.
3. Full utilization of MOBY U performance. In this stage, the commands and/or user data can also be securely assigned to the particular MDS number.

In addition to filehandler mode, the MDSs can use direct byte addressing as with the other MOBY identification systems.

A separate service and diagnostic interface makes it simple to commission and trouble-shoot during operation. In addition, this interface can be used with the service function "load software to SLG" in existing applications for future function expansions without having to exchange the SLG.

Subject to change without
prior notice

Ordering Data

| Product Description | Order No. | L-Price EURO/Unit | AL | ECCN |
|--|---------------|----------------------|----|------|
| Read/write device SLG U92 with RS 422 with FCC | 6GT2501-0BA00 | on demand | N | |
| Read/write device SLG U92 with RS 232 with FCC | 6GT2501-1BA00 | on demand | N | |

Technical Data

| | |
|--|--|
| SLG type | SLG U92 |
| Identification system | MOBY U |
| Air Interface | |
| Transmission frequency | 2.4 to 2.4835 GHz |
| Bandwidth | 2 x 1 MHz within 83 MHz |
| Modulation procedure | GMSK (BT=0.5) in downlink or DBPSK in uplink |
| Gross bit rate of radio channel | 384 kbit/sec |
| Check routines | Forward correction with systematic block code (CRC), ARQ procedure |
| Error rate | < 1 read error for every 10 ⁶ transactions |
| Net data rate (read/write) | Approx. 8/4.8 Kbyte/sec without pileup Approx. 4/2.4 Kbyte/sec with pileup size 2 |
| Range (read/write) | 0.15 m to 3 m |
| Limit distance (L _g) | Limit distance = range limitation |
| Max./min./standard | 3 m/0.5 m/2 m |
| Location resolution | Range limitation (adjustable in steps of 0.5 m) |
| Working distance (L _a) | Approx. 75% of limit distance |
| Field length/width at L _g = 1.5 m | 2 m |
| Read/write device (SLG) | |
| Functions | MOBY filehandler (file manager) Direct read/write |
| Multiple identification capability | Up to 12 MDSs |
| MDS acquisition time | > 2 sec with 12 MDSs |
| Object's speed | < 2 m/sec at L _a = 1.5 m and read/write ≤ 2.5 Kbytes of data |
| Power supply | 24 V DC (nominal value), 20 V DC to 30 V DC Limited Power Source according EN 60950/IEC 60950 |
| Current consumption (send) | < 300 mA |
| Operating modes | SLG: Standby, search, communication |
| Synchronization, SLG - SLG | Via semaphore control over 2nd interface, max. of 3 SLGs together |
| Minimum distance between two SLGs | > 6 m, with synchronization directly next to each other |
| Two interfaces for: | |
| ASM 452/ASM 475 or PC | 6-pin SLG plug connector in acc. w. EN 175201-804 RS 232 or RS 422 (SLG U92 model) |
| Transmission speed | 19.2 to 115.2 Kbaud (depending on cable length) |
| Transmission protocol | 3964 R |
| Cable length, SLG - ASM | Max. of 1000 m (shielded) |
| Cable length, SLG - PC | Max. of 30 m/300 m (shielded) |
| Service, 2 DIs and SLG synchronization | 11-pin plug connector in acc. w. EN 175201-804 |

