


Appendix

A.1 Certificates and approvals

All the latest RFID radio approvals are available on the Internet (<http://www.siemens.com/rfid-approvals>).

Labeling	Description
	Conformity acc. to the RED EU directive

Notes on CE marking

The following applies to the system described in this documentation:
The CE marking on a device indicates the corresponding approval.

DIN ISO 9001 certificate

The quality assurance system for the entire product process (development, production, and marketing) at Siemens fulfills the requirements of ISO 9001 (corresponds to EN29001: 1987).




This has been certified by DQS (the German society for the certification of quality management systems).










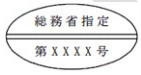
EQ-Net certificate no.: 1323-01

Country-specific approvals

Safety

If the device has one of the following markings the corresponding approval has been obtained:

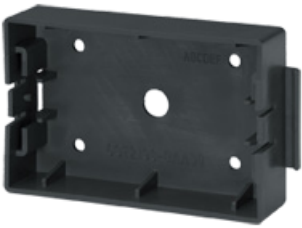


Labeling	Description
	Underwriters Laboratories (UL) to UL 60950 Standard (I.T.E), UL508 or UL61010-1/UL61010-2-201 (IND.CONT.EQ)
	Underwriters Laboratories (UL) according to Canadian standard C22.2 No. 60950 (I.T.E), C22.2 No. 142 or C22.2 NO. 61010-1-12 (IND.CONT.EQ)
	Underwriters Laboratories (UL) according to Standard UL 60950, Report E11 5352 and Canadian standard C22.2 No. 60950 (I.T.E), UL508 or UL61010-1/UL61010-2-201 (IND.CONT.EQ) and C22.2 No. 142 or C22.2 NO. 61010-1-12 (IND.CONT.EQ)





Labeling	Description
	UL recognition mark
	Canadian Standard Association (CSA) acc. to standard C22.2. No. 60950 (LR 81690), C22.2 No. 142 or C22.2 NO. 61010-1-12 (LR 63533)
	Canadian Standard Association (CSA) acc. to American Standard UL 60950 (LR 81690), UL508 or UL61010-1/UL61010-2-201 (LR 63533)
	This product meets the requirements of the AS/NZS 3548 Norm.
	USA (FCC) This device complies with Part 15 of the FCC Rules. FCC ID: NXW-RF...
Canada (IC)	Canada (IC) This device complies with Industry Canada licence-exempt RSS standard(s). IC: 267X-RF...
	Russia, Belarus and Kazakhstan
	Brazil (ANATEL) ANATEL-ID: XXXX-YY-ZZZZ
Mexico (COFETEL)	Mexico (COFETEL)
	South Africa (ICASA)
China (CMIIT)	China (CMIIT) CMIIT ID: XXXXYZZZZ
	South Korea (KCC)
	Japan (VCCI)




A.2 Accessories

A.2.1 Transponder holders

Table A- 1 Overview of the transponder holders and spacers

Product photo	Insertable transponders	Characteristics
 6GT2190-0AA0	<ul style="list-style-type: none"> • MDS D100 • MDS D200 • MDS D400 • MDS E600 • MDS E611 • RF360T 	<ul style="list-style-type: none"> • Spacer for mounting on metal, in conjunction with the fixing pocket 6GT2190-0AB00 • Distance from transponder to metal: 25 mm • Mounting: 4 x M4 screws • Material: PA6 • Weight: 31 g • Dimensions (L x W x H): 110 x 62 x 24 mm
 6GT2190-0AB00	<ul style="list-style-type: none"> • MDS D100 • MDS D200 • MDS D400 • MDS E600 • MDS E611 • RF360T 	<ul style="list-style-type: none"> • Fixing pocket in conjunction with spacer 6GT2190-0AA00 • Mounting: <ul style="list-style-type: none"> – Locks into spacer – 2 x screws/nails – Tacked • Material: PA6 • Weight: 12 g • Dimensions (L x W x H): 121 x 57 x 5 mm
 6GT2390-0AA00	<ul style="list-style-type: none"> • MDS D100 • MDS D200 • MDS D400 • MDS E600 • MDS E611 	<ul style="list-style-type: none"> • Fixing pocket not suitable for mounting directly on metal • Mounting: 2 x M4 countersunk screws • Material: PA6 • Weight: 21 g • Dimensions (L x W x H): 110 x 65 x 5 mm

Product photo	Insertable transponders	Characteristics
 <p>6GT2690-0AA00</p>	<ul style="list-style-type: none"> • MDS D139 • MDS D339 	<ul style="list-style-type: none"> • Spacer for mounting on metal • Distance from transponder to metal: 30 mm • Mounting: 1 x M5 stainless steel screw • Tightening torque: 1.5 Nm • Material: PPS • Weight: 50 g • Dimensions (Ø x H): 85 x 30 mm
 <p>6GT2690-0AH00</p>	<ul style="list-style-type: none"> • MDS D139 • MDS D339 	<ul style="list-style-type: none"> • Quick change holder for mounting on metal • Distance from transponder to metal: 30 mm • Mounting: Screw-in • Material: Stainless steel VA • Weight: 80 g • Dimensions (Ø x H): 22 x 60 mm
 <p>6GT2690-0AH10</p>	<ul style="list-style-type: none"> • MDS D139 • MDS D339 	<ul style="list-style-type: none"> • Quick change holder for mounting on metal • Distance from transponder to metal: 30 mm • Mounting: Screw-in • Material: Stainless steel VA • Weight: 60 g • Dimensions (Ø x H): 22 x 47 mm
 <p>6GT2690-0AK00</p>	<ul style="list-style-type: none"> • MDS D124 • MDS D324 • MDS D424 • MDS D524 	<ul style="list-style-type: none"> • Spacer for mounting on metal • Distance from transponder to metal: 15 mm • Mounting: 1 x M4 countersunk screw • Tightening torque: ≤ 1 Nm • Material: PPS • Weight: Approx. 4 g • Remounting cycles: min. 10 • Dimensions (Ø x H): 36 x 22 mm

Product photo	Insertable transponders	Characteristics
 <p>6GT2690-0AL00</p>	<ul style="list-style-type: none"> • MDS D126 • MDS D426 • MDS D526 • MDS E624 	<ul style="list-style-type: none"> • Spacer for mounting on metal • Distance from transponder to metal: 25 mm • Mounting: 1 x M4 countersunk screw • Tightening torque: ≤ 1 Nm • Material: PA6 • Weight: Approx. 12 g • Remounting cycles: min. 10 • Dimensions (Ø x H): 59 x 30 mm
 <p>6GT2690-0AG00</p>	<ul style="list-style-type: none"> • MDS D160 • MDS D460 	<ul style="list-style-type: none"> • Spacer for mounting on metal • Distance from transponder to metal: 10 mm • Mounting: 1 x M3 countersunk screw • Material: PA6 • Weight: 2 g • Dimensions (Ø x H): 20 x 14 mm
 <p>6GT2690-0EA00</p>	<ul style="list-style-type: none"> • MDS D423 • RF330T 	<ul style="list-style-type: none"> • Fixing hood • Mounting: 2 x M4 or 2 x M5 screws with max. head diameter of 9.5 mm • Tightening torque ≤ 0.8 Nm (M4 only with flat washer) • Material: PPS • Weight: 3 g • Dimensions (L x W x H): 49.4 x 20 x 9.8 mm

