

Outdoor installation



Moonlight®



gesis® RST® – plug & play outdoors

Water-tight electronics.

■ The challenge

Expert operation plays a major role, particularly for electrical installations outdoors. Difficult installation conditions and extreme time pressure often lead to errors, loss of protection and finally to the failure of the system.

■ The solution

As a complete installation system, **gesis® RST®** is optimally adapted to these increased requirements. It is very flexible in its application and has proven technology at its disposal. Luminaires can thus be delivered in a pre-assembled design. They only have to be plugged in on-site. The connectors are also touch-safe when they have not yet been plugged in; they provide a locking device against accidental loosening.

The possibility of connecting almost all customary cable types (including underground cables) as well as the IP 68 and IP 69K protection degree make the RST® connector a strong partner for outdoor lighting.

■ Optimization

The system becomes even more versatile with **gesis® RC RST®** switching outputs with integrated EnOcean radio technology. The outputs for 230 V can switch 6 A at maximum and can be controlled with standard EnOcean key functions. Two LED drivers from the system family can be connected to each switched output. A transmission frequency of 868.3 MHz and EnOcean radio technology are used.



Benefits of the *gesis® RST®* device series

- **Quick IP68 installation with pluggable connections**
- **Safe installation as devices do not have to be opened to connect them**
- **Easy installation with pre-assembled devices and cables**
- **Easy operation due to use of EnOcean radio technology**
- **Comprehensive as LED drivers are available in the system housing**

Common data

Type of protection	IP65, IP66, IP67, IP68 (3 m; 2 h), IP69K all IP protection degrees are only valid for plugged cables or closed connections
Connector	only from the gesis® RST20i2 and gesis® RST20i3 series
Dimensions	
high housing	104/162/96 mm
flat housing	104/162/58 mm
Housing	thermoplastic PA 66 halogen-free
Housing color	black

Data/radio technology

Technology using the EnOcean protocol

Radio frequency 868.3 MHz

Range

- Line-of-sight typically 30m in corridors, up to 100m in halls
- Plaster board/wooden walls typically 30m through max. 5 walls
- Brick/gas-aerated concrete walls typically 20 m through max. 3 walls
- Reinforced concrete walls/ceilings typically 10 m through max. 1 floor/wall
- Considerable limitations in the range (up to the shielding of the radio signal)

All electrically conductive materials (mostly metals) between the transmitter and the receiver or nearby impair the range.

	Switching application EnOcean 4-fold 83.020.0905.0	Switching application EnOcean 1-fold 83.020.0904.0	Switching application EnOcean 1-fold 83.020.0904.1	LED constant voltage supply 12V 83.020.0900.0	LED constant voltage supply 24V 83.020.0901.0	LED constant voltage supply 350 mA 83.020.0902.0	LED constant voltage supply 700 mA 83.020.0903.0	Low voltage halogen transformer 83.020.0904.0
Outputs (enOcean controlled)	4	1	1					
Outputs switching in parallel			2					
230V Through-wiring	1	1		1	1	1	1	1
LED outputs 12V/12W				1				
LED outputs 24V/12W					1			
LED outputs 350 mA/12W						1		
LED outputs 700 mA/12W							1	
Low voltage halogen output 21V/20-70W								1
RST 20i3 black for power								
RST 20i2 brown for low voltage								
RST 20i2 gray for low voltage								

*1 See the product range of the pluggable electrical installation system **gesis®** CON



Garden installation with *gesis® RST®*

Requirements

Switching various spotlights in a hotel garden. The individual switching groups are to be controlled via radio as there is only one supply line. Furthermore, trained personell shall be able to easily modify the system.

