made in germany

SCHLEGEL®
ELEKTROKONTAKT

RFID

More than an alternative to key switches

8–9

Index

RFID System

The increasing demand for electronic access authorisation for industrial applications requires an access concept which is not possible to handle with standard key switches. The Schlegel RFID system is a wireless communication technology for an easy, fast and unambiguous identification of persons. The RFID transponder, also named tag, replaces the key and includes special data which can be read by a reader via electromagnetic waves and which will then be evaluated in the control device. Thus, persons or groups can be unambiguously assigned and the relating access authorisations and levels will be enabled on the machine or installation.

Advantages

- convenient - fast and easy operation, passwords no longer necessary
- reliable - robust and durable, as there are no mechanical wear parts in the system
- flexible - access authorisation can be defined and changed individually
- safe - improves the operational safety of machines and installations
- easy - easy assembly for panel cut-out Ø 22.3 mm (Ø 30.5 mm with accessory)
- design - appealing design

Application fields

- controlled personalised machine access with details access documentation
- individual machine operation according to the access authorisation for groups and individual persons
- easy and safe realisation of an operation mode switch

RFID System

Holder for RFID reader with LED status indication

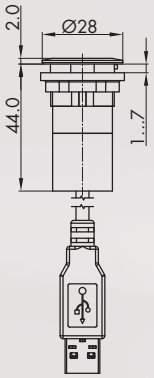
LED light ring for status indication

Georg Schlegel GmbH & Co. KG - 88525 Dürmentingen - ✆ +49 (0) 73 71 / 502-0 - Fax: +49 (0) 73 71 / 502 49 - info@schlegel.biz - www.schlegel.biz

RFID

Illustration	Dimensions	Description	Type

IP65 IP69K

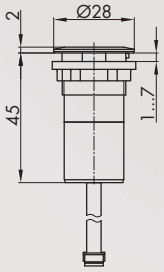


RFID Reader with USB interface

- panel cut-out Ø 22.3 mm
- 13,56 MHz
- supports the Standards ISO 14443A/B (MIFARE-Classic/-DESFire), ISO 15693 and compatibles like EM4135, EM4043
- read and write function
- USB drivers for Windows, Linux, Android 4.2 and Macintosh OSX
- 2 operating modes: cyclic transmission with individual transmission (continuous operation) or manual transmission (on/off)
- LED status illumination
- power supply from USB port (5V)
- cable length: 80 cm (other lengths on request)

		Type
colour	silver-coloured	RRJ_RFID_USB
	stainless steel, polished	RRJVA_RFID_USB
	black	RRJSW_RFID_USB

IP65 IP69K



RFID Reader with serial RS232 interface

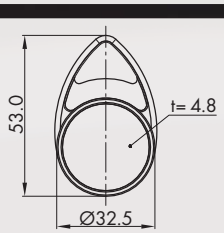
- panel cut-out Ø 22.3 mm
- 13,56 MHz
- baud rate 9600 up to 115200 bit/s
- supports the Standards ISO 14443A/B (MIFARE-Classic/-DESFire), ISO 15693 and compatibles like EM4135, EM4043
- read and write function
- USB drivers for Windows, Linux, Android 4.2 and Macintosh OSX
- 2 operating modes: cyclic transmission with individual transmission (continuous operation) or manual transmission (on/off)
- LED status illumination
- supply voltage of 5V/DC is necessary
- cable length: 80 cm (other lengths on request)

		Type
colour	silver-coloured	RRJ_RFID_RS2
	stainless steel, polished	RRJVA_RFID_RS2
	black	RRJSW_RFID_RS2

RS232 interface connector

RFID_ST_24V

The RS232 interface connector is equipped with an internal 5V/DC voltage converter to operate the RFID reader in an electrical system of 10 to 24V/DC. The connector is directly screwed to the RS232 interface with the 9 pole D-sub socket. A 2-pole screw terminal is included. The connection cable of the RFID reader is being plugged inside.



