



EAO Product Information

Series 58



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Product Information

General notes

The Series 58 is a touch-sensitive switch that operates through glass. Please take note, that the glass does not contain any metal! In case of doubt, the glass has to be tested.

The switch can be bonded direct to the material's surface without the need to drill holes; it will operate even through 16 mm-thick double-glazing. It was developed for use as a door-opening switch for public transport vehicles fitted with large expanses of glass. Vehicles which are using collectors for power supply need further clarifications.

Mounting

The Series 58 is fitted with an electronic switching unit and is bonded direct to the glass.

The active part of the switch is fixed to the inner side of a glass surface using an adhesive. The passive part is fixed to the opposite of the glass, which has no electrical connection to the inside, and guides the user to the touch area.

The switch that is glued to the inside of the vehicle is sealed to IP 65 and is vandal resistant. The outer part is resistant to any influence.

Switch

The touch-area features a 25 cm² aluminium touch area, which reacts to contact of the hand.

Switching system

The electronic High Side Switch is short-circuit and overload-proof. It contains no moving parts, so it's incredibly durable and offers a long service life.

Marking

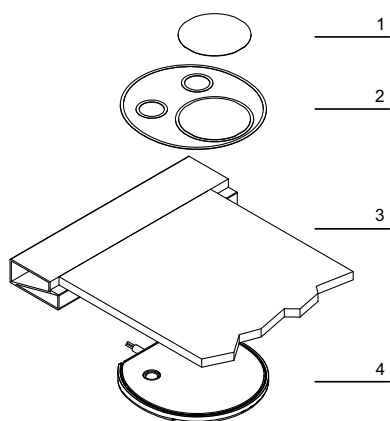
The touch-area can be engraved with standard symbols and inscriptions (see markings under Series 56).

Display

The switch is illuminated with two green LEDs to indicate the ready status. While touching the touch-area they turn red for an optical feedback.

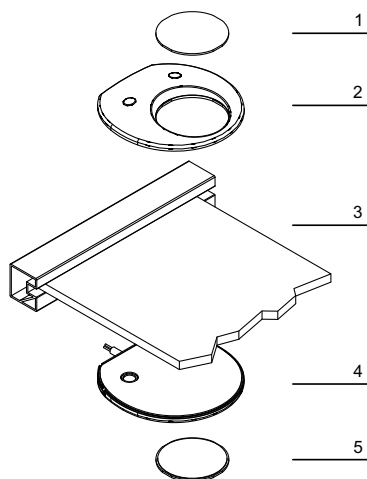
*We reserve the right to modify technical data
All dimensions in mm*

Single side switch, glass mounting



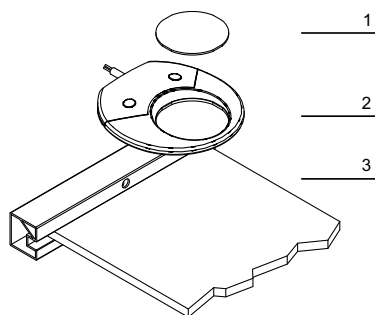
- 1 Touch plate
- 2 Adhesive label (or outer housing)
- 3 Pane of glass
- 4 Switching unit

Double side switch, glass mounting



- 1 Touch plate
- 2 Outer housing (or adhesive label)
- 3 Pane of glass
- 4 Switching unit
- 5 Touch plate

Single side switch, wall mounting

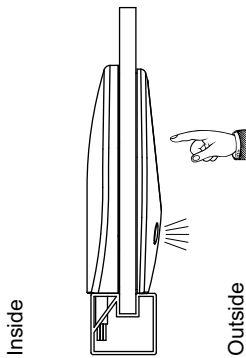


- 1 Touch plate
- 2 Switching unit
- 3 Pane of glass

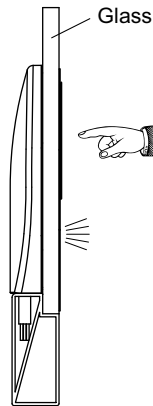
Mounting versions

1. Single side switch, glass mounting

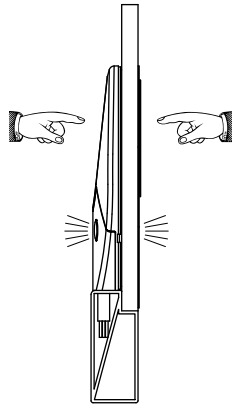
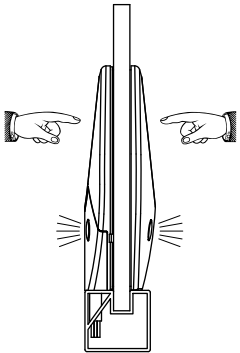
Version with housing