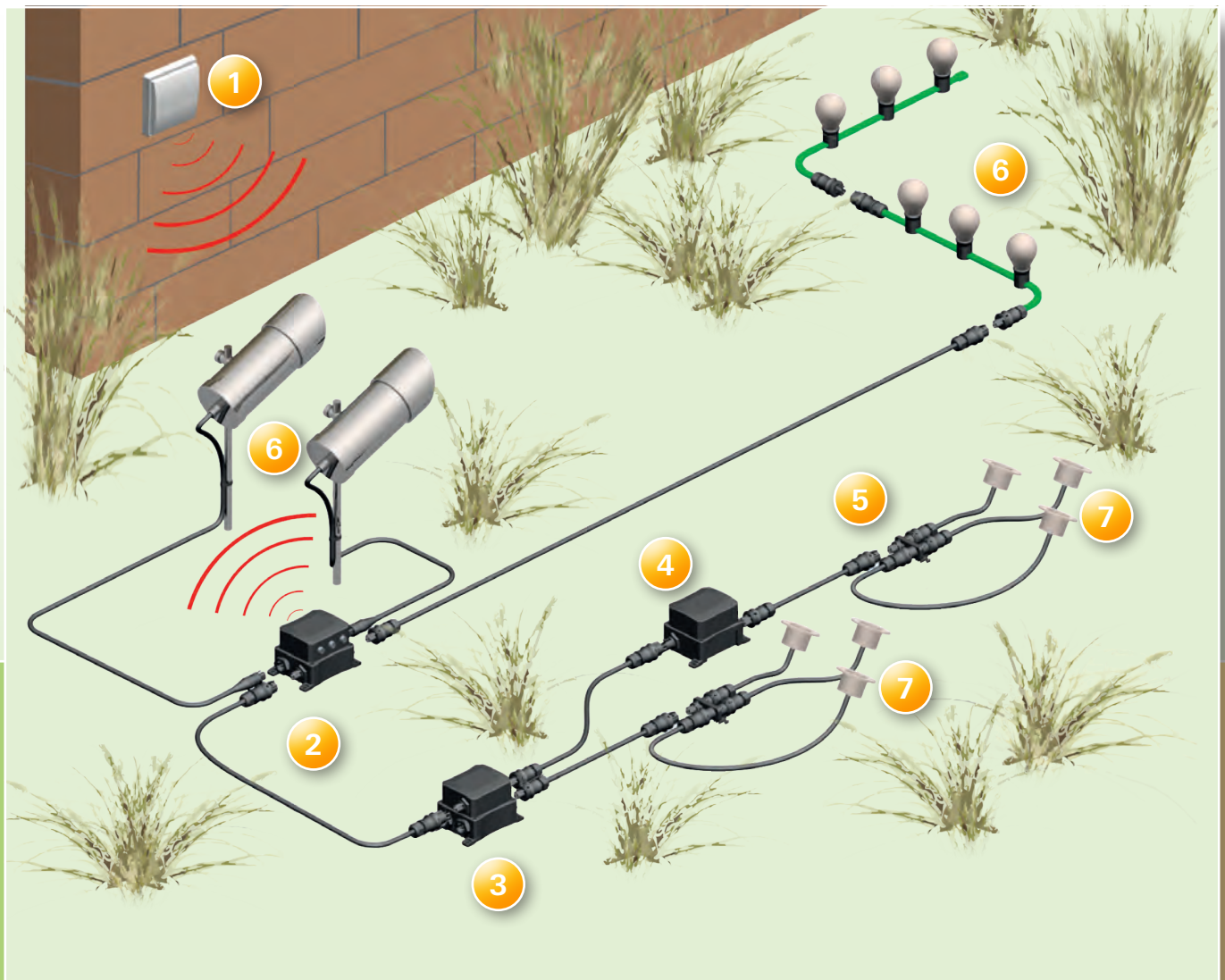
Realization

All components are pluggable. The *gesis® RST®* connector system is used in order to meet the degree of protection required for electrical safety. The radio outputs are controlled with switches from indoors. To keep them in the same design as the other switches and sockets, multivendor switches and the corresponding design frames are used.