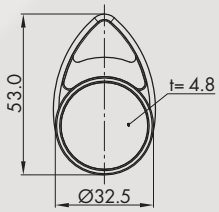
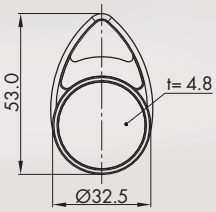
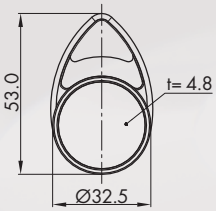
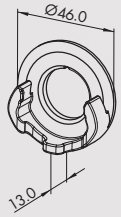
RFID tag drop-shaped 1 KB

NXP Mifare Classic EV1

Inscription on request (max. 4 digits possible)

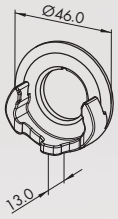
		Type
colour	blue	ESRT1_B
	red	ESRT1_R
	yellow	ESRT1_Y
	green	ESRT1_G
	black	ESRT1_S

RFID

Illustration	Dimensions	Description			Type
		**RFID tag drop-shaped 2 KB** NXP Mifare DESFire EV1 Inscription on request (max. 4 digits possible)	colour	blue	**ESRT2_B**
				yellow	**ESRT2_Y**
				green	**ESRT2_G**
				red	**ESRT2_R**
				black	**ESRT2_S**
		**RFID tag drop-shaped 4 KB** NXP Mifare Classic Inscription on request (max. 4 digits possible)	colour	blue	**ESRT4_B**
				yellow	**ESRT4_Y**
				green	**ESRT4_G**
				red	**ESRT4_R**
				black	**ESRT4_S**
		**RFID tag drop-shaped 8 KB** NXP Mifare DESFire EV1 Inscription on request (max. 4 digits possible)	colour	blue	**ESRT8_B**
				yellow	**ESRT8_Y**
				green	**ESRT8_G**
				red	**ESRT8_R**
				black	**ESRT8_S**
		**LED Light Ring for status indication** LED Light Ring for an optical amplification of the status indication - system connection to the RFID reader - colouring via the RFID reader or by an external control (except SKS) - panel cut-out Ø 30.5 mm delivery without RFID reader	colour	blue/green	**LR22K5DUO_GB_619**
		**RFID Tag Holder** Fixing of the tag in case of cyclic reading of the RFID reader - fixing from the top or from the front, e.g. combined with a bunch of keys - panel cut-out Ø 30.5 mm delivery without RFID reader	colour	white	**RRJ_RFID_HR_WS**
				black	**RRJ_RFID_HR_SW**

Georg Schlegel GmbH & Co. KG - 88525 Dürmentingen - ✆ +49 (0) 73 71 / 502-0 - Fax: +49 (0) 73 71 / 502 49 - info@schlegel.biz - www.schlegel.biz

RFID

Illustration	Dimensions	Description	Type
		**RFID Tag Holder with LED Status Indication** same function as LR22K5DUO_BG_619 and RRJ_RFID_HR_(XX), but combined in one component delivery without RFID reader colour blue/green 	**RRJ_RFID_HR_LBG**

RFID Schlegel Control System (SKS)

Advantages

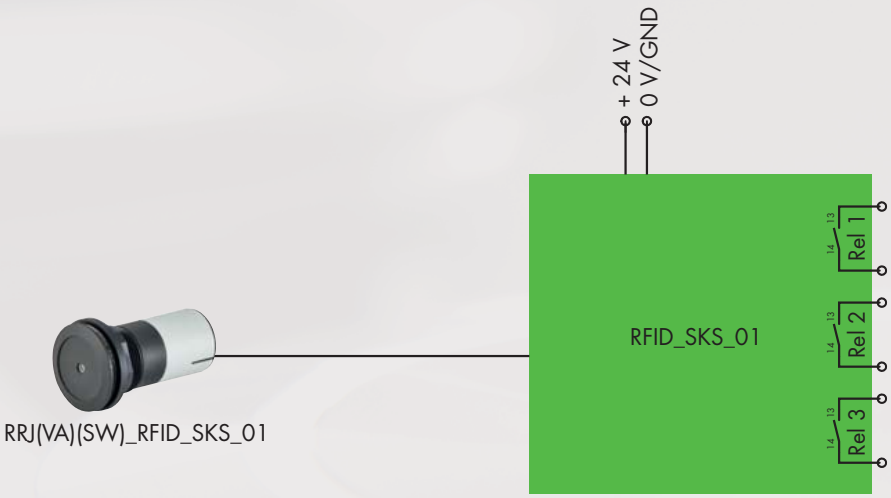
- SELF-SUFFICIENT - no external control necessary
- CONVENIENT - fast and easy operation, passwords no longer necessary
- RELIABLE - robust and durable, as there are no mechanical wear parts in the system
- FLEXIBLE - access authorisation can be defined and changed individually
- SAFE - improves the operational safety of machines and installations
- EASY - easy assembly for panel cut-out Ø 22.3 mm (Ø 30.5 mm with accessory)
- DESIGN - appealing design