Version with adhesive label



2. Double side switch, glass mounting



3. Single side switch, wall mounting

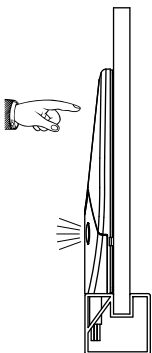
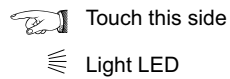
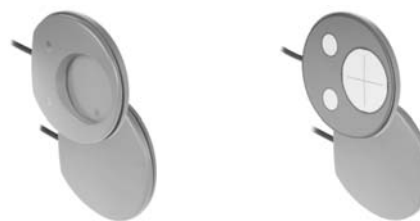



Figure:



Single side switch, glass mounting



Essential Accessories:

 Touch plate page 9

	Front protection	Terminals	Display	Sensitivity	Earth lip	Inside	Outside	Colour	Typ-Nr.	Technical drawing	Circuit drawing	
Single side switch, glass mounting Operating voltage : 24 VDC	IP 67	F	LED 2 green 2 red	High	without	Switching unit	Adhesive label	blue RAL 5017	58-121.11.6	4	1	0.128
								green RAL 6024	58-121.11.5	4	1	0.128
								grey RAL 7012	58-121.11	4	1	0.128
								orange RAL 2003	58-121.11.3	4	1	0.128
								red RAL 3020	58-121.11.2	4	1	0.128
								yellow RAL 1023	58-121.11.4	4	1	0.128
							Housing	blue RAL 5017	58-122.11.6	3	1	0.177
								green RAL 6024	58-122.11.5	3	1	0.177
								grey RAL 7012	58-122.11	3	1	0.177
								orange RAL 2003	58-122.11.3	3	1	0.177
								red RAL 3020	58-122.11.2	3	1	0.177
								yellow RAL 1023	58-122.11.4	3	1	0.177
				Standard	with	Switching unit	Adhesive label	blue RAL 5017	58-111.11.6	4	1	0.128
								green RAL 6024	58-111.11.5	4	1	0.128
								grey RAL 7012	58-111.11	4	1	0.128
								orange RAL 2003	58-111.11.3	4	1	0.128
								red RAL 3020	58-111.11.2	4	1	0.128
								yellow RAL 1023	58-111.11.4	4	1	0.128
							Housing	blue RAL 5017	58-112.11.6	3	1	0.177
								green RAL 6024	58-112.11.5	3	1	0.177
								grey RAL 7012	58-112.11	3	1	0.177
								orange RAL 2003	58-112.11.3	3	1	0.177
								red RAL 3020	58-112.11.2	3	1	0.177
								yellow RAL 1023	58-112.11.4	3	1	0.177

Standard version:

Cable length 200 mm, with core-end sleeves

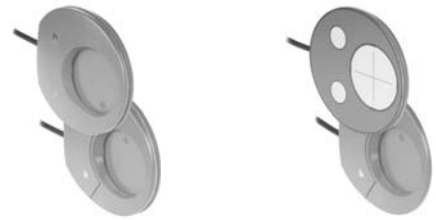
Sensitivity :

Typical applications for higher sensitivity are double-glazing of e.g. 4-8-4 mm thickness and standard sensitivity for single glazing of e.g. 3-6 mm.


Terminals: F = Cable


Technical drawing from page 11, Circuit drawing from page 15

Double side switch, glass mounting



Essential Accessories:

 Touch plate page 9

	Front protection	Terminals	Display	Sensitivity	Earth lip	Inside	Outside	Colour	Typ-Nr.	Technical drawing	Circuit drawing	
Double side switch, glass mounting Operating voltage : 24 VDC	IP 67	F	LED 4 green 4 red	High	without	Switching unit	Adhesive label	blue RAL 5017	58-221.12.6	2	1	0.105
								green RAL 6024	58-221.12.5	2	1	0.105
								grey RAL 7012	58-221.12	2	1	0.105
								orange RAL 2003	58-221.12.3	2	1	0.105
								red RAL 3020	58-221.12.2	2	1	0.105
								yellow RAL 1023	58-221.12.4	2	1	0.105
							Housing	blue RAL 5017	58-222.12.6	1	1	0.155
								green RAL 6024	58-222.12.5	1	1	0.155
								grey RAL 7012	58-222.12	1	1	0.155
								orange RAL 2003	58-222.12.3	1	1	0.155
								red RAL 3020	58-222.12.2	1	1	0.155
								yellow RAL 1023	58-222.12.4	1	1	0.155
				Standard	with	Switching unit	Adhesive label	blue RAL 5017	58-211.12.6	2	1	0.105
								green RAL 6024	58-211.12.5	2	1	0.105
								grey RAL 7012	58-211.12	2	1	0.105
								orange RAL 2003	58-211.12.3	2	1	0.105
								red RAL 3020	58-211.12.2	2	1	0.105
								yellow RAL 1023	58-211.12.4	2	1	0.105
							Housing	blue RAL 5017	58-212.12.6	1	1	0.155
								green RAL 6024	58-212.12.5	1	1	0.155
								grey RAL 7012	58-212.12	1	1	0.155
								orange RAL 2003	58-212.12.3	1	1	0.155
								red RAL 3020	58-212.12.2	1	1	0.155
								yellow RAL 1023	58-212.12.4	1	1	0.155

Standard version:

Cable length 200 mm, with core-end sleeves

Sensitivity :

Typical applications for higher sensitivity are double-glazing of e.g. 4-8-4 mm thickness and standard sensitivity for single glazing of e.g. 3-6 mm.


Terminals: F = Cable

Technical drawing from page 11, Circuit drawing from page 15

Single side switch, wall mounting



Essential Accessories:

 Touch plate page 9

	Front protection	Terminals	Display	Sensitivity	Earth lip	Inside	Colour	Typ-Nr.	Technical drawing		Circuit drawing	
Single side switch, wall mounting Operating voltage : 24 VDC	IP 67	F	LED 2 green 2 red	Standard	with	Switching unit	blue RAL 5017	58-100.11.6	5	1	0.101	
							green RAL 6024	58-100.11.5	5	1	0.101	
							grey RAL 7012	58-100.11	5	1	0.101	
							orange RAL 2003	58-100.11.3	5	1	0.101	
							red RAL 3020	58-100.11.2	5	1	0.101	
							yellow RAL 1023	58-100.11.4	5	1	0.101	

Standard version:

Cable length 200 mm, with core-end sleeves

Sensitivity :

Typical application for standard sensitivity for single glazing of e.g. 3-6 mm.


Terminals: F = Cable

Technical drawing from page 11, Circuit drawing from page 15

Inside


Cover Inner housing

for covering of the inner housing

	Cover	Colour	Typ-Nr.	
Cover Inner housing	Plastic	blue RAL 5017	58-55000.6	0.023
		green RAL 6024	58-55000.5	0.023
		grey RAL 7012	58-55000	0.023
		orange RAL 2003	58-55000.3	0.023
		red RAL 3020	58-55000.2	0.023
		yellow RAL 1023	58-55000.4	0.023



Touch plate


	Touch plate	Marking	Typ-Nr.	
Touch plate Thickness 0.3 mm	Aluminium natural	Door close	58-43892	0.003
		Door open	58-43891	0.003
		without	58-43800	0.003
	Aluminium traffic-blue	Baby carriage	58-43693	0.003
		Wheelchair	58-43694	0.003



The touch-plate is not needed in the vehicle inside by use as a single side door-opening switch


Outside

Outer housing

	Housing	Colour	Typ-Nr.	
Outer housing	Plastic	blue RAL 5017	58-66000.6	0.065
		green RAL 6024	58-66000.5	0.065
		grey RAL 7012	58-66000	0.065
		orange RAL 2003	58-66000.3	0.065
		red RAL 3020	58-66000.2	0.065
		yellow RAL 1023	58-66000.4	0.065



Adhesive label

	Adhesive label	Colour	Typ-Nr.	
Adhesive label	Plastic	blue RAL 5017	58-77000.6	0.004
		green RAL 6024	58-77000.5	0.004
		grey RAL 7012	58-77000	0.004
		orange RAL 2003	58-77000.3	0.004
		red RAL 3020	58-77000.2	0.004
		yellow RAL 1023	58-77000.4	0.004



Switching unit

Switching system

Switching element

Touch-sensitive (electronic, capacitive)

Material

Connecting cable

Halogene free Polydefine mixture

Inner and outer housing

Thermoplastic Acrylat Styren Acrylonitril / Polycarbonat (ASA+PC), as per UL94 V0

