

Polycarbonate-Siloxane Copolymer push button switching voltage up to 250 VAC

new



Momentary Action Switches
Non-illuminated



Non-illuminated
with green color ring



Ring illumination
red

See below:

Approvals and Compliances

Description

- Mechanical switch with stroke MO (Momentary) for mounting diameter 19, 22 mm
- With or without illumination
- With torsion protection for easier positioning
- Equipped with quick connect terminals to permit fast connection

Unique Selling Proposition

- Attractive tactile feedback
- High quality materials
- Long life span
- Color marking and variety of design options regarding size, color and illumination

Characteristics

- Housing and actuator material made by PC-Lexan
- High impact resistance IK 10
- IP67
- Switching voltage from 30 VDC to 250 VAC
- Switching current from 0.1 A to 10 A

References

Other versions on request

Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [CAD-Drawings](#), [Product News](#), [Detailed request for product](#), [Configurator](#)

Technical Data

Electrical Data

Switching Function	See table of Subminiature and Micro-switch
Supply Voltage LED	5 VDC - 24 VDC, see table of variants
Impulse Withstand Voltage (ESD)	8 kV contact discharge
	15 kV air discharge

Mechanical Data

Actuating Force	4.5 N
Actuating Travel	1.0 mm
Lifetime	1.5 million actuations
Shock Protection	IK10
Mounting screw torque Plastic Nut	M16: max. 2 Nm
	M22: max. 3.5 Nm

Climatical Data

Operating Temperature	-30 to 85 °C (Sub. Microswitch to -40°C)
Storage Temperature	-40 to 85 °C
Protection Class	IP66 and IP67 Front Side
Salt Spray Test (acc. to IEC 60068-2-11)	24 h / 48 h / 96 h Residence Time

Material

Housing	PC-Lexan
Actuator	PC-Lexan
Plastic Nut	PA, UL94

Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

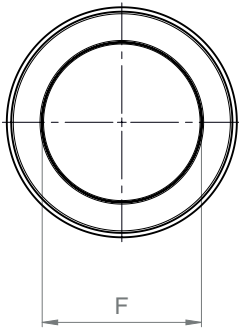
Compliances

The product complies with following Guide Lines

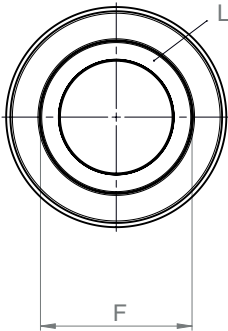
Identification	Details	Initiator	Description
CE	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
UKCA	UKCA declaration of conformity	SCHURTER AG	The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.
RoHS	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.

Dimension [mm]