Dimensional drawings

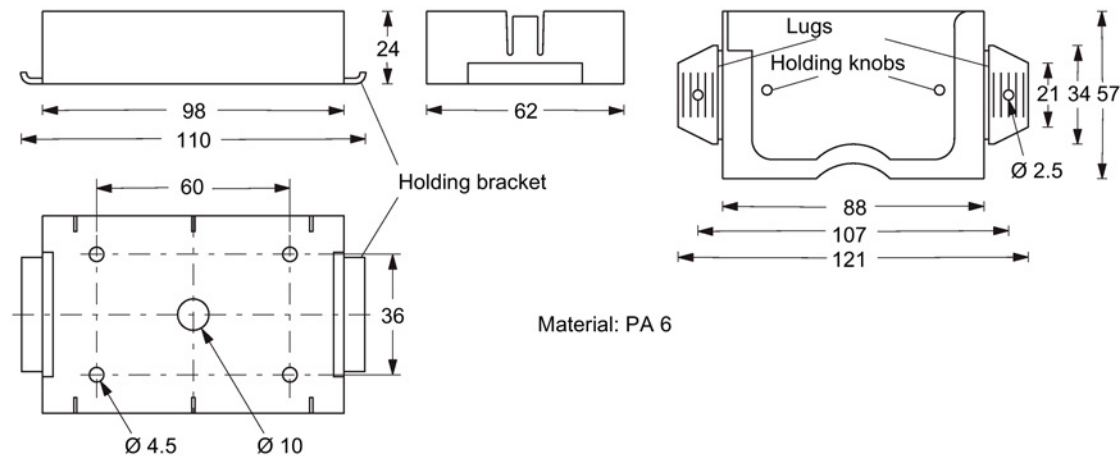


Figure A-1 Dimension drawing of spacer 6GT2190-0AA00 with fixing pocket 6GT2190-0AB00