Adhesive surface

3 M™ VHB™ - adhesive transfer tape

Switch

Touch-area aluminium anodized

Electrode

Stainless steel

Mechanical characteristics

Terminals

Cable 3-poles end spliced

Wire cross-section

0.25 mm²

Electrical characteristics

Operating voltage/-current

Operation voltage : 24 VDC +25 % ... -30 %

Output

Short circuit and overload protected

Load $I_{max.} = 200$ mA

Display

Ready status: 2 green LED each side

Feedback : 2 red LED, light up while touching

EMC approved, as per

EN 50081-1

EN 50082-1

EN 50082-2

EN 50121-3-2

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +80 °C

Front protection

IP 67

Climate resistance

Damp heat, cyclic

96 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity, as per EN IEC 60068-2-30

Damp heat, state

56 days, +40 °C / 93 % relative humidity, as per EN IEC 60068-2-78

Rapid change of temperature

100 cycles, -40 °C ... +80 °C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 250 m/s², pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100 m/s² at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

Approvals

Approbations

e1

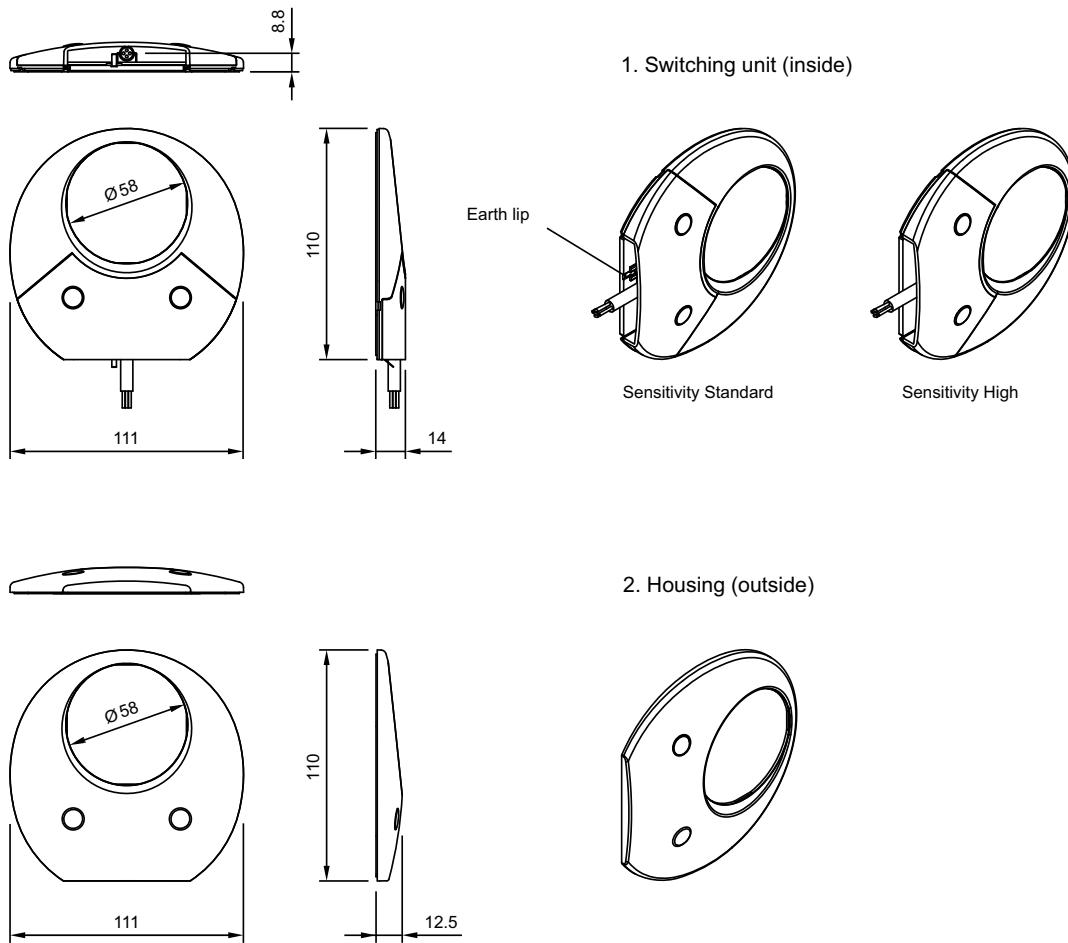
Declaration of conformity

CE

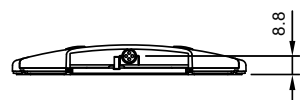
RoHS

Technical drawing

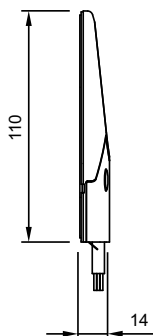
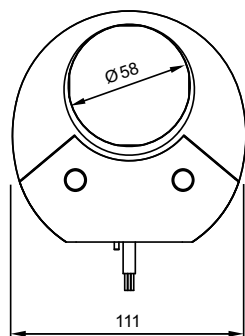
1 Double side switch, glass mounting page 7



