

product type designation



Reader RF685R FCC

SIMATIC RF600 Reader RF685R FCC; Interfaces: Ethernet M12 PROFINET M12 1 integrated antenna+1 ext. antenna port, 4 dig. inputs/ 4 dig. outputs, 24 V DC; IP65; -25 to +55 °C; without accessories.

suitability for operation

RF600 Transponder, for direct connection to Ethernet, PROFINET, EtherNet/IP or PROFIBUS via communication module, OPC UA server integrated

radio frequencies

operating frequency	902 ... 928 MHz
transmit power	3 ... 2000 mW
equivalent isotropically radiated power	
• for each external antenna / maximum	4000 mW
• minimum	10 mW
• maximum	4000 mW
range / maximum	8 m; Extended ranges possible, see RF600 System Manual, Range table: http://support.automation.siemens.com/WW/view/en/67384964
protocol / with radio transmission	EPCglobal Class 1 Gen 2 V2 / ISO/IEC 18000-62/-63
transfer rate / with radio transmission / maximum	400 kbit/s
product feature / multitag-capable	Yes
polarization	Linear (h/v), circular, combined

electrical data

transmission time / for user data	
• for write access / per byte / typical	2 ms
• for read access / per byte / typical	0.15 ms

interfaces

number of external antennas	1
standard for interfaces / for communication	Ethernet, PROFINET, OPC UA, EtherNet/IP, RS422
type of electrical connection	
• for external antenna(s)	RP-TNC
• for supply voltage	M12, 8-pin, connector
• for communications interface	2 x M12 4-pin D-coded, M12 8-pin (RS422)
• at the digital inputs/outputs	M12, 12-pin, female connector
number of digital inputs	4
number of digital outputs	4

mechanical data

material	Aluminum, Pocan
color	silver, TI-Grey
mounting distance / relating to metal surfaces / recommended / minimum	0 mm

supply voltage, current consumption, power loss

supply voltage / at DC	
• rated value	24 V
•	20 ... 30 V
consumed current / at DC	
• at 24 V / typical	0.38 A

• at 24 V / maximum	2 A
ambient conditions	
ambient temperature	
• during operation	-25 ... +55 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
ambient condition / for operation	With operating temperature below -20 °C: Warming-up time at least 10 minutes
protection class IP	IP65
shock resistance	EN 60068-2-27, EN 60068-2-6
shock acceleration	250 m/s ²
vibrational acceleration	30 m/s ²
resistance to mechanical stress	The maximum values for shock and vibration acceleration must not occur as continuous stress and they apply exclusively to assembly using screws
design, dimensions and weights	
width	258 mm
height	258 mm
depth	80 mm
net weight	2.47 kg
fastening method	Vesa 100 with 4 x M4 screws, top-hat rail 35 mm, profile rail S7-300, S7-1200 or S7-1500
wire length	
• of antenna cable / minimum	1 m
• of antenna cable / maximum	40 m
product features, product functions, product components / general	
display version	two LED rows with 8 and 9 LEDs
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function / of the PROFINET IO device / is supported / H-Sync forwarding	No
protocol / is supported	
• LLDP	Yes
• PROFINET IO protocol	Yes
• TCP/IP	Yes
• SNMP v1	Yes
• SNMP v2	No
• SNMP v3	Yes
• DCP	Yes
• EtherNet/IP protocol	Yes
• OPC UA	Yes
product feature / silicon-free	Yes
standards, specifications, approvals	
certificate of suitability	wireless according to FCC, IC (Canada), cULus, OPC UA: embedded UA Server Profile
certificate of suitability	
• IECEx	No
MTBF	29 a
reference code	
• according to IEC 81346-2:2019	BYB
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO ₂ eq]	
• total	359.52 kg
• during manufacturing	72.88 kg
• during operation	285.81 kg
• after end of life	0.83 kg
accessories	
accessories	one external antenna, set for mounting on top-hat rail or profile rail
further information / internet links	
internet link	
• to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
• to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
• to web page: RFID country approval	https://www.siemens.com/rfid-approvals

- to web page: identification and localization systems
- to web page: SiePortal
- to website: Image database
- to website: CAX-Download-Manager
- to website: Industry Online Support

<https://www.siemens.com/ident>
<https://sieportal.siemens.com/>
<https://www.automation.siemens.com/bilddb>
<https://www.siemens.com/cax>
<https://support.industry.siemens.com>

security information

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Approvals / Certificates

General Product Approval

EMV



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formity](#)



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Radio Equipment Type Approval Certificate

[Miscellaneous](#)

[Industry Canada \(IC\)](#)

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Environment

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