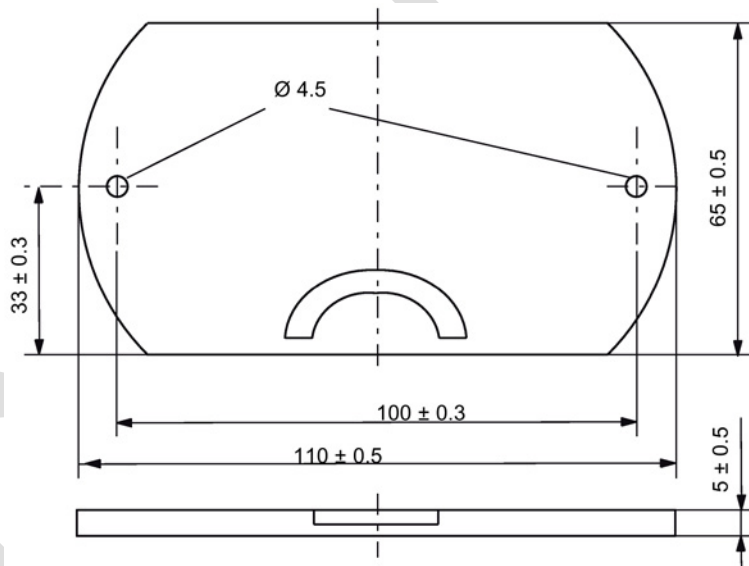


Figure A-2 Dimension drawing of fixing pocket 6GT2390-0AA00

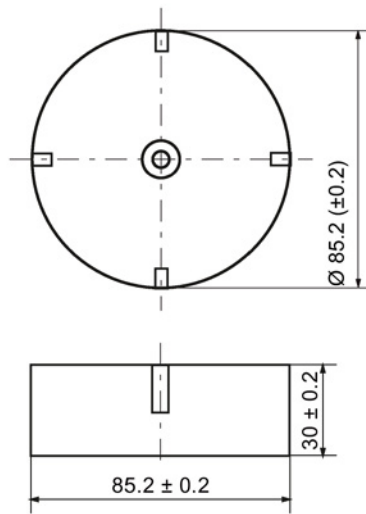


Figure A-3 Dimension drawing of spacer 6GT2690-0AA00

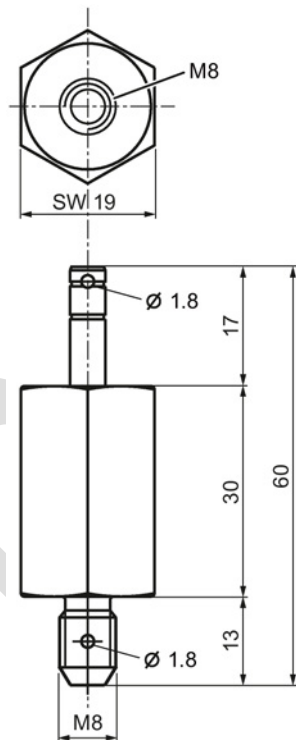


Figure A-4 Dimension drawing of quick change holder 6GT2690-0AH00

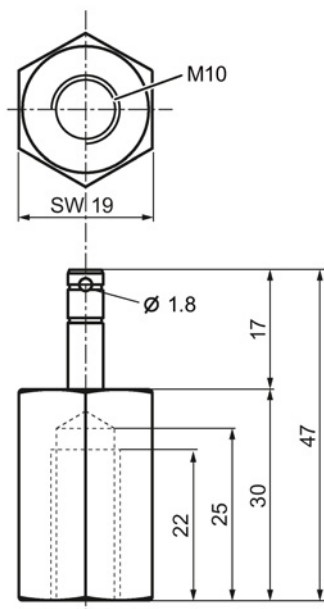


Figure A-5 Dimension drawing of quick change holder 6GT2690-0AH10

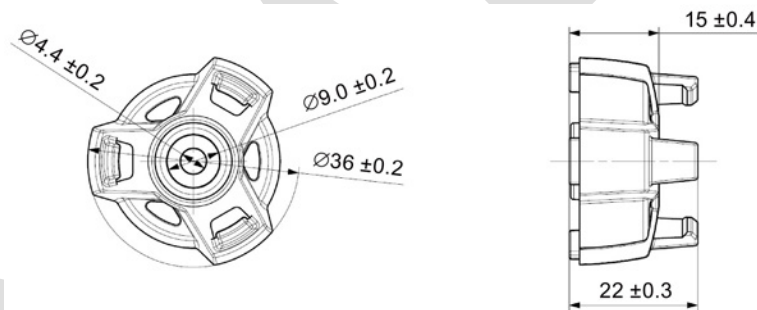


Figure A-6 Dimension drawing of spacer 6GT2690-0AK00

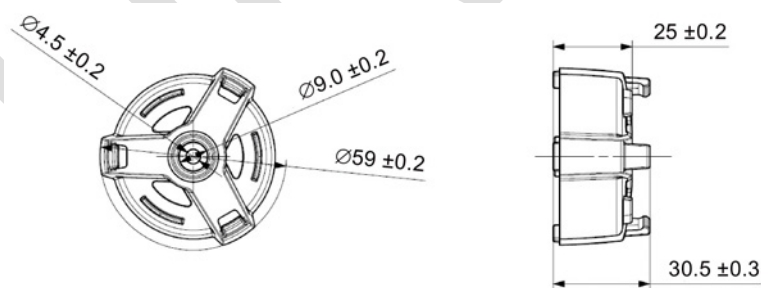


Figure A-7 Dimension drawing of spacer 6GT2690-0AL00

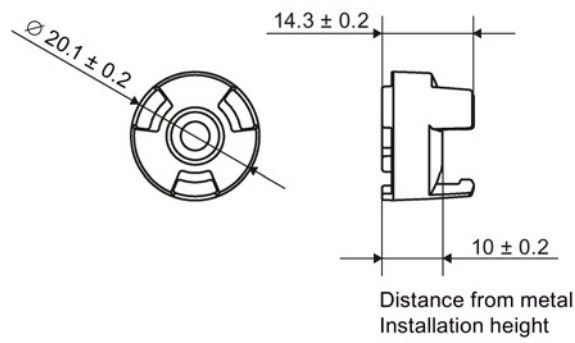


Figure A-8 Dimension drawing of spacer 6GT2690-0AG00

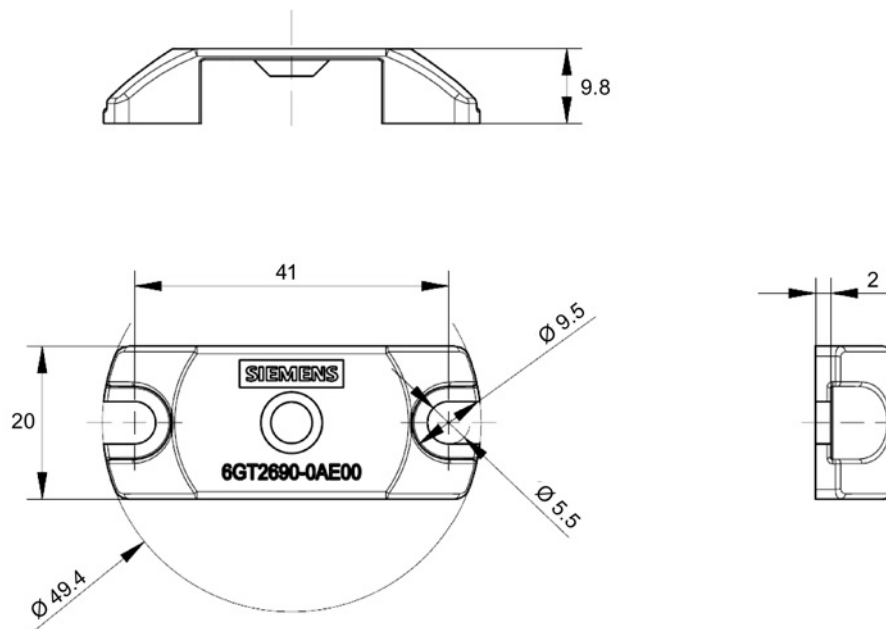


Figure A-9 Dimension drawing of fixing hood 6GT2690-0EA00

A.2.2 MOBY I migration

The RF300 readers of the new generation provide the option of simple migration of existing MOBY I systems to SIMATIC RF300. The so-called MOBY I emulation processes frames of the MOBY I protocol on its serial interface and communicates with the established RF300 transponders.

If the RF300 reader is connected to a communications module with MOBY I capability, the reader automatically recognizes the serial protocol and sets the MOBY I protocol. As a communications module with MOBY I capability, all the communications modules sold for MOBY I count regardless of the mode in which the MOBY I communications modules are operated. This property allows even projects with the ECC mode turned on or with file handlers to be migrated.

Communication modules with MOBY I capability:

RF180C, RFID 181EIP, RF170C, ASM 456, ASM 475, ASM 470, ASM450, ASM 451, ASM 452, ASM 472, ASM 473, ASM 424, ASM 454, ASM 400, CM 422, CM 423, ASM 410, ASM 420, ASM 421, ASM 440, ES030

With the aid of the adapter cable (0.3 m; article number 6GT2091-4VE30) you can migrate existing MOBY I projects without needing to re-cable the connected RFID devices.

The transfer is as usual with MOBY I with a transmission speed of 19.2 kBd. The transmission speed in the application is identical (or slightly slower) than with the original MOBY I hardware.

NOTICE**Changed field geometry**

When replacing MOBY I components with RF300 components note that the field geometry changes.

Design of the Y adapter

With the aid of the Y adapter (article number 6GT2090-4VE00) a slow migration of a MOBY I application to RF300 is possible. The Y adapter is mounted in the vicinity of a MOBY I SLG. It forwards signals of a communications module both to the MOBY I SLG and to the RF300 readers to be newly installed. The transponder commands are handled either with a MOBY I transponder or with an RF300 transponder. To do this, no change to the MOBY I application is necessary.

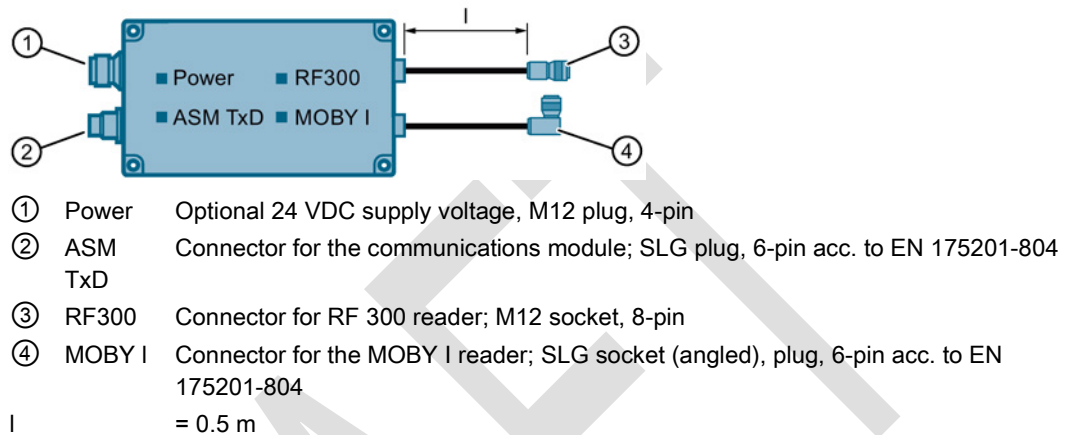


Figure A-10 Connection graphic of the MOBY Y adapter for MOBY I

Command set

The command set of the MOBY I readers is supported by the RF300 readers. You will find a list of the commands and a description of the commands in the manuals "FB 45" and "FC 56". These manuals can be found in the archive of the DVD "Ident Systems Software & Documentation" (6GT2080-2AA20).

A.2.3 DVD "Ident Systems Software & Documentation"

The DVD contains:

- FB/FC for SIMATIC, 3964R
- Drivers for DOS/Windows XP/Win 7
- C libraries
- PC demonstration program
- RFID documentation in PDF format, especially RFID system manuals, programming instructions and operating instructions

Table A- 2 Ordering data DVD

	Article number
DVD "Ident Systems Software & Documentation"	6GT2080-2AA20

Note

Notes on "Ident Systems Software" and licensing

When purchasing a communication module or an interface module, no software or documentation is supplied. The "Ident Systems Software & Documentation" DVD contains all available FBs/FCs for the SIMATIC, C libraries, demo programs, etc. and needs to be ordered separately. In addition, the DVD contains the complete Ident documentation (German and English) in PDF format.

The purchase of a communications module or an interface module includes a payment for the use of the software, including documentation, on the "Ident Systems Software & Documentation" DVD and the purchaser acquires the right to make copies (copy license) insofar as they are required as part of the customer-specific application or development for the plant.

The contract accompanying the DVD pertaining to the use of software products against a one-off payment also applies.

A.3 Connecting cable

In the following chapter, you will find an overview of the connecting cables between the readers and communication modules or PCs.

A.3.1 RF3xxR reader (RS-422) with ASM 456 / RF160C / RF170C / RF180C / RF182C

Connecting cable with straight connector

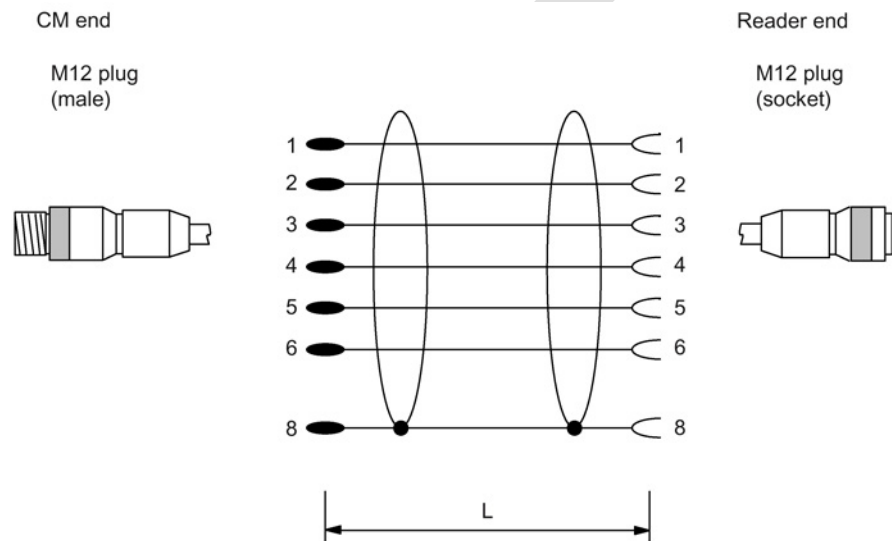


Figure A-11 Connecting cable between ASM 456, RF160C, RF170C, RF180C, RF182C and RF3xxR reader (RS-422)