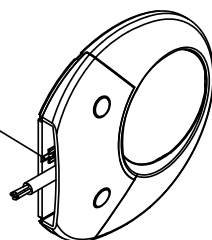
2 Double side switch, glass mounting page 7



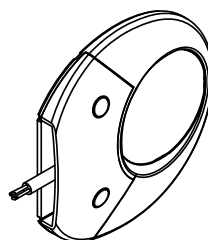
1. Switching unit (inside)



Earth lip

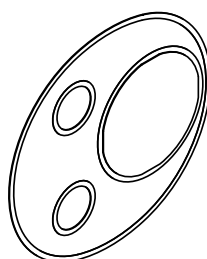
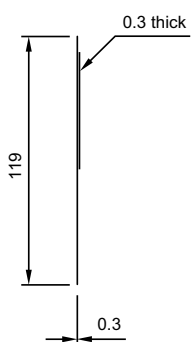
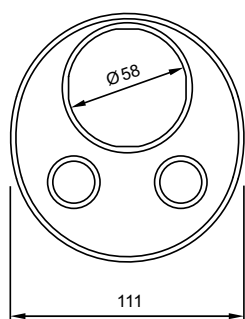


Sensitivity Standard

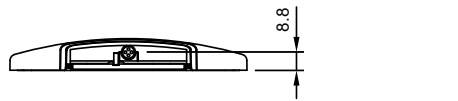


Sensitivity High

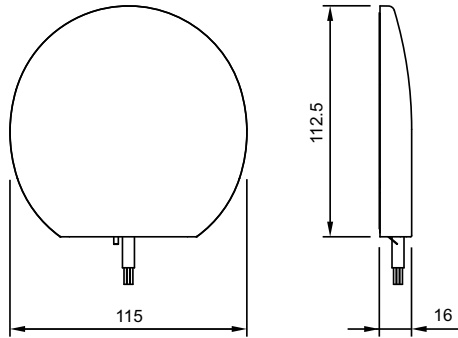
2. Adhesive label (outside)
with touch plate



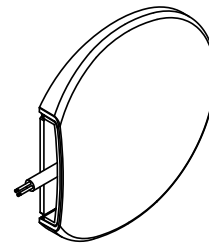
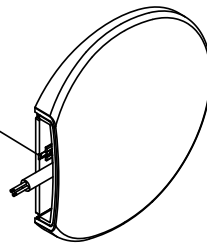
3 Single side switch, glass mounting page 6



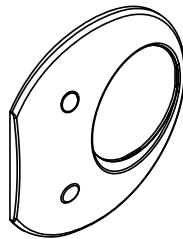
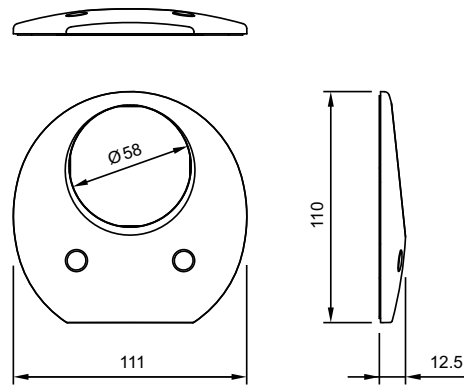
1. Switching unit (inside)



