SIEMENS

Brochure	Edition 11/2019

SIMATIC RF1000
RFID system

Access control for machinery and equipment

The growing demand for security and traceability increasingly calls for solutions enabling access to machines and systems which can be regulated and documented.

Electronic access management consolidates process security while enhancing productivity and efficiency by preventing damage which could be caused by unauthorized access.
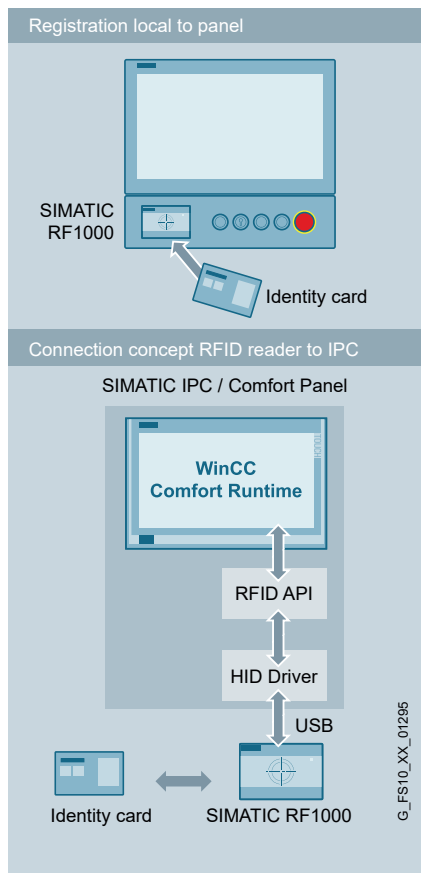
With the SIMATIC RF1000 Siemens provides an RFID-based solution which enables simple and versatile implementation of electronic authorization management. Existing employee ID cards provides the basis for identification, which increases user friendliness and minimizes costs.

Readers of the SIMATIC RF1000 series allows realization of finely-graded access concepts, documentation of processes or storage of user-specific instructions to be stored according to the customer-specific application. And all with one card.

Typical application examples

- Controlled machine access
  - Logging of access data
  - Traceability of access and changes

- Individual control of access rights
  - Definition of any number of user groups with different access rights

- Integration in the company-wide industrial security concept

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Task

- Identification of operating personnel at machines and plants
  - Access control
  - Audit trail

Solution

One-time login with RFID card

1. Card is held to the reader
2. UID[1] or customer-specific data segments including handling with access keys are read out once
3. Automatic login

Continuous login with RFID card

1. Card is placed in holder
2. UID[1] or customer-specific data segments including handling with access keys are continuously read out
3. Automatic login
4. Card is removed → automatic logout

Login with card and password

1. Card is held to the reader
2. UID[1] is read out once
3. User enters password for a secure login
4. Login

Registration local to panel

SIMATIC RF1000

Identity card

Connection concept RFID reader to IPC

SIMATIC IPC / Comfort Panel

WinCC Comfort Runtime

RFID API

HID Driver

USB

Identity card ⟷ SIMATIC RF1000

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Highlights

- Use of existing employee ID cards for individual control of access rights
- Diagnostics via 3-color LED status display
- Secure and documented access to machines prevents operating errors
- Easy integration into existing hardware (HMI devices, IPCs and panels)
- ATEX II approval (for SIMATIC RF1060R and RF1070R only)
- Reading and writing data on the employee ID card
- Config card for customer-specific parameterization of the reader
- Use of key material for enhanced security

Technical specifications

- RFID system in the HF range: Frequency 13.56 MHz
- RFID system in the LF range: Frequency 125 kHz (only for SIMATIC RF1040R)
- Standards:
  - ISO 14443 A/B (MIFARE)
  - ISO 15693
  - Legic Prime[3]
  - Legic Advant[3]
  - current LF standards, e.g. HITAG1/2[4]
- USB Port
- Integration into SCADA systems (WinCC, PCS7)
- Degree of protection: IP65 (frontside)
- Temperature range -25 to +55 °C
- Serial interface RS232 for direct connection to selected communication modules and PCs[3]

[1] UID = Unique Identification Number
[2] Accessories can be found under: **www.siemens.com/industrymall**
[3] Only available with SIMATIC RF1070R and RF1040R
[4] Only available with SIMATIC RF1040R

Ordering data[2]

Device	Article No.	Description
SIMATIC RF1040R	6GT2831-6CA50	Access control reader with USB connection (1.8 m connection cable) and RS232 interface for LF and HF range
SIMATIC RF1060R	6GT2831-6AA50	Access control reader with USB connection (1.8 m connecting cable) for the HF range
SIMATIC RF1070R	6GT2831-6BA50	Access control reader with USB connection (1.8 m connecting cable) and RS232 interface for the HF range (incl. Legic)

Security information

Note:

The TIA Selection Tool is available to support the selection of SIMATIC Ident components: **www.siemens.com/tst**

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