Table A- 3 Ordering data

Length L	Article number
2 m	6GT2891-4FH20
5 m	6GT2891-4FH50
10 m	6GT2891-4FN10
20 m	6GT2891-4FN20
50 m	6GT2891-4FN50

Connecting cable with angled connector

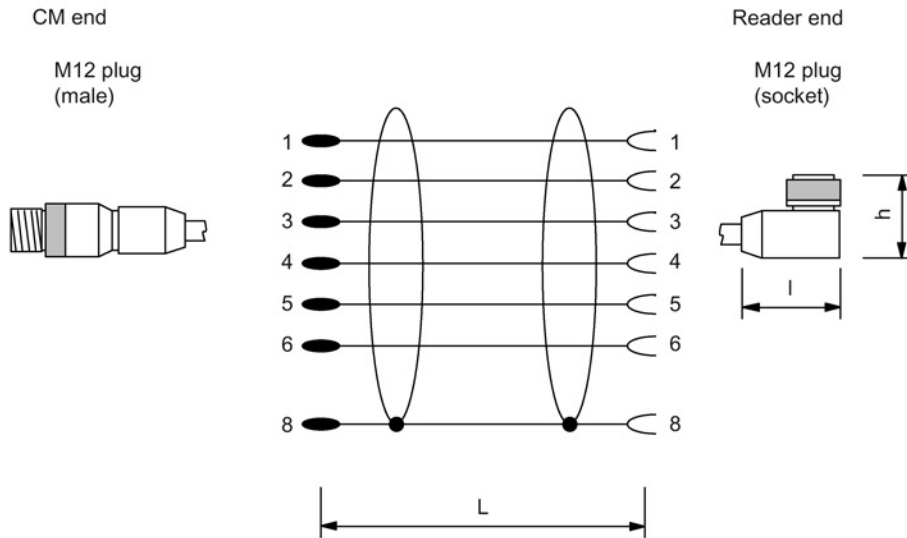


Figure A-12 Connecting cable between ASM 456, RF160C, RF170C, RF180C and RF3xxR reader (RS-422) with angled connector

Table A- 4 Ordering data

Length L	Article number
2 m	6GT2891-4JH20
5 m	6GT2891-4JH50
10 m	6GT2891-4JN10

The angled connector has a height of $h = 29$ mm and a length of $l = 38$ mm. Remember that due to the construction, the distance between the edge of the connector and the edge of the reader housing (H) is higher.

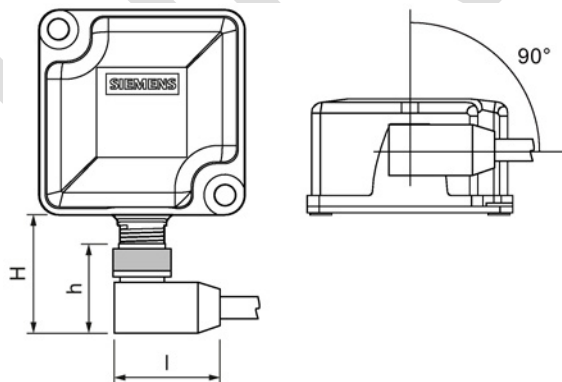


Figure A-13 Distance between connector edge and housing edge

The distance between the connector edge and the housing edge of the reader (H) depends on the reader being used and can be up to 38 mm. If you look at the front of the reader, the angled connector always points to the right and runs parallel to the housing.

A.3.2 Reader RF3xxR (RS422) with ASM 475

Reader connection system

The connecting cable has a length of 2 m (standard) and 5 m. Extensions up to 1000 m are possible with the 6GT2891-4E... plug-in cables.

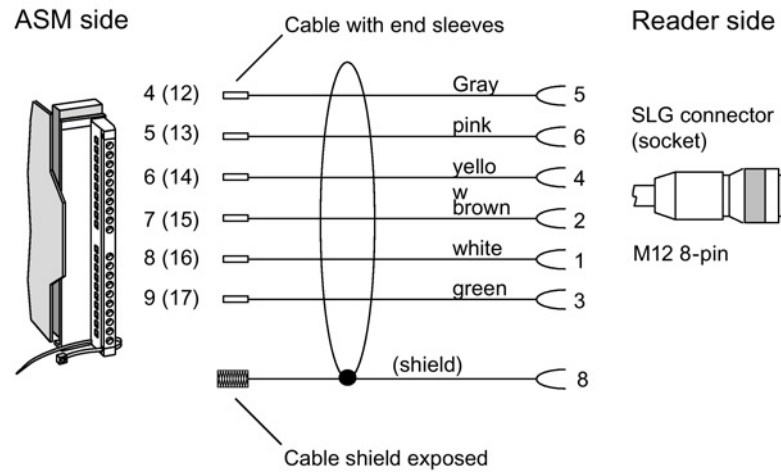


Figure A-14 Structure of the connecting cable between ASM 475 and RF3xx reader with RS-422

Table A- 5 Ordering data

Length L	Article number
2 m	6GT2891-4EH20
5 m	6GT2891-4EH50

A.3.3 Reader RF3xxR (RS-422) with RF120C

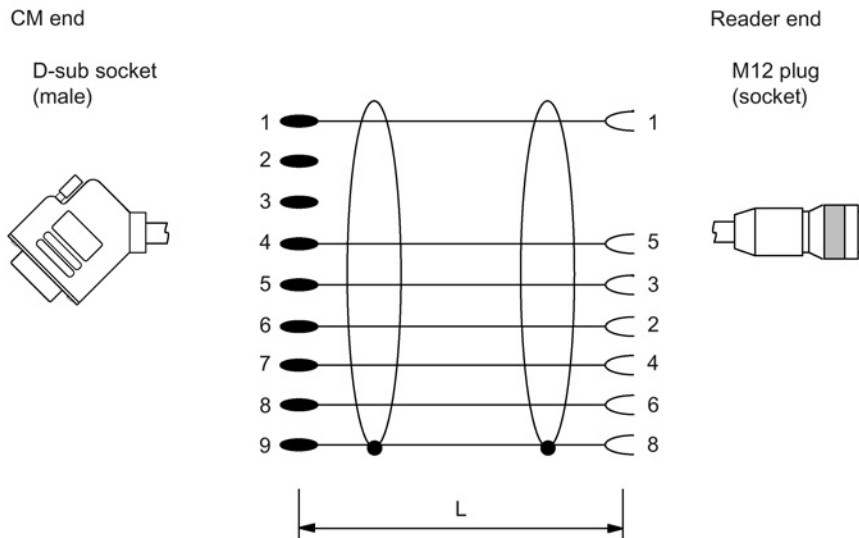


Figure A-15 Connecting cable between RF120C and RF3xxR reader (RS-422)

Table A-6 Ordering data

Length L	Article number
2 m	6GT2091-4LH20
5 m	6GT2091-4LH50
10 m	6GT2091-4LN10

A.3.4 Reader RF380R (RS232) - PC

The connecting cables have a length of 5 m. The outgoing cable for the power supply has a length of 0.5 m.