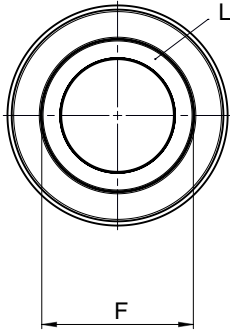
Front view push buttons



Non illuminated

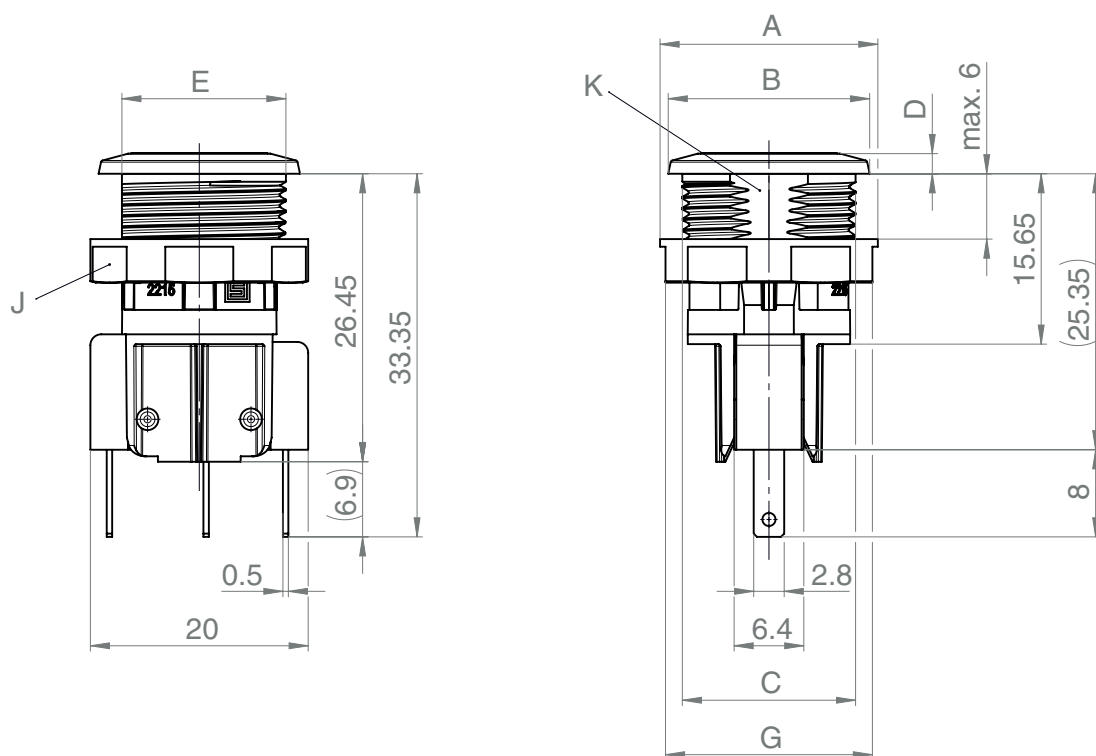


Non illuminated
with color ring (RC)

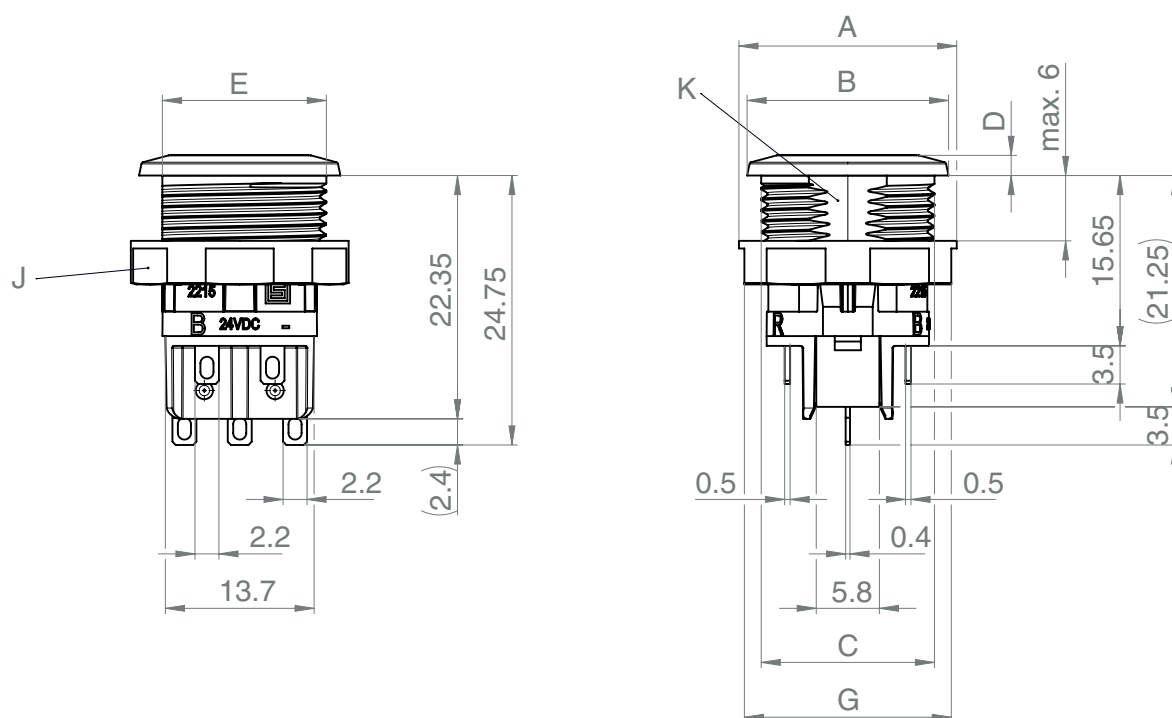


Ring illumination(RI)

