

Technical Data RF240R – Short Form

Remarks: The RF240R manual does not yet exist, even in German language. The RF240R manual, once completed, will contain detailed information about field-data, range for certain tags, and information about how to implement the RF240R in a production site with communication modules. This detailed information may not be much relevant for RF240R FCC approval.

Below given are short system overview and technical data which are required in order to run the RF240R for testing and to check the reader's function.



RF200 System overview

SIMATIC RF200 is an inductive identification system, based on the standard ISO 15693, which was specially designed for industrial production for controlling and optimization material flow.

Contrary to SIMATIC RF300, SIMATIC RF200 is designed for RFID applications for lower demands on performance (data volume, data transfer speed, diagnostics). SIMATIC RF200 is an entry-level RFID system.

Component	Description
Communication Modules	Integration of an RFID Identification system into a PLC (e. g. SIMATIC S7) is achieved by a communications module.
Reader	The reader achieves the communication with the tag and provides the tag with energy by the reader's magnetic field. The reader also interfaces to various modules (i.e. SIMATIC S7 via ASM 475).
Tag	The RFID-tag stores all data relevant for production and is used as a substitute for optical barcode-tags.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes :

(1) il ne doit pas produire de brouillage, et

(2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage

radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

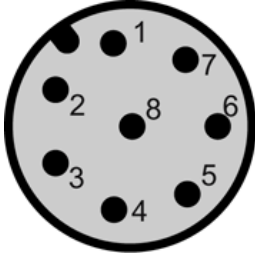
Overview of System Components compatible with RF240R

System components	
Communication modules	<ul style="list-style-type: none"> • ASM 456 • ASM 475 (S7 300/ ET 200M) • RF160C • RF170C • RF180C • RF182C
Tags	<ul style="list-style-type: none"> • MDS D100 • MDS D200 • MDS D124 • MDS D139 • MDS D160 • MDS D324 • MDS D424 • MDS D428 • MDS D460

Technical Data RF240R (short form)

Inductive interface (magnetic field) to transponder (tag). Carrier frequency for energy / data	13.56 MHz
Antenna	Integrated loop
Interface to communications module	RS422
Baud rate	19200, 57600, 115200 Baud
Functions	read tag, write on tag, get status data, antenna on/off, read tag serial number
DC-Voltage (nominal)	24 V DC
Display elements	2-color-LED (operating voltage, presence, error)
Connector	M12 (8-pin.)
Housing	
<ul style="list-style-type: none"> • Dimensions (in mm) • Color • Material 	<ul style="list-style-type: none"> • 50 x 50 x 31 (without M12 device connector) • anthracite • PA6.6-GF35 (Ultramid A3WG7)
Fixing	2 Screws, M5 type
Degree of protection to EN 60529	IP67
Weight	200 g
Current consumption	40mA

Pin assignment RF240R (RS422 interface)

M12 connector (male)	Pin No. M12 plug	Pin
	1	+24V
	2	-TX
	3	0V (GND)
	4	+TX
	5	+RX
	6	-RX
	7	Not used (free)
	8	PE / shield

LED indicator (display elements) RF240R

LED colour		Meaning
green	flashing	Operating voltage available, reader NOT initialized
	Permanently on	Operating voltage available. Reader initialized.
yellow		Tag in field (tag presence)
red (flashing)		Errors according to error code table.
red (permanently on)		Fatal error

RF240R housing and dimensions (not to scale)