With 4-pin power supply connector

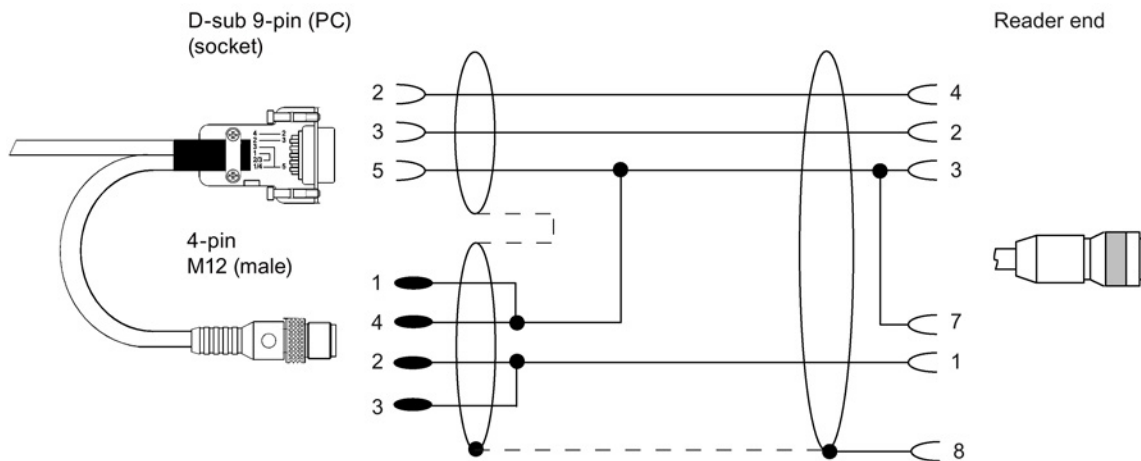


Figure A-16 Connecting cable between PC and RF380R (RS-232) with 4-pin power supply connector

Suitable power supply unit: e.g. wide-range power supply unit

With open ends for the power supply

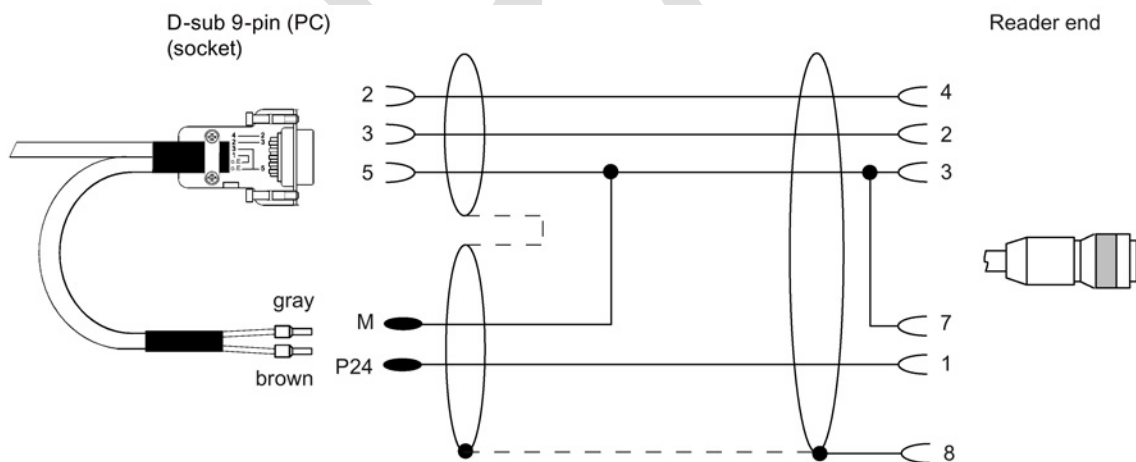


Figure A-17 Connecting cable between PC and RF380R (RS-232) with open ends for the power supply

Table A- 7 Ordering data connecting cable

	Article number
Connecting cable with 4-pin power supply connector (5 m)	6GT2891-4KH50
Connecting cable with open ends (5 m)	6GT2891-4KH50-0AX0

Table A- 8 Ordering data for wide-range power supply unit

	Article number
Wide-range power supply unit for SIMATIC RF-systems (100 - 240 VAC / 24 VDC / 3 A) with 2 m connecting cable with country-specific plug	EU: 6GT2898-0AA00 UK: 6GT2898-0AA10 US: 6GT2898-0AA20

A.4 Ordering data

RF300 components

Note

Product update

Note that readers with the article numbers "6GT2801-xABxx" are being replaced by readers with the article numbers "6GT2801-xBAxx".

Table A- 9 RF300 reader

Reader	Description	Article number
RF310R (RS-422)	<ul style="list-style-type: none"> • With RS422 interface (3964R) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 55 x 75 x 30 mm • with integrated antenna • ISO 15693 compatible 	horizontal base plate
		base plate turned through 90°
RF310R (Scanmode)	<ul style="list-style-type: none"> • with RS-422 interface (Scanmode) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 55 x 75 x 30 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-1AB20-0AX1
RF310R second generation	<ul style="list-style-type: none"> • With RS-422 interface (3964R) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 55 x 75 x 30 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-1BA10
RF340R	<ul style="list-style-type: none"> • With RS422 interface (3964R) • IP67 • Operating temperature -25 °C ... +70 °C • Dimensions (L x W x H): 75 x 75 x 41 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-2AB10

Reader	Description	Article number
RF340R second generation	<ul style="list-style-type: none"> • With RS-422 interface (3964R) • IP67 • Operating temperature -25 °C ... +70 °C • Dimensions (L x W x H): 75 x 75 x 41 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-2BA10
RF350R	<ul style="list-style-type: none"> • With RS-422 interface (3964R) • IP65 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 75 x 75 x 41 mm • Reader for external antennas, with the option of connecting ANT 1, ANT 3, ANT 12, ANT 18, ANT 30 • ISO 15693 compatible 	6GT2801-4AB10
RF350R second generation	<ul style="list-style-type: none"> • With RS422 interface (3964R) • IP65 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 75 x 75 x 41 mm • Reader for external antennas, with the option of connecting ANT 1, ANT 3, ANT 12, ANT 18, ANT 30 • ISO 15693 compatible 	6GT2801-4BA10
RF380R	<ul style="list-style-type: none"> • with RS-422 interface (3964R) and RS-232 interface (3964R) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 160 x 80 x 41 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-3AB10
RF380R Scanmode	<ul style="list-style-type: none"> • with RS-422 interface (Scanmode) and RS-232 interface (Scanmode) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 160 x 80 x 41 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-3AB20-0AX1

Reader	Description	Article number
RF382R (Scanmode)	<ul style="list-style-type: none"> • with RS-422 interface (Scanmode) and RS-232 interface (Scanmode) • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 160 x 80 x 41 mm • with integrated antenna • ISO 15693 compatible 	6GT2801-3AB20-0AX0
RF350M	<ul style="list-style-type: none"> • IP54 • Operating temperature: -20 °C ... +55 °C • Dimensions (L x W x H): 250 x 90 x 47 mm • Mobile reader with integrated antenna 	6GT2803-1BA00
RF350M	<ul style="list-style-type: none"> • IP54 • Operating temperature: -20 °C ... +55 °C • Dimensions (L x W x H): 250 x 90 x 47 mm • Mobile reader for external antennas, with the option of connecting ANT 8, ANT 12, ANT 18, ANT 30 	6GT2803-1BA10

Table A- 10 RF300 transponder

RF300 transponder	Description	Article number
RF320T	<ul style="list-style-type: none"> • IP67 • Memory size: 20 bytes of EEPROM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 27 x 4 mm 	6GT2800-1CA00
RF330T	<ul style="list-style-type: none"> • IP68 • Memory size: 32 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 30 x 8 mm 	6GT2800-5BA00
RF340T (8 KB FRAM)	<ul style="list-style-type: none"> • IP68 • Memory size: 8 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W x H): 48 x 25 x 15 mm 	6GT2800-4BB00
RF340T (32 KB FRAM)	<ul style="list-style-type: none"> • IP68 • Memory size: 32 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W x H): 48 x 25 x 15 mm 	6GT2800-5BB00

RF300 transponder	Description	Article number
RF350T	<ul style="list-style-type: none"> • IP68 • Memory size: 32 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W x H): 50 x 50 x 20 mm 	6GT2800-5BD00
RF360T (8 KB FRAM)	<ul style="list-style-type: none"> • IP67 • Memory size: 8 KB FRAM user memory • Operating temperature: -25 °C ... +75 °C • Dimensions (L x W x H): 85.8 x 54.8 x 2.5 mm 	6GT2800-4AC00
RF360T (32 KB FRAM)	<ul style="list-style-type: none"> • IP67 • Memory size: 32 KB FRAM user memory • Operating temperature: -25 °C ... +75 °C • Dimensions (L x W x H): 85.8 x 54.8 x 2.5 mm 	6GT2800-5AC00
RF370T (32 KB FRAM)	<ul style="list-style-type: none"> • IP68 • Memory size: 32 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W x H): 75 x 75 x 41 mm 	6GT2800-5BE00
RF370T (64 KB FRAM)	<ul style="list-style-type: none"> • IP68 • Memory size: 64 KB FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W x H): 75 x 75 x 41 mm 	6GT2800-6BE00
RF380T	<ul style="list-style-type: none"> • IP68 • Memory size 32 KB FRAM user memory • Operating temperature: -25 °C ... +200 °C (cyclic) • Dimensions (Ø x H): 114 x 83 mm 	6GT2800-5DA00