Wieland devices used

- | | | |
|---|---|---------------|
| ① | 2 x push-buttons 4-channel | F0.000.0002.3 |
| ② | 1 x EnOcean switching application 4-fold | 83.020.0505.0 |
| ③ | LED constant current supply 350 mA | 83.020.0902.0 |
| ④ | LED constant current supply 350 mA | 83.020.0902.0 |
| ⑤ | Distribution block for series connection | 99.910.0000.7 |
| ⑥ | Lighting 230V with RST20i3 connection 230V | |
| ⑦ | LED spotlight with RST20i2 connection max. 50 V | |

The initial connection is made to a female connector for pre-assembly on-site. The connection cables in various lengths are also pre-assembled. Connections not used are closed with covers.



Switching application EnOcean 4-fold



EnOcean 4-fold switching outputs in the IP68 surface housings for outdoor use feature four 230V relays. They can be programmed for 30 push-button pairs. All electrical connections are pluggable.

Type	Part No.
gesis RC RST-0/4	83.020.0505.0
4 relay outputs, 1 feed-through wiring	
Incoming supply:	
Power input/output	230V AC / 20A connector RST 20i3 coding black
Outputs:	
Quantity	4
Connection type	connector RST20i3 coding black
Rated voltage	230V AC
Switching capacity	6A (max. two of the LED/LV halogen modules given below)
General data:	
Type of protection	IP68 (all connections plugged or closed)
Dimensions (length/width/height)	104/162/96 mm
Installation option	4 elongated holes

Switching application EnOcean 4-fold



EnOcean 1-fold switching outputs in the IP68 surface housing for outdoor use feature one 230V relay. They can be programmed for 30 push-button pairs. All electrical connections are pluggable.

Type	Part No.
gesis RC RST-0/1	83.020.0504.0
gesis RC RST-0/1x2	83.020.0504.1
1 relay output, 1 feed-through wiring	
2 relay outputs connected in parallel	
Incoming supply:	
Power input/output	230V AC / 20A connector RST 20i3 coding black
Outputs:	
Quantity	1
Connection type	connector RST20i3 coding black
Rated voltage	230V AC
Switching capacity	5A total ohmic load
General data:	
Type of protection	IP68 (all connections plugged or closed)
Dimensions (length/width/height)	104/162/57 mm
Installation option	4 elongated holes

Constant power supply unit, 350 mA DC



Constant power supply unit 350 mA for connecting LEDs. Connections not used have to be closed.

Type	Part No.
gesis RST PSI 350/12 LED	83.020.0902.0
Incoming supply:	
Input power (male connector)	230V AC/20A RST20i3 coding black
Output power (female connector)	230V AC/20A RST20i3 coding black
Output LED (female connector)	350mA DC/max. 12W RST20i2 coding brown
General data:	
Type of protection	IP68 (all connections plugged or closed)
Ambient temperature	-25°C to +55°C
Dimensions (length/width/height)	104/162/96 mm
Installation option	4 elongated holes
Electrical connections	pluggable with RST20i2 ... 20i3


Constant power supply unit, 700 mA DC




Constant power supply unit 700 mA for connecting LEDs. Connections not used have to be closed.

Type	Part No.
gesis RST PSI 700/12 LED	83.020.0903.0
Incoming supply:	
Input Power (male connector)	230V AC/20A RST20i3 coding black
Output Power (female connector)	230V AC/20A RST20i3 coding black
Output LED (female connector)	700mA DC/max. 12W RST20i2 coding brown
General data:	
Type of protection	IP68 (all connections plugged or closed)
Ambient temperature	-25°C to +55°C
Dimensions (length/width/height)	104/162/96 mm
Installation option	4 elongated holes
Electrical connections	pluggable with RST20i2 ... 20i3


LED constant voltage supply, 12V DC

 <p>Constant voltage supply unit 12 V for connecting LEDs. Connections not used have to be closed.</p>	<table border="1"> <thead> <tr> <th>Type</th> <th>Part No.</th> </tr> </thead> <tbody> <tr> <td>gesis RST PSU 12/12 LED</td> <td>83.020.0900.0</td> </tr> </tbody> </table>	Type	Part No.	gesis RST PSU 12/12 LED	83.020.0900.0
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<p>Incoming supply: Input power (male connector) 230 V AC/20A RST20i3 coding black Output power (female connector) 230 V AC/20A RST20i3 coding black Output LED (female connector) 12 V DC/max. 12 W RST20i2 coding pebble gray</p> <p>General data: Type of protection IP 68 (all connections plugged or closed) Ambient temperature -25 °C to +55 °C Dimensions (length/width/height) 104/162/96 mm Installation option 4 elongated holes Electrical connections pluggable with RST20i2 ... 20i3</p>					