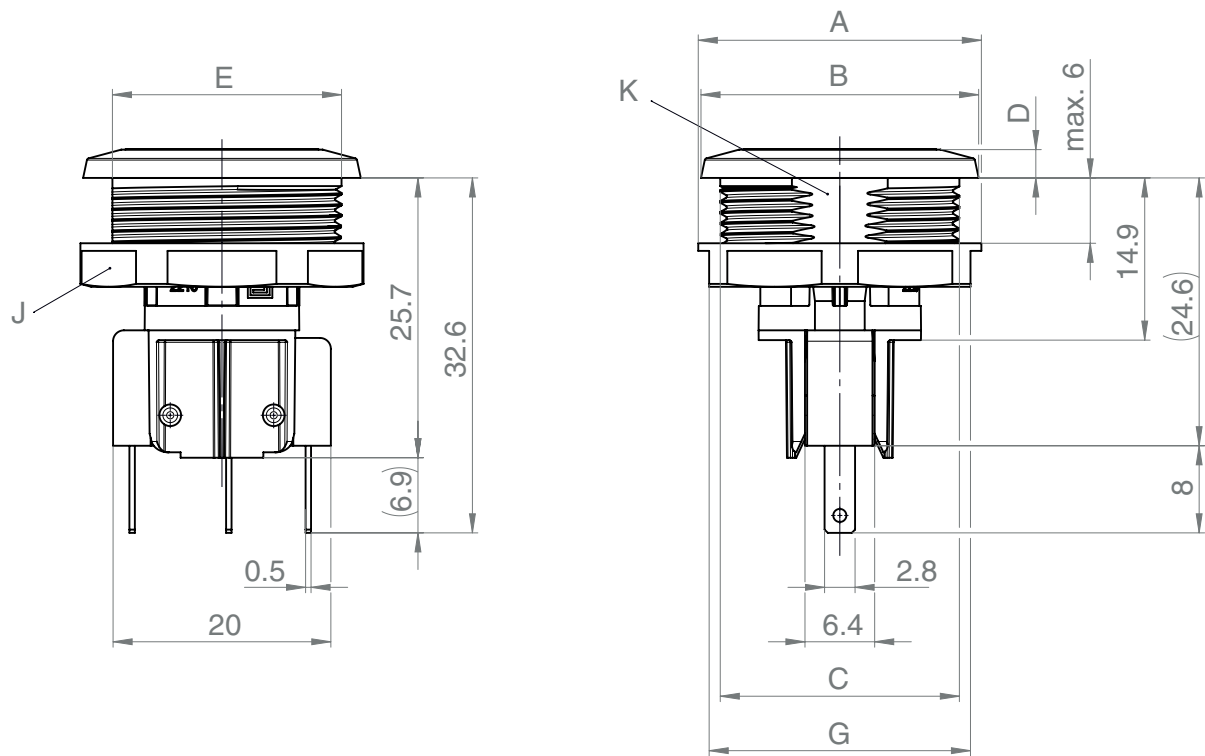
MSM II SPDT with Microswitch and Quick Connect Terminal



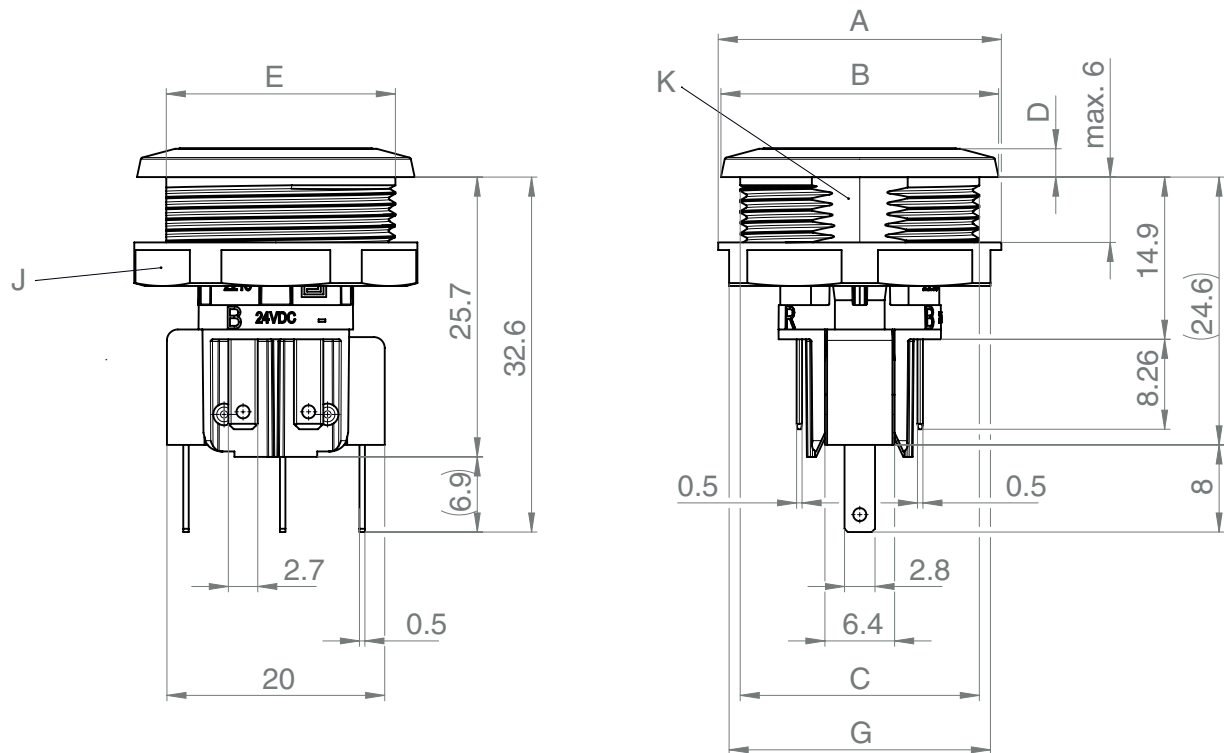
MSM II SPDT with Subminiature Microswitch and Solder Terminal