Table A- 11 ISO transponder

ISO transponder	Description	Article number
MDS D100	<ul style="list-style-type: none"> • IP68 • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +80 °C • Dimensions (L x W x H): 85.6 x 54 x 0.9 mm • Credit card format 	6GT2600-0AD10
MDS D117	<ul style="list-style-type: none"> • IP68 • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 4 x 5 mm 	6GT2600-0AG00

ISO transponder	Description	Article number
MDS D124	<ul style="list-style-type: none"> • IP67; IPx9K • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +180 °C • Dimensions (Ø x H): 27 (±0.2) x 4 (±0.2) mm 	6GT2600-0AC10
MDS D126	<ul style="list-style-type: none"> • IP68 • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 50 x 3.6 mm • Round design with mounting hole 	6GT2600-0AE00
MDS D127	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +125 °C • Dimensions (Ø x H): M6 x 5.8 (±0.2) mm 	6GT2600-0AF00
MDS D139	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 112 bytes of EEPROM user memory • Operating temperature: up to +200 °C/+220 °C • Dimensions (Ø x H): 85 (±0.5) x 15 (-1.0) mm 	6GT2600-0AA10
MDS D160	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C...+70 °C • Dimensions (Ø x H): 16 (±0.2) x 3.0 (±0.2) mm • Laundry transponder for cyclic applications 	6GT2600-0AB10
MDS D165	<ul style="list-style-type: none"> • IP65 • Memory size: 112 bytes of EEPROM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W): 86 x 54 mm • Smartlabel (PET) in credit card format 	6GT2600-1AB00-0AX0
MDS D200	<ul style="list-style-type: none"> • IP67 • Memory size: 256 bytes of EEPROM user memory • Operating temperature: -20 °C ... +60 °C • Dimensions (L x W x H): 86 x 54 x 0.8 mm • Credit card format 	6GT2600-1AD00-0AX0
MDS D261	<ul style="list-style-type: none"> • IP65 • Memory size: 256 bytes of EEPROM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (L x W): 55 x 55 mm • Smartlabel (PET), small design 	6GT2600-1AA00-0AX0

ISO transponder	Description	Article number
MDS D324	<ul style="list-style-type: none"> IP67; IPx9K Memory size: 992 bytes of EEPROM user memory Operating temperature: -25 °C...+125 °C Dimensions (Ø x H): 27 (±0.2) x 4 (±0.2) mm 	6GT2600-3AC00
MDS D339	<ul style="list-style-type: none"> IP68; IPx9K Memory size: 992 bytes of EEPROM user memory Operating temperature: -25 °C ... +220 °C Dimensions (Ø x H): 85 (±0.5) x 15 (-1.0) mm 	6GT2600-3AA10
MDS D400	<ul style="list-style-type: none"> IP67 Memory size: 2000 bytes of FRAM user memory Operating temperature: -25 °C ... +60 °C Dimensions (L x W x H) 85.6 (±0.3) × 54 (±0.2) × 0.8 (±0.05) mm 	6GT2600-4AD00
MDS D421	<ul style="list-style-type: none"> IP67; IPx9K Memory size: 2000 bytes of FRAM user memory Operating temperature -25 °C ... +85 °C Dimensions (Ø x H): 10 x 4.5 mm 	6GT2600-4AE00
MDS D422	<ul style="list-style-type: none"> IP68 Memory size: 2000 bytes of FRAM user memory Operating temperature: -25 °C ... +85 °C Dimensions (Ø x H): M20 x 6 (±0.2) mm Can be screwed into metal (flush-mounted) 	6GT2600-4AF00
MDS D423	<ul style="list-style-type: none"> IP68; IPx9K Memory size: 2000 bytes of FRAM user memory Operating temperature: -25 °C ... +85 °C Dimensions (Ø x H): 30 (+0.2/-0.5) x 8 (-0.5) mm 	6GT2600-4AA00
MDS D424	<ul style="list-style-type: none"> IP67; IPx9K Memory size: 2000 bytes of FRAM user memory Operating temperature: -25 °C ... +125 °C Dimensions (Ø x H): 27 (±0.2) x 4 (±0.2) mm 	6GT2600-4AC00
MDS D425	<ul style="list-style-type: none"> IP68; IPx9K Memory size: 2000 bytes of FRAM user memory Operating temperature: -25 °C ... +85 °C Dimensions (Ø x H): 24 X 10 mm; M6 thread Screw transponder 	6GT2600-4AG00

ISO transponder	Description	Article number
MDS D426	<ul style="list-style-type: none"> • IP68 • Memory size: 2000 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 50 x 3.6 mm • Round design with mounting hole 	6GT2600-4AH00
MDS D428	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 2000 bytes of FRAM user memory • Operating temperature: -25 °C...+85 °C • Dimensions (Ø x H): 18(±1) x 20(±1) mm (without thread); thread M8 	6GT2600-4AK00-0AX0
MDS D460	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 2000 bytes of FRAM user memory • Operating temperature: -25 °C...+85 °C • Dimensions (Ø x H): 16 (±0.2) x 3.0 (±0.2) mm 	6GT2600-4AB00
MDS D521	<ul style="list-style-type: none"> • IP67; IPx9K • Memory size: 8192 bytes of FRAM user memory • Operating temperature -25 °C ... +85 °C • Dimensions (Ø x H): 10 x 4.5 mm 	6GT2600-5AE00
MDS D522	<ul style="list-style-type: none"> • IP68 • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): M20 x 6 (±0.2) mm • Can be screwed into metal (flush-mounted) 	6GT2600-5AF00
MDS D522 Special variant	<ul style="list-style-type: none"> • IP68 • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 18 (+0.1) x 5.2 mm • Can be clipped into metal (flush-mounted) 	6GT2600-5AF00-0AX0
MDS D524	<ul style="list-style-type: none"> • IP67 • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 27 (±0.2) x 4 (±0.2) mm 	6GT2600-5AC00
MDS D525	<ul style="list-style-type: none"> • IP67; IPx9K • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 24 x 10 (+1.0) mm 	6GT2600-5AG00

ISO transponder	Description	Article number
MDS D526	<ul style="list-style-type: none"> • IP67; IPx9K • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 50 x 3.6 mm • Round design with mounting hole 	6GT2600-5AH00
MDS D528	<ul style="list-style-type: none"> • IP68; IPx9K • Memory size: 8192 bytes of FRAM user memory • Operating temperature: -25 °C ... +85 °C • Dimensions (Ø x H): 18(±1) x 20(±1) mm (without thread); thread M8 	6GT2600-5AK00

Table A- 12 Communication modules/interface modules

Communications module	Description	Article number
ASM 456	ASM 456 for PROFIBUS DP-V1 max. 2 readers connectable	6GT2002-0ED00
ASM 475	ASM 475 for SIMATIC S7 max. 2 RF3xxR readers with RS-422 can be connected in parallel without a front connector	6GT2002-0GA10
RF120C	Communications module RF120C for SIMATIC S7-1200	6GT2002-0LA00
RF160C	Communications module RF160C for PROFIBUS DP V0 max. 2 readers connectable	6GT2002-0EF00
RF170C	RF170C communications module	6GT2002-0HD00
	RF170C connecting block	6GT2002-1HD00
RF180C	RF180C communications module max. 2 SLGs or readers can be connected	6GT2002-0JD00
	Connecting block M12, 7/8" (5-pin)	6GT2002-1JD00
	Connecting block M12, 7/8" (4-pin)	6GT2002-4JD00
	Push-pull connecting block, RJ-45	6GT2002-2JD00
RF182C	RF182C communications module max. 2 SLGs or readers can be connected	6GT2002-0JD10
	Connecting block M12, 7/8" (5-pin)	6GT2002-1JD00
	Connecting block M12, 7/8" (4-pin)	6GT2002-4JD00
	Push-pull connecting block, RJ-45	6GT2002-2JD00
RFID 181EIP	RF182C communications module max. 2 SLGs or readers can be connected	6GT2002-0JD20
	Connecting block M12, 7/8" (5-pin)	6GT2002-1JD00
	Connecting block M12, 7/8" (4-pin)	6GT2002-4JD00
	Push-pull connecting block, RJ-45	6GT2002-2JD00

