SIEMENS

SIMATIC Ident
RFID systems
SIMATIC RF200 command set
Product Information

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Compared to the SIMATIC RF300, the SIMATIC RF200 has a reduced command set. Chaining of commands is also possible here. This chaining allows the writing and reading of 1 KB of data in a sequence, and two additional commands such as SET-ANT "On" and SET-ANT "Off" (antenna on/off). With the RF290R, any amount of data can be transferred in a sequence.

The following commands are supported:

- READ (read UID)
- WRITE
- SLG-STATUS [Mode 1]
- MDS-STATUS [Mode 3]
- RESET (init_run)
- SET-ANT

As with the RF300, the following messages are generated:

- Startup
- Presence

In contrast to the RF300, the following commands are not supported and return Moby error "05" (unknown command):

- Init (possible with RF290R)
- Repeat (possible with RF290R)
- OTP handling (write once to data carrier)

Note

Transponder with protected memory area

Transponders with protected memory area (lock bit) cannot be processed and cause various error messages (0x01, 0x0C) depending on the transponder type.

Input parameters

The RESET command via "init_run" causes the input parameters to be transferred and errors and alarms to be acknowledged. The RESET command effectively corresponds to the RESET command from the SIMATIC RF300 for the ISO interface settings. The following parameters can be changed or must be entered with the RF200:

Parameter name	Parameter value	Description
scanning_time	0x00	Not used
MOBY_mode	Bit 0..3 = 5	Single tag mode
	Bit 4 = 0	Not used
	Bit 5..7 = 0	Operating mode without presence
	Bit 5..7 = 2	Operating mode with presence
option_1	Bit 0 = 0	Not used
	Bit 1 = 0	RESET command does not reset red LED
	Bit 1 = 1	RESET command resets red LED
	Bit 2..7 = 0	Not used
distance_limiting	0x00	Not used
distance_limiting (with RF290R)	0x04	1 W
	0x08	2 W
	0x0C	3 W
	0x10	4 W
	0x14	5 W
multitag	0x01	Only the single tag mode is supported

Parameter name	Parameter value	Description
field_ON_control	0x00	Not used
field_ON_time	0x01	ISO mode
field_ON_time (with RF290R)	0x01	ISO mode
	0x03	MDS D3xx - optimization

READ

The READ command corresponds to the READ command from RF300:

User data address	0000 ... xxxx (hex)	The max. permissible address is the memory size (-1) of the transponder. ⇒ refer to relevant transponders for details
User data length	1 ... 1024 (dec.) [1)]	Length of user data to be read. ⇒ Address + length < max. memory area

1) With RF290R, no user data restrictions.

The targeted reading of the UID alone is possible by entering the address FFF0 and length 8.

WRITE

The WRITE command corresponds to the WRITE command from RF300:

User data address	0000 ... xxxx (hex)	The max. permissible address is the memory size (-1) of the transponder. ⇒ refer to relevant transponders for details
User data length	1 ... 1024 (dec.) [1)]	Length of user data to be read. ⇒ Address + length < max. memory area

1) With RF290R, no user data restrictions.

Settings in HW Config

For the interface/communications modules (ASM <xyz>, RF<xyz>C) in SIMATIC Manager, select the highlighted addressing mode or the basic parameters in HW Config:

RF160C

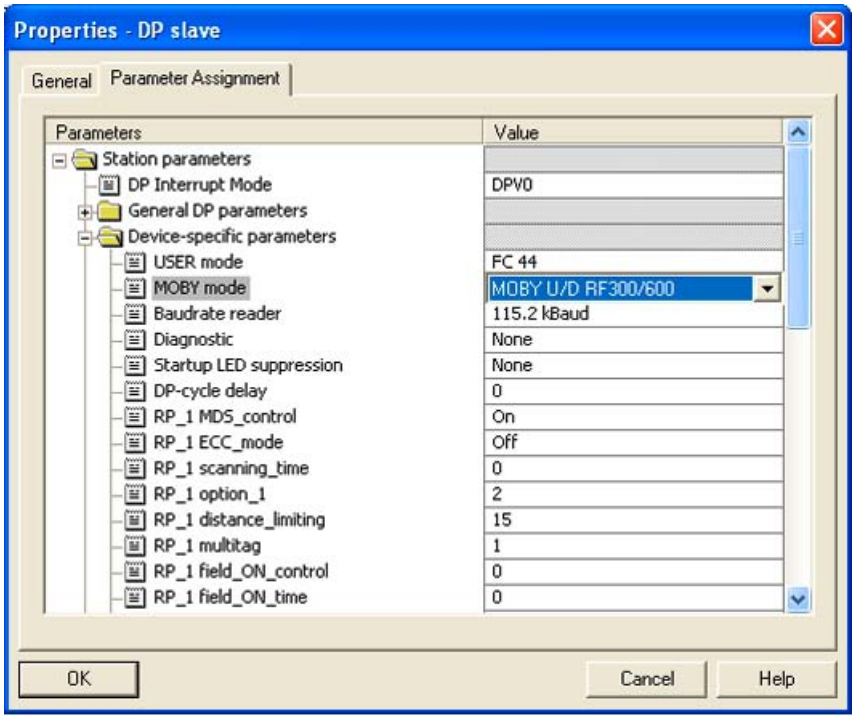

Figure 1 Addressing of the RF160C

RF170C

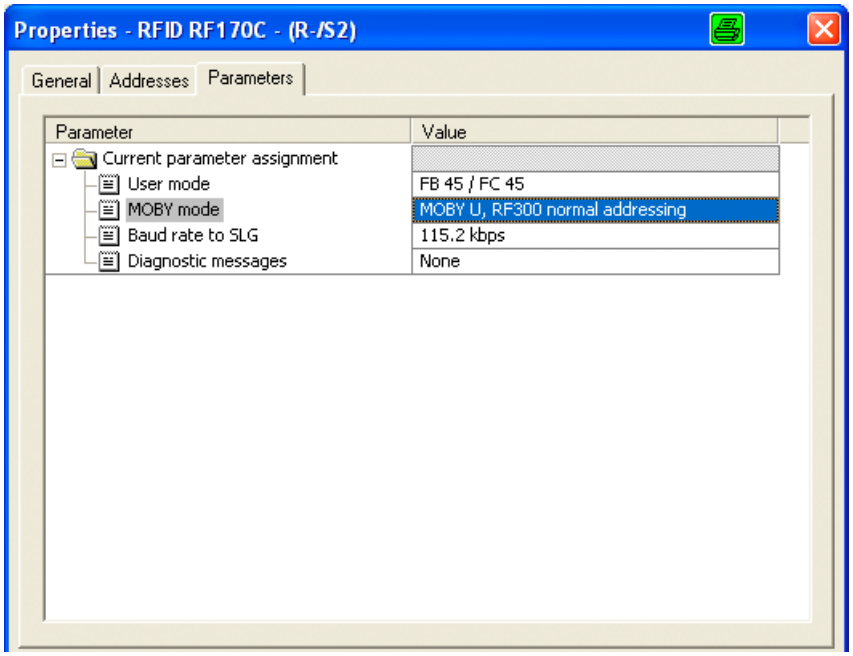

Figure 2 Addressing of the RF170C

RF180C

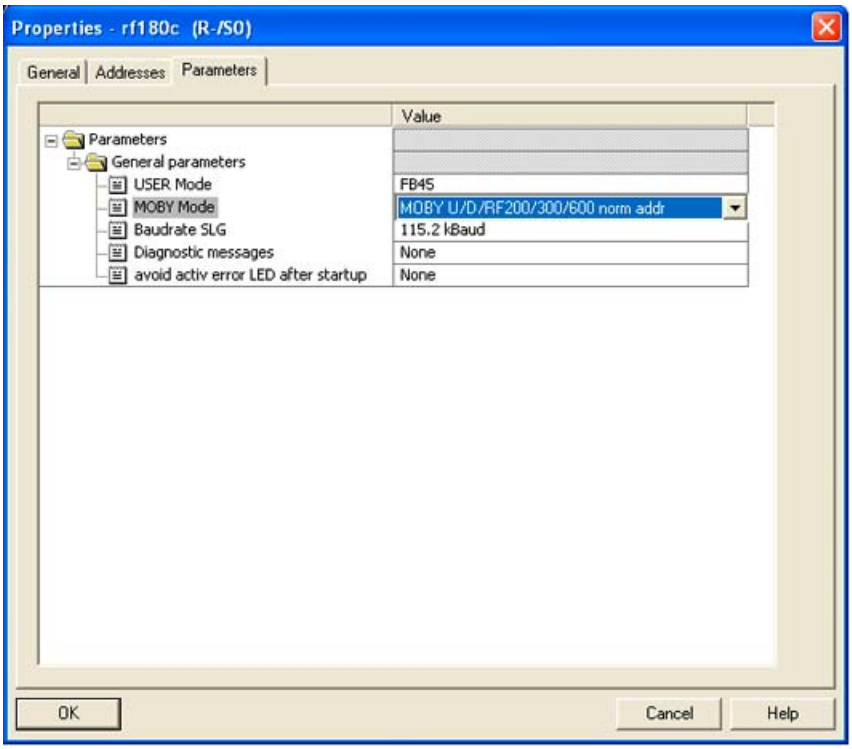

Figure 3 Addressing of the RF180C