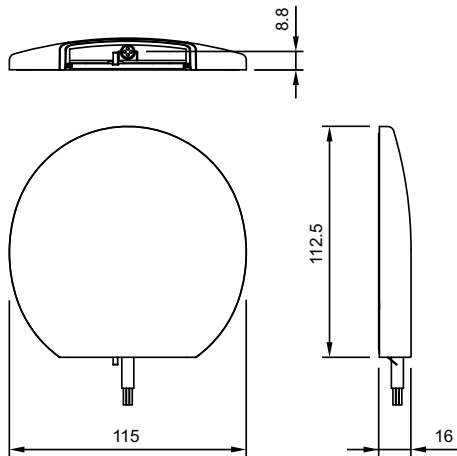
Earth lip



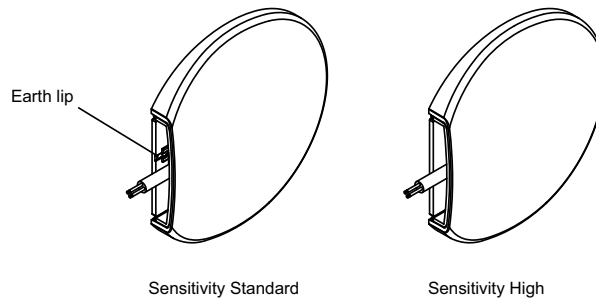
2. Housing (outside)



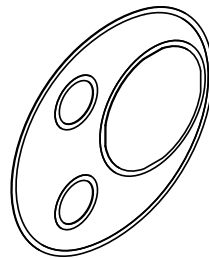
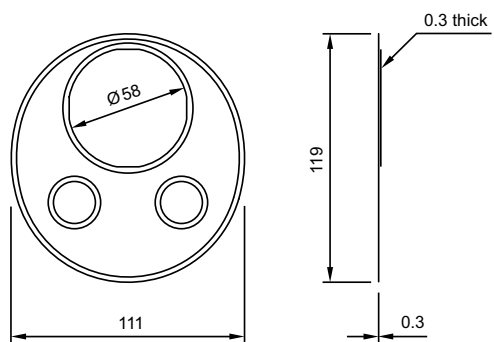
4 Single side switch, glass mounting page 6



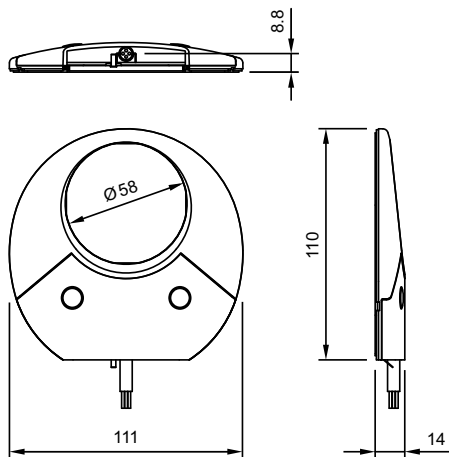
1. Switching unit (inside)



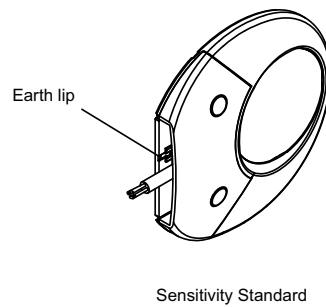
2. Adhesive label (outside)
with touch plate



5 Single side switch, wall mounting page 8

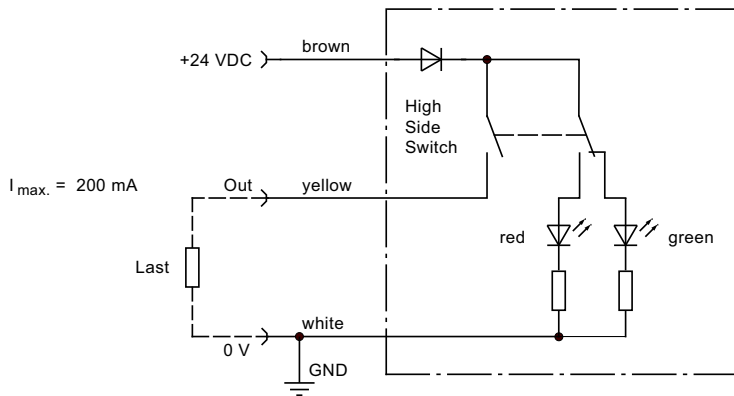


Switching unit (inside)



Circuit drawing

1 Single side switch, glass mounting page 6 | Double side switch, glass mounting page 7 | Single side switch, wall mounting page 8



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58-100.11.3	8	58-66000	9		
58-100.11.4	8	58-66000.2	9		
58-100.11.5	8	58-66000.3	9		
58-100.11.6	8	58-66000.4	9		
58-111.11	6	58-66000.5	9		
58-111.11.2	6	58-66000.6	9		
58-111.11.3	6	58-77000	9		
58-111.11.4	6	58-77000.2	9		
58-111.11.5	6	58-77000.3	9		
58-111.11.6	6	58-77000.4	9		
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Fax	+1 203 877 3694
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