Table A- 13 Antennas

Antenna	Description	Article number
ANT 1	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 75 x 75 x 20 mm • incl. an integrated antenna cable 3 m 	6GT2398-1CB00
ANT 3	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 50 x 28 x 10 mm • without antenna connecting cable 	6GT2398-1CD30-0AX0
	<ul style="list-style-type: none"> • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CD40-0AX0
ANT 3S	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (L x W x H): 50 x 28 x 10 mm • without antenna connecting cable 	6GT2398-1CD50-0AX0
	<ul style="list-style-type: none"> • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CD60-0AX0
ANT 8	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (Ø x L): M8 x 40 mm • without antenna connecting cable 	6GT2398-1CF00
	<ul style="list-style-type: none"> • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CF10
ANT 12	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (Ø x L): M12 x 40 mm • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CC00
ANT 18	<ul style="list-style-type: none"> • IP67 (front) • Operating temperature: -25 °C ... +70 °C • Dimensions (Ø x L): M18 x 55 mm • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CA00
ANT 30	<ul style="list-style-type: none"> • IP67 • Operating temperature: -25 °C ... +70 °C • Dimensions (Ø x L): M30 x 58 mm • incl. one plug-in antenna connecting cable 3 m 	6GT2398-1CD00

Accessories

Table A- 14 Accessories for RF300 reader

Reader	Accessories	Article number
RF380R	RS-232 plug-in cable with 4-pin connector	6GT2891-4KH50
	Plug-in cable RS-232 with open ends (5 m)	6GT2891-4KH50-0AX0
	Plug-in cable with D-SUB ↔ M12, 8-pin and with M8, 3-pin power unit connector	6GT2891-4KH50-0AX1

Table A- 15 RF300 transponder accessories

Transponder	Accessories	Article number
RF320T	Spacer (Ø x H): 36 x 22 mm	6GT2690-0AK00
RF330T	Fixing hood (L x W x H): 49.4 x 20 x 9.8 mm	6GT2690-0EA00
RF360T	Spacer (L x W x H): 110 x 62 x 24 mm (in conjunction with fixing pocket 6GT2190-0AB00)	6GT2190-0AA00
	Fixing pocket (L x W x H): 121 x 57 x 5 mm (in conjunction with spacer 6GT2190-0AA00)	6GT2190-0AB00
RF380T	Holder (short version)	6GT2090-0QA00
	Holder (long version)	6GT2090-0QA00-0AX3
	Shrouding cover	6GT2090-0QB00
	Universal holder	6GT2590-0QA00

Table A- 16 Transponder accessories

Transponder	Accessories	Article number
MDS D100 / D200 / D400 / D600 / D611	Spacer	6GT2190-0AA00
	Fixing pocket	6GT2190-0AB00
	Securing pocket (cannot be mounted directly on metal)	6GT2390-0AA00
MDS D139 / D339	Spacer (Ø x H): 85 x 30 mm	6GT2690-0AA00
	Quick change holder (Ø x H): 22 x 60 mm	6GT2690-0AH00
	Quick change holder (Ø x H): 22 x 47 mm	6GT2690-0AH10
MDS D124 / D324 / D424 / D524	Spacer (Ø x H): 36 x 22 mm	6GT2690-0AK00
MDS D126 / D426 / D526 / E624	Spacer (Ø x H): 59 x 30 mm	6GT2690-0AL00
MDS D160 / D460	Spacer (Ø x H): 20 x 14 mm	6GT2690-0AG00
MDS D423 / RF330T	Spacer (L x W x H): 49.4 x 20 x 9.8 mm	6GT2690-0EA00

Table A- 17 Accessory connecting RF300 reader ↔ PC

Connecting cable	Accessories	Article number
RF240R / RF260R / RF290R (RS232) and PC	Connecting cable RS-232 with M12 male connector (4-pin), 5 m	6GT2891-4KH50
	Connecting cable RS-232 with open ends, 5 m	6GT2891-4KH50-0AX0

Table A- 18 Accessories - connecting cable communications module/ASM ↔ reader

Connecting cables	Description Length	Article number
ASM 456 / RF160C / RF170C / RF180C and reader RF3xxR (RS422)	2 m	6GT2891-4FH20
	5 m	6GT2891-4FH50
	10 m	6GT2891-4FN10
	20 m	6GT2891-4FN20
	50 m	6GT2891-4FN50
ASM 456 / RF160C / RF170C / RF180C and RF3xxR reader (RS-422) with angled connector	2 m	6GT2891-4JH20
	5 m	6GT2891-4JH50
	10 m	6GT2891-4JN10
ASM 475 and reader RF3xxR (RS422)	2 m	6GT2891-4EH20
	5 m	6GT2891-4EH50
RF120C and reader RF3xxR (RS422)	2 m	6GT2091-4LH20
	5 m	6GT2091-4LH50
	10 m	6GT2091-4LN10

Table A- 19 RFID accessories, general

RFID general	Article number
DVD "Ident Systems Software & Documentation"	6GT2080-2AA20
Wide-range power supply unit for SIMATIC RF systems (100 - 240 VAC / 24 VDC / 3 A) with country-specific power cable/plug, 2 m	EU: 6GT2898-0AC00
	UK: 6GT2898-0AC10
	US: 6GT2898-0AC20
24 V connecting cable, 5 m	6GT2491-1HH50
M12 connector, 4-pin for wide range power supply unit, pack of 3	6GK1907-0DB10- 6AA3

A.5 Service & Support

Technical Support

You can reach technical support for all PD projects as follows:

- Phone: + 49 (0) 911 895 7222
- Fax: + 49 (0) 911 895 7223
- E-mail (<mailto:support.automation@siemens.com>)
- Internet: Web form for Support Request (<https://support.industry.siemens.com/My/ww/en/requests>)

Contacts

If you have any further questions on the use of our products, please contact one of our representatives at your local Siemens office.

The addresses are found on the following pages:

- On the Internet (http://w3.siemens.com/aspa_app)
- In Catalog CA 01
- In the catalog ID 10 specially for Industrial Identification Systems

Service & Support for Process Industries and Drives

On the Internet, on the Support home page (<https://support.industry.siemens.com/cs/de/en/>) of Process Industries and Drives (PD), you will find various services.

There you will find the following information, for example:

- Our newsletter containing up-to-date information on your products.
- Relevant documentation for your application, which you can access via the search function in "Product Support".
- A forum for global information exchange by users and specialists.
- Your local contact for PD.
- Information about on-site service, repairs, and spare parts. Much more can be found under "Our service offer".

RFID homepage

For general information about our identification systems, visit RFID homepage (<http://w3.siemens.com/mcms/identification-systems/>).

Online catalog and ordering system

The online catalog and the online ordering system can also be found on the Industry Mall Homepage (<https://mall.industry.siemens.com>).

Training center

We offer appropriate courses to get you started. Please contact your local training center or the central training center in

D-90327 Nuremberg.

Phone: +49 (0) 180 523 56 11

(€ 0.14 /min. from the German landline network, deviating mobile communications prices are possible)

For information about courses, see the SITRAIN homepage (<http://sitrain.automation.siemens.com/sitrainworld/>).