MSM II SPDT with Microswitch and Quick Connect Terminal



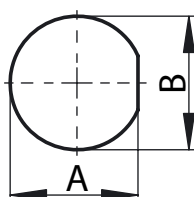
MSM II RI SPDT with Microswitch and Quick Connect Terminal



Diameter in mm	16	22
A	Ø20	Ø26
B	Ø18.5	Ø25.5
C	M16x1	M22x1
D	1.85	2.6
E	15.1	21.1
F Operating area / illumination area	Ø12.8	Ø18
G	AF19	AF24
H	4.3	6.1
O	2.2	3.1
J	Nut	
K	Anti-rotation lock	
L	Lighting ring	

Dimension

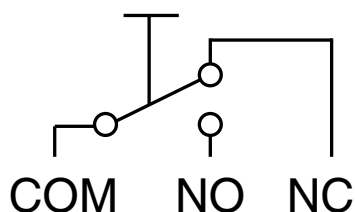
All illuminated products and all non illuminated push buttons with symbols are supplied with anti-rotation protection



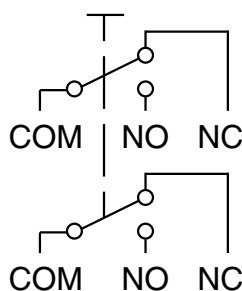
Diameter (mm)	A	B
16	15.15±0.05	16.1 ±0.1
22	21.15±0.05	22.1 ±0.1

