

# SIEMENS

## SIMATIC Sensors

### RFID systems

### FB 45 and FC 45 input parameters for RF300 and ISO transponders

#### Product Information

The SIMATIC RF310R (6GT2801-1AB10) and RF380R (6GT2801-3AB10) readers can be parameterized for use with RF300 or ISO 15693 compatible tags. The input parameters needed for parameterizing via the function blocks FB 45 and FC 45 are listed in the following table.

Variable	ISO	RF300	
field_ON_time(ftim)	<p>With the aid of the "ftim" parameter, a decision is made whether the reader is operated in RF300 mode or in ISO 15693 mode (mixed operation is not provided for).</p> <p>Specifying the value 00 switches the reader into RF300 mode with the command "init_run"(RESET). Values ranging from 01 to 07 activate the ISO15693 mode.</p> <p>The value 01 activates the "general ISO mode" with rudimentary ISO commands (see note No. 4). With this setting, the performance is generally limited, but the operation is basically guaranteed with each ISO-compatible tag.</p> <p>The transponder chip types of the tags specified in the System Manual SIMATIC RF300 (Chap. 7.1) support these commands.</p> <p>The following values can be set:</p>		
	Value	ISO	RF300
	01	Cross-manufacturer tag.	To be assigned the value 0
	03	ISO my-d (Infineon SRF 55V10P)	
	04	ISO (Fujitsu MB89R118)	
	05	ISO I-Code SLI (NXP SL2 ICS20)	
	06	ISO Tag-it HFI (Texas Instruments)	
	07	ISO (ST LRI2K)	
	<p>Notes</p> <ol style="list-style-type: none"> <li>The following special functions are not supported: <ul style="list-style-type: none"> <li>AFI (Application Family Identifier)</li> <li>DSFID (Data Storage Format Identifier)</li> <li>Chip-specific added functions such as EAS, Kill commands, etc.</li> </ul> </li> <li>If a previously unknown tag cannot be identified based on the parameters above, an error message occurs (error_MOBY "0D"[hex]).</li> <li>Impermissible parameters are rejected with an error message (error_MOBY "15"[hex]).</li> <li>With "ftim" = 01, RF300 supports the ISO commands "Inventory", "ReadSingleBlock", "WriteSingleBlock", "LockBlock," "GetSystemInformation" and, for multi-tag, it also supports "Select" and "ResetToReady".</li> </ol>		
	MDS_control	MDS_control switches the presence check or MDS control on the reader (ASM) on or off.	
Value		MDS control	ASM type
0		Presence check is off. The variable ANZ_MSD_present doesn't indicate a valid value.	All
1		Presence check is on. MDS control is off. The variable ANZ_MSD_present indicates an MDS in the transmission window of a reader.	All

Variable	ISO	RF300
ECC_mode	ISO	RF300
	To be assigned the value 0	
RESET_long	The init_run (RESET) command transfers all INPUT parameters to the reader. This bit must be set to True when RF300 is used.	
MOBY_mode	The following values are generally permissible for RF300:	
	Value	
	5	Without multi-tag handling with ASM 475; 473; 452; 456; RF170C, RF180C
7	With multi-tag handling (pending) with ASM 475; 473; 452; 456; RF170C, RF180C	
scanning_time	ISO	RF300
	To be assigned the value 0	
Option_1	This parameter is coded bit by bit. Its standard value is 0. It can be used for special control in the reader (ASM).	
	Value	
	00	The flashing ERR LED can only be switched off by switching off the power supply to the reader
	02	The flashing ERR LED is extinguished by init_run (RESET)
distance_limiting	With this parameter, a change to the output power can only be made for the RF380R (MLFB 6GT2801-3AB10). In doing this, you must take into consideration that the change to the output power will affect both the upper and lower limit range, as well as the minimum distance that is to be maintained between adjacent RF380Rs. See the RF300 System Manual, field data, Chapter 4.2	
	The following settings are possible:	
	Value	
	02	0.5 W
	03	0.75 W
	04	1,0
	05	1.25 W (default)
	06	1.5 W
	07	1.75 W
	08	2.0 W
	Settings outside of the specified values mean that the default value of 1.25 W is set and no error message occurs for compatibility reasons!	
multitag	The reader is basically intended for multi-tag operation, which is not currently approved. Maximum number of MDSs being processed in parallel in the field. Currently permitted values: 1	
field_ON_control(fcon)	ISO	RF300
	To be assigned the value 0	

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