ASM 456

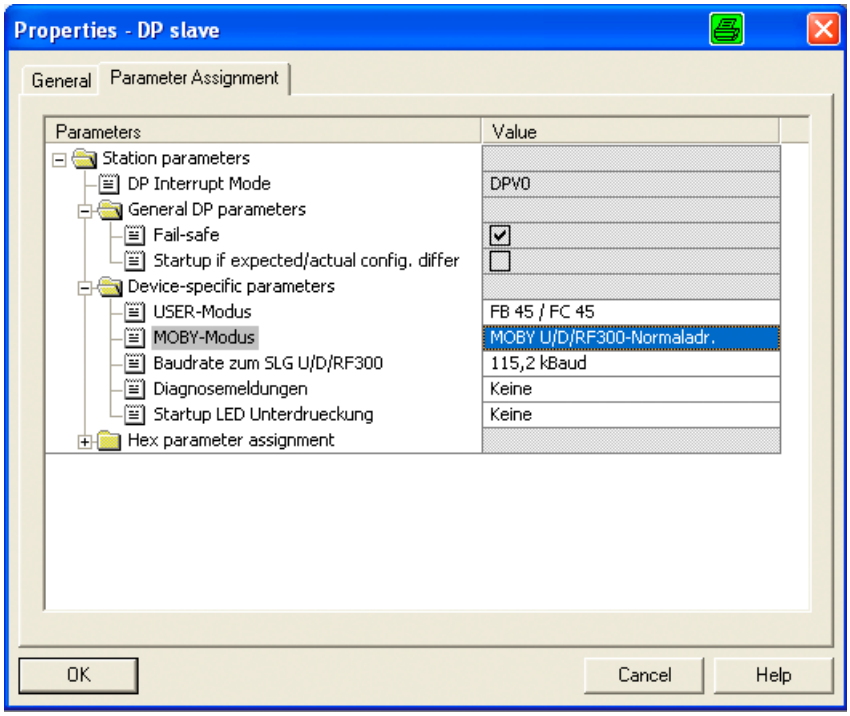

Figure 4 Addressing the ASM 456

ASM 475

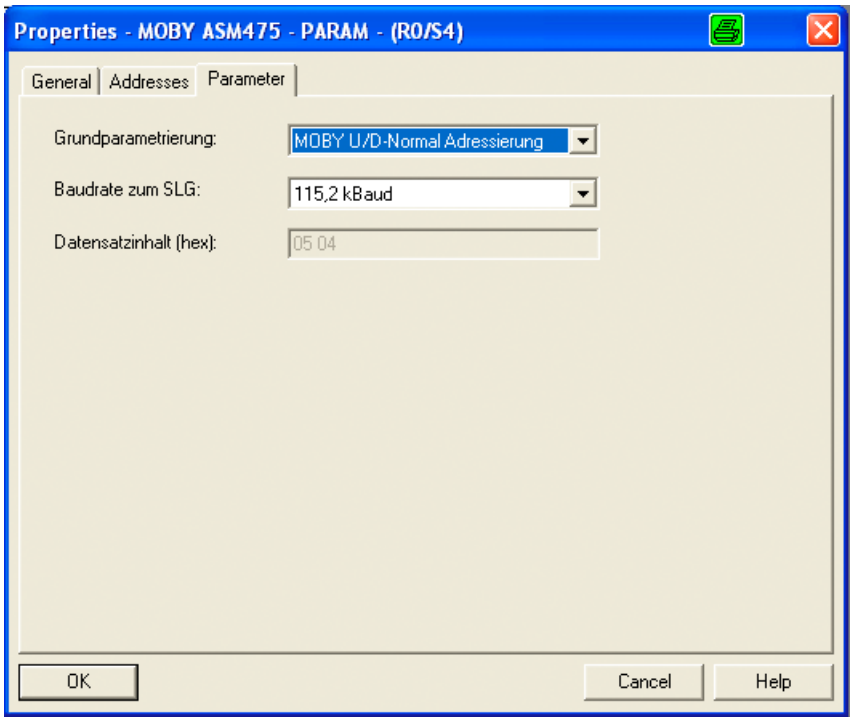

Figure 5 Addressing the ASM 475

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