Application fields

- in environments in which a standard key switch is not suitable due to extreme conditions as to dirt and weather
- for installations for which more than three different authorisations are required, e.g. for an operation mode switch
- for systems without electronic control or for controls having no USB or RS232 interface available

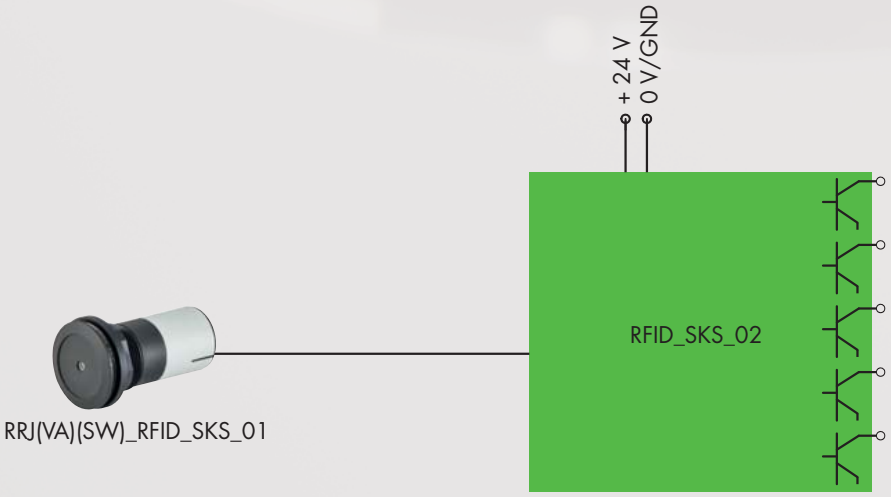
SKS_RFID_01

Schlegel's SKS_RFID_01 is an access control for machines and installations which can be installed in an easy and quick way. An electronic control (PLC, PC) is not obligatory for the operation. The SKS includes the complete evaluation and control of the accesses of users and user groups. If the read tag has been identified as valid, the authorisation level of the user is being determined and information is being transferred to the 3 electrically isolated relay outputs. The downstream control can then approve and enable the relating operating modes and functions of the machine. The 3 outputs can realise up to 8 authorisation levels. The SKS_RFID_01 has a standard allocation table for the tags to the outputs, but it can also be adapted to the individual customer requirements.



SKS_RFID_02

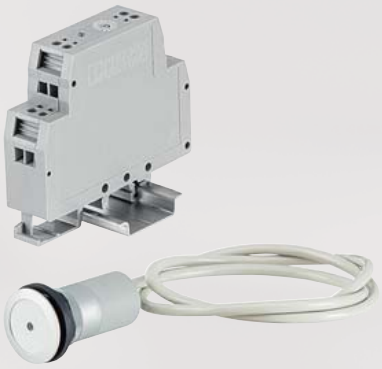
The basic principle of SKS_RFID_02 is similar to the version 01. However, this version has 5 open collector outputs for a BCD coded value. This value can either be on the inputs of the PLC (PC) directly or, if the modular operating concept of Schlegel is being used, it can be transferred to the control via the relating bus system (CANopen, Profibus, EtherCAT, Profinet I/O, Ethernet IP, AS-Interface). The control will then enable the access right relating to the value for the user. Up to 25 authorisation levels can be realised with SKS_RFID_02.



Georg Schlegel GmbH & Co. KG - 88525 Dürmentingen - ☎ +49 (0) 73 71 / 502-0 - Fax: +49 (0) 73 71 / 502 49 - info@schlegel.biz - www.schlegel.biz

RFID SKS

Illustration	Dimensions	Description	Type



RFID-SKS V01 - Bundle

SKS bundle comprising:
- 1 x RFID reader RRJ_RFID(XX)_SKS01
- 1 x RFID control system RFID_SKS_01
- 5 x user key ESRTU_S

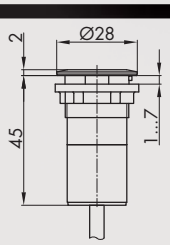
colour	silver-coloured	SKS_RRJ_01
	stainless steel, polished	SKS_RRJVA_01
	black	SKS_RRJSW_01