DRAFT

DRAFT

Index

A

- Antennas
 - Minimum clearances, 200
- Application Planning
 - SIMATIC RF300, 37
- Approvals, 405
- ASM 475
 - Assignment for connecting cable, 386, 419
 - Cable installation, 387
 - Design and function, 382
 - Function of the LEDs, 385
 - Indicators, 385
 - Ordering data, 383
 - Pin assignment, 386, 419
 - Status display with LEDs, 385

C

- Cabinet configuration, 106
- Cable, 417
 - Reader - ASM, 417
 - Shielding, 111
- Certificates, 405
- Communication modules, 379
- Communication time
 - Calculation, 47
- Connecting cable
 - Reader-communication module/ASM/PC, 417
- Contacts, 434
- Coupling paths, 104
- Courses, 435
- Customer benefits, 31

D

- Detection area, 44
- Diagnostic functions
 - Transponder, 401
- Direction of motion
 - Transponder, 44
- Display elements
 - RF310R reader with RS-422 interface, 116
 - RF340R reader, 137
 - RF350R reader, 144, 167

- Dwell time
 - Transponder, 46
- Dynamic mode, 45
 - Dwell time of the transponder, 46

E

- Electromagnetic compatibility
 - Coupling paths, 104
- Electromagnetic interference, 102
- EMC directives
 - Definition, 100
 - Equipotential bonding, 110
- EMC Directives
 - Propagation of electromagnetic interference, 102
- EMC Guidelines
 - Avoiding interference, 109
 - Basic Rules, 101
 - Cabinet configuration, 106
 - Cable shielding, 111
 - Overview, 99
- Equipotential bonding, 110
- Error codes
 - Reader, 395

F

- FC 45, 397
- Field data
 - ISO transponder, 52, 57
 - RF300 transponder, 49
- Fields of application, 31
- Flush-mounting
 - of transponders and readers, 63

H

- High-performance, 22

I

- Inductive alternating field, 37
- Input parameter, 379
- Installation
 - Several readers, 64
- Installation guidelines, 62

Interface modules, 379
 Interference sources
 Electromagnetic, 103
 ISO 14443 functionality, 114
 ISO 15693 functionality, 113
 ISO transponder
 Resistance to chemicals, 90

M

Main applications, 31
 MDS D100 transponder
 Technical specifications, 256
 MDS D117 transponder
 Technical specifications, 260
 MDS D124 Transponder
 Technical specifications, 264
 MDS D127 transponder
 Technical specifications, 274
 MDS D160 transponder
 Technical specifications, 285
 MDS D200 transponder
 Technical specifications, 293
 MDS D339 transponder
 Technical specifications, 305
 MDS D424 Transponder
 Technical specifications, 332
 MDS D425 Transponder
 Technical specifications, 335
 MDS D428 transponder
 Technical specifications, 343
 MDS D460 Transponder
 Technical specifications, 347
 MDS D521 transponder
 Technical specifications, 353
 MDS D522 transponder
 Technical specifications, 356
 MDS D524 transponder
 Technical specifications, 365
 MDS D525 transponder
 Technical specifications, 368
 MDS D526 transponder
 Technical specifications, 373
 MDS D528 transponder
 Technical specifications, 376
 MDS STATUS, 397
 Medium-performance, 22
 Memory configuration of the RF300 transponders, 208
 Metal
 Influence on the transmission window, 65
 Metal-free area
 Reader RF310R, 117, 124

Reader RF340R, 138
 RF380R reader, 168, 177
 Transponder RF330T, 216
 Transponder RF340T, 221
 Transponder RF350T, 224
 Transponder RF360T, 229
 Transponder RF370T, 235
 Transponder RF380T, 242

Metal-free space
 RF310R reader, 131
 RF340R reader, 154

Minimum clearances
 Antenna to antenna, 200

Minimum distance
 Antenna to antenna, 61
 Reader to reader, 60
 Transponder to transponder, 59

O

Ordering data, 423
 Antennas, 196, 431
 Communications modules, 430
 ISO transponder, 426
 Overview, 423
 Reader, 423
 RF300 transponder, 425
 RF310R Scanmode, 122
 RF310R with RS-422 interface, 115, 129
 RF340R with RS-422 interface, 136, 152
 RF350R with RS-422 interface, 143, 159
 RF380R Scanmode, 175
 RF380R with RS-422 interface, 166
 RF382R Scanmode, 182

P

Parameterization
 Function blocks, 379

Possible combinations
 Reader - transponder, 24, 27, 30

R

Read/write distance, 37

Reader
 Installing, 64

Reader RF310R
 Metal-free area, 117, 124

Reader RF340R
 Metal-free area, 138

Reducing interference due to metal, 62

Reduction of field data by metal

RF310R, 65

RF340R, 69

RF350R with ANT 1, 73

RF350R with ANT 18, 80

RF350R with ANT 3, 76

RF350R with ANT 30, 83

RF380R, 85

RF382R, 89

Resistance to chemicals

Transponder, 90

RF300 system diagnostics

SLG STATUS, 398

RF300 transponder

Resistance to chemicals, 90

RF310R reader, 115, 122, 129

Characteristics, 115, 122, 129

Metal-free space, 131

RF330T

Characteristics, 215

RF340R reader, 136, 152

Characteristics, 136, 152

Metal-free space, 154

RF350R reader, 143, 159

Characteristics, 143, 159

RF380R reader, 166

Characteristics, 166

Metal-free area, 168, 177

RF380R Scanmode reader, 175

Characteristics, 175

RFID systems

Overview, 21

S

Scanmode, 22

Selection criteria

SIMATIC RF300 components, 37

Shielding, 111

SLG STATUS, 397

Static mode, 45

Dwell time of the transponder, 46

Structure

System manual, 13

System diagnostics

MDS status, 401

System overview

RFID systems, 21

T

Technical specifications

MDS D100 transponder, 256

MDS D117 transponder, 260

MDS D124 Transponder, 264

MDS D127 transponder, 274

MDS D160 transponder, 285

MDS D200 transponder, 293

MDS D339 transponder, 305

MDS D424 Transponder, 332

MDS D425 Transponder, 335

MDS D428 transponder, 343

MDS D460 Transponder, 347

MDS D521 transponder, 353

MDS D522 transponder, 356

MDS D524 transponder, 365

MDS D525 transponder, 368

MDS D526 transponder, 373

MDS D528 transponder, 376

Transponder MDS D126, 270

Transponder MDS D139, 279

Transponder MDS D165, 289

Transponder MDS D261, 297

Transponder MDS D324, 301

Transponder MDS D400, 312

Transponder MDS D421, 318

Transponder MDS D422, 323

Transponder MDS D423, 327

Transponder MDS D426, 340

Transponder RF320T, 213

Transponder RF330T, 217

Transponder RF340T, 222

Transponder RF350T, 227

Transponder RF360T, 232

Transponder RF370T, 236

Transponder RF380T, 247

Technical Support, 434

Tracking

Tolerance, 40

Tracking tolerances, 40

Training, 435

Transmission gaps, 48

Transmission window

Antennas, 39

Impact of metal, 65

Reader, 38

Width, 40

Transponder

Detection area, 44

Directions of motion, 44

Dwell time, 46

Mounting on metal, 64

- Transponder MDS D126
 - Technical specifications, 270
- Transponder MDS D139
 - Technical specifications, 279
- Transponder MDS D165
 - Technical specifications, 289
- Transponder MDS D261
 - Technical specifications, 297
- Transponder MDS D324
 - Technical specifications, 301
- Transponder MDS D400
 - Technical specifications, 312
- Transponder MDS D421
 - Technical specifications, 318
- Transponder MDS D422
 - Technical specifications, 323
- Transponder MDS D423
 - Technical specifications, 327
- Transponder MDS D426
 - Technical specifications, 340
- Transponder RF320T
 - Characteristics, 211
 - Technical specifications, 213
- Transponder RF330T
 - Characteristics, 215
 - Metal-free area, 216
 - Technical specifications, 217
- Transponder RF340T
 - Characteristics, 220
 - Metal-free area, 221
 - Technical specifications, 222
- Transponder RF350T
 - Characteristics, 224
 - Metal-free area, 224
 - Technical specifications, 227
- Transponder RF360T
 - Characteristics, 229
 - Metal-free area, 229
 - Technical specifications, 232
- Transponder RF370T
 - Characteristics, 234
 - Metal-free area, 235
 - Technical specifications, 236
- Transponder RF380T
 - Metal-free area, 242
 - Technical specifications, 247

U

- User data
 - Calculation, 47