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| | |
|---|--|
| Interface for service | RS 232 |
| Transmission speed | 19.2 KBaud |
| Cable length, SLG - PC | Max. of 30 m |
| Transmission protocol | Terminal, ASCII characters |
| 2 DIs for proximity switch | |
| DI 1/DI 2 | Proximity switch for triggering antenna field, on/off |
| DI 1 (or DI 2) | Proximity switch for continuous antenna field, on |
| Cable length, SLG - proximity switch | Max. of 50 m |
| Interface for SLG synchronization | |
| Cable length, SLG - SLG | Max. of 30 m |
| Indicator elements | 2 LEDs |
| Housing | |
| Dimensions [L x W x H] | 290 x 135 x 42 (without plug) |
| Color/material | Anthracite/plastic PA 12 GF 25 |
| Mounting | 4 M6 screws |
| Shock/oscillation in acc. w. DIN EN 60721-3-7, class 7 M3 | 30 g/1.5 g |
| MTBF (at +40°C) | 0.4 x 10 ⁶ hours |
| Protection rating in acc. w. DIN EN 60529 | IP 65 |
| Ambient temperature | |
| Operation/transportation and storage | -25°C to +70° C/-40°C to +85°C |
| Weight, approx. | 800 g |
| Antenna | Integrated in SLG |
| Antenna efficiency | < 50 mV/m at distance of 3 m/< 0.5 µW/cm ² (at distance of 1 m) |
| Receiving sensitivity | -95 dBm |
| Gain | 5 dBi |
| Emission towards back | -20 dB front/back |
| Opening angle | Approx. 90° horizontal/vertical |
| Polarization | Circular |
| Certifications | RF: I-ETS 330440+C1:1997 SAR: 99/519/EG Safety: EN 60950:2000 EMC: EN 301489-01:2000 EN 301489-03:2000 ENV 50204:1995 FCC Part 15C cUL _{US} Safe for pacemakers |

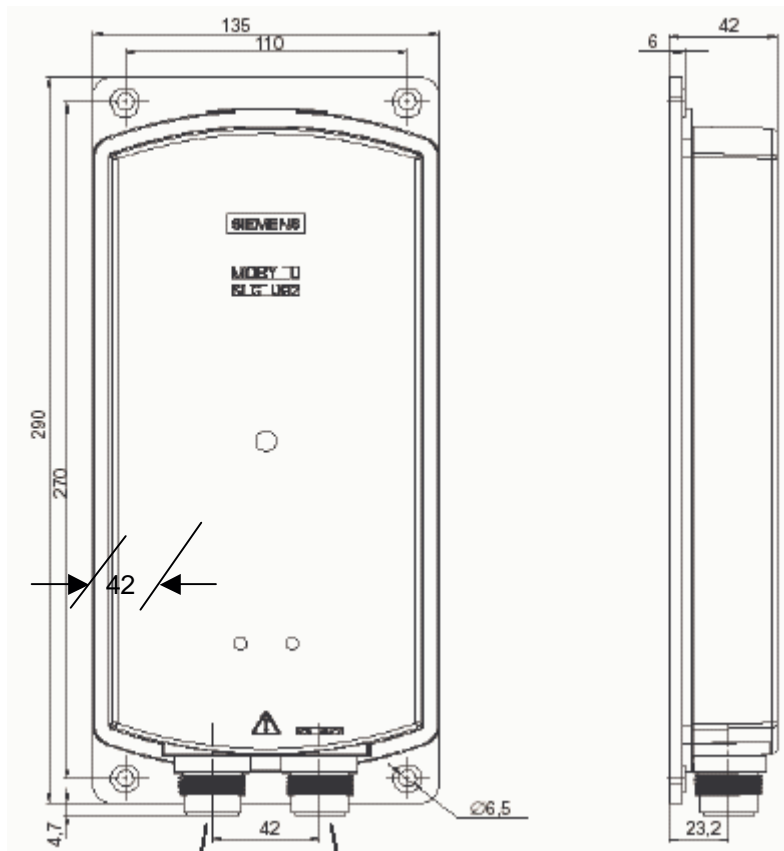
Field Data

| | Standard | Minimum | Maximum | |
|---|----------|---------|---------|---|
| Limit distance (S _g), approx. | 2.0 m | 0.50 m | 3.0 m | Over-the-horizon transmissions can be actively limited (in 0.5 m steps from 0.5 m to 3.5 m) by SLG. |
| Working distance (S _a) | 1.4 m | 0.35 m | 2.1 m | |
| Transmission window at S _a Length/width | 2.0 m | 0.70 m | 2.1 m | |

The field data apply to reading and writing the MDS with SLG U92 with FCC certification.

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Dimensional Drawing - SLG U92



11-pin plug connector in
acc. w. EN 175201-804
for service interface,
proximity switch and
synchronization

6-pin SLG plug connector
in acc. w. EN 175201-804
for ASM/PC
RS 422 or RS 232