RFID-SKS V02 - Bundle embedded

SKS bundle comprising:
- 1 x RFID reader RRJ_RFID(XX)_SKS01
- 1 x RFID control system RFID_SKS_02
- 5 x user key ESRTU_S

colour	silver-coloured	SKS_RRJ_02
	stainless steel, polished	SKS_RRJVA_02
	black	SKS_RRJSW_02

IP65 IP69K



RFID Reader SKS

RFID reader only in combination with SKS control

- panel cut-out Ø 22.3 mm
- 13,56 MHz
- read-write function
- direct programming of the tags, no additional software necessary
- operating mode cyclic / individual
- LED status illumination
- cable length: 80 cm (other lengths on request)
- incl. 1 master key (ESRTM)

colour	silver-coloured	RRJ_RFID_SKS01
	stainless steel, polished	RRJVA_RFID_SKS01
	black	RRJSW_RFID_SKS01

RFID Control System SKS

RFID_SKS_01

RFID control only in combination with SKS reader

- 3 authorisation levels on 3 potential-free contacts
- designed for a maximum of 25 transponders
- supply voltage 24V / DC
- contacts designed for 230V / 16A
- mounting on standard DIN rail for switching cabinets

RFID Control System SKS embedded

RFID_SKS_02

RFID control only in combination with SKS reader

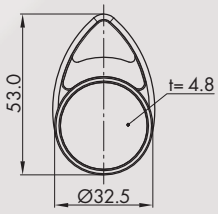
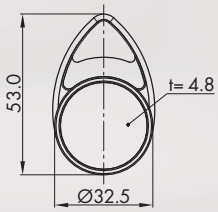
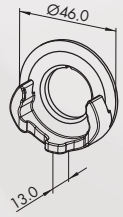
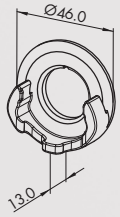
- BCD coded transfer of the transponder number to the 5 open collector outputs
- designed for a maximum of 25 transponders
- supply voltage 24V / DC
- suitable for the integration in bus systems

RFID SKS

made in germany

SCHLEGEL ELEKTROKONTAKT

RFID

Illustration	Dimensions	Description	Type
		**RFID Master Key SKS** Red RFID tag, drop-shaped, for the administrative access to the Schlegel Control System. The master key can only be used with the Schlegel Control System being programmed to it. Inscription on request (max. 4 digits possible) colour red	**ESRTM**
		**RFID user key for Schlegel Control System (SKS)** Black RFID tag, drop-shaped, for the user access to the Schlegel Control System. Further colours (blue, green, yellow) and inscription on request (max. 4 digits possible). colour black	**ESRTU_S**
		**LED Light Ring for status indication** LED Light Ring for an optical amplification of the status indication - system connection to the RFID reader - colouring via the RFID reader or by an external control (except SKS) - panel cut-out Ø 30.5 mm delivery without RFID reader colour blue/green	**LR22K5DUO_GB_619**
		**RFID Tag Holder** Fixing of the tag in case of cyclic reading of the RFID reader - fixing from the top or from the front, e.g. combined with a bunch of keys - panel cut-out Ø 30.5 mm delivery without RFID reader colour white black	**RRJ_RFID_HR_WS** **RRJ_RFID_HR_SW**
		**RFID Tag Holder with LED Status Indication** same function as LR22K5DUO_BG_619 and RRJ_RFID_HR_(XX), but combined in one component delivery without RFID reader colour blue/green	**RRJ_RFID_HR_LBG**

Georg Schlegel GmbH & Co. KG - 88525 Dürmentingen - ☎ +49 (0) 73 71 / 502-0 - Fax: +49 (0) 73 71 / 502 49 - info@schlegel.biz - www.schlegel.biz

Georg Schlegel GmbH & Co. KG
Kapellenweg 4
88525 Dürmentingen / **Germany**
Tel.: +49 (0)7371 / 502-0
Fax: +49 (0)7371 / 502 49
E-Mail: info@schlegel.biz
www.schlegel.biz

Subsidiaries:

Schlegel Elektrokontakt GmbH
Schönbachstr. 93
04299 Leipzig / **Germany**
Tel.: +49 (0)341 / 8 68 72-0
Fax: +49 (0)341 / 8 68 72 43
E-Mail: leipzig@schlegel.biz
www.schlegel.biz

Georg Schlegel Vertriebs Ges.mbH
Samuel Morse-Straße 7
2700 Wiener Neustadt / **Austria**
Tel.: +43 (0)2622 / 81313
Fax: +43 (0)2622 / 81313-19
E-Mail: schlegel@schlegel.at
www.schlegel.at