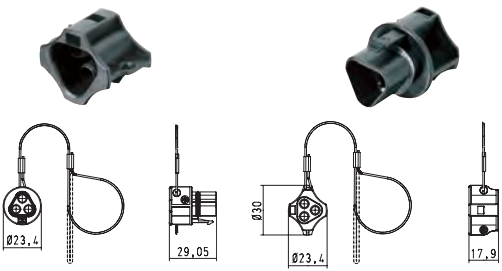
LED constant voltage supply, 24V DC

 <p>Constant voltage supply unit 24 V for connecting LEDs. Connections not used have to be closed.</p>	<table border="1"> <thead> <tr> <th>Type</th> <th>Part No.</th> </tr> </thead> <tbody> <tr> <td>gesis RST PSU 24/12 LED</td> <td>83.020.0901.0</td> </tr> </tbody> </table>	Type	Part No.	gesis RST PSU 24/12 LED	83.020.0901.0
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gesis RST PSU 24/12 LED	83.020.0901.0				
<p>Incoming supply: Input power (male connector) 230 V AC/20A RST20i3 coding black Output power (female connector) 230 V AC/20A RST20i3 coding black Output LED (female connector) 12 V DC/max. 12 W RST20i2 coding pebble gray</p> <p>General data: Type of protection IP 68 (all connections plugged or closed) Ambient temperature -25 °C to +55 °C Dimensions (length/width/height) 104/162/96 mm Installation option 4 elongated holes Electrical connections pluggable with RST20i2 ... 20i3</p>					

Transformer for low-voltage halogen luminaires, 12V AC

 <p>Power supply unit 12 V for connecting halogen luminaires. Connections not used have to be closed.</p>	<table border="1"> <thead> <tr> <th>Type</th> <th>Part No.</th> </tr> </thead> <tbody> <tr> <td>gesis RST PSU 12/70 LVH</td> <td>83.020.0904.0</td> </tr> </tbody> </table>	Type	Part No.	gesis RST PSU 12/70 LVH	83.020.0904.0
	Type	Part No.			
gesis RST PSU 12/70 LVH	83.020.0904.0				
<p>Incoming supply: Input power (male connector) 230 V AC/20A RST20i3 coding black Output power (female connector) 230 V AC/20A RST20i3 coding black Output LV halogen (female connector) 12 V AC/20 – 70 W RST20i2 coding pebble gray Output LV halogen cable length max. 2 m</p> <p>General data: Type of protection IP 68 (all connections plugged or closed) Ambient temperature 0 °C to +45 °C (derating from 35 °C) Dimensions (length/width/height) 104/162/96 mm Installation option 4 elongated holes Electrical connections pluggable with RST20i2 ... 20i3</p>					

Accessories: covers

 <p>The covers have to be used to close all unused inputs and outputs. Without these covers, only IP20 is achieved!</p>	<table border="1"> <thead> <tr> <th>Type</th> <th>Part No.</th> </tr> </thead> <tbody> <tr> <td>Suitable for all RST20i2 and RST20i3 codings</td> <td></td> </tr> <tr> <td>For male connector captive against loss</td> <td>99.416.6205.2</td> </tr> <tr> <td>For male connector not captive against loss</td> <td>05.564.4453.1</td> </tr> <tr> <td>For female connector captive against loss</td> <td>99.414.6205.2</td> </tr> <tr> <td>For female connector not captive against loss</td> <td>Z5.564.4553.1</td> </tr> </tbody> </table>	Type	Part No.	Suitable for all RST20i2 and RST20i3 codings		For male connector captive against loss	99.416.6205.2	For male connector not captive against loss	05.564.4453.1	For female connector captive against loss	99.414.6205.2	For female connector not captive against loss	Z5.564.4553.1
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