Diagrams

Switching element SPDT

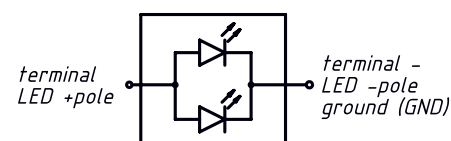


Switching element DPDT



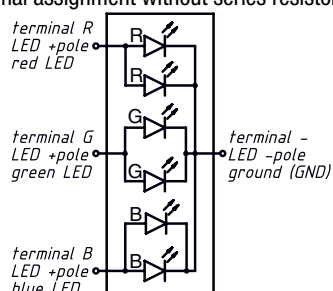
Illumination single color

Terminal assignment without series resistor



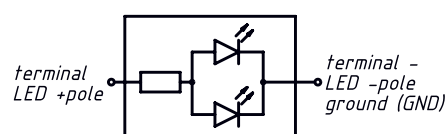
Illumination RGB

Terminal assignment without series resistor



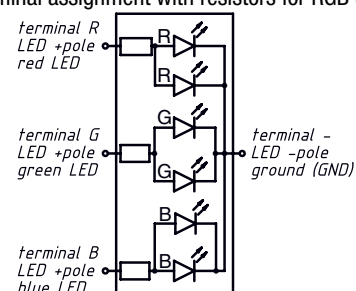
Illumination single color

Terminal assignment with resistors for 5 VDC



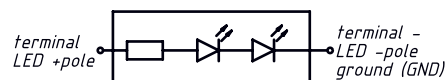
Illumination RGB

Terminal assignment with resistors for RGB 5 VDC



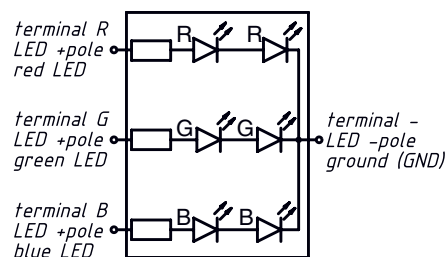
Illumination single color

Terminal assignment with resistors for 12 VDC and 24 VDC



Illumination RGB

Terminal assignment with resistors for RGB 12 VDC and 24 VDC



Illumination options for RGB

Lighting type	Wire red	Wire green	Wire blue	Resulting Color
Multicolor Singlecolor	x			Red
Multicolor Singlecolor		x		Green
Multicolor Singlecolor			x	Blue
Multicolor RGB Additive 2	x	x		Yellow
Multicolor RGB Additive 2	x		x	Magenta
Multicolor RGB Additive 2		x	x	Cyan
Multicolor RGB Additive 3	x	x	x	White

Illumination

Operating Data	Forward Current max.	Forward Voltage at 10 mA	Forward Voltage max.
LED red	25 mA	1,7 VDC	2,4 VDC
LED green	25 mA	2,6 VDC	3,2 VDC
LED blue	25 mA	2,6 VDC	3,2 VDC

Micro Switch

Micro Switch	Contact Material	Switching Voltage	Switching current	Rated Switching Capacity	Lifetime	Contact Resistance	Insulation Resistance	Duration of Bounce
0.1 A, IP40	Au	max. 30 VDC	max. 0.1 A	3 W	0.2 Mio.	< 50 mΩ	> 100 MΩ	< 5 ms
0.1 A, IP67		max. 30 VDC	max. 0.1 A	2.5 W	0.05 Mio.			
5 A / 125 VAC resp. 3 A / 250 VAC, IP40	Ag	max. 125 / 250 VAC	max. 5 / 3 A	750 W	0.2 Mio.	< 30 mΩ	> 100 MΩ	< 5 ms
6 A, IP67		max. 250 VAC	max. 5 A	1250 W	0.01 Mio.			
10 A, IP40	Ag	max. 250 VAC	max. 10 A	2500 W	0.05 Mio.	< 30 mΩ	> 100 MΩ	< 5 ms
10 A, IP67		max. 250 VAC	max. 10 A	2500 W	0.01 Mio.			

Subminiature Microswitch

Subminiature Microswitch	Contact Material	Switching Voltage	Switching current	Rated Switching Capacity	Lifetime	Contact Resistance	Insulation Resistance	Duration of Bounce
0.1 A, IP40	Au	max. 30 VDC	max. 0.1 A	3 W	0.1 Mio.	< 100 mΩ	> 100 MΩ	< 10 ms
3 A, IP40	Ag	max. 125 VAC	max. 3 A	375 W	0.03 Mio.	< 30 mΩ	> 100 MΩ	< 10 ms

Order number key

M	S	M	II	-	16	-	MO	NX	A10	-	B	1	-	B	A0	-	A	-	RI	0GN	012	A0	-	P4	BK	B	-	P4	BK	NF	-	1	074	-	C
					1		2				3					4			5	6	7	*		*	*		8			9		*			

Diameter		1
16 mm ¹⁾	=	16
22 mm	=	22

Switch function		2
Switch	=	MONX
Indicator element	=	0000

Design 3

Switches		
Switch with Microswitch SPDT / quick connect		
100 mA Gold contact	=	A10-B1-AA0
3 A	=	03A-B1-BA0
5 A	=	05A-B1-BA0
6 A	=	06A-B1-BA0
10 A	=	10A-B1-BA0

Switch with Subminiature SPDT / solder terminal		
100 mA Gold contact	=	A10-B2-AE0
3 A	=	03A-B2-BE0

Switch with Subminiature DPDT / solder terminal		
100 mA Gold contact	=	A10-D3-AE0
3 A	=	03A-D3-BE0

Indicator Elements		
Indicator element with quick connect	=	000-01-000
Indicator element with solder terminal	=	000-02-000

Microswitch version		4
IP40 (100 mA, 3 A, 5 A, 10 A)	=	A
IP67 (100 mA, 3 A, 6 A, 10 A)	=	B***

Illumination / Appearance		5
No illumination	=	00
No illumination with colored ring	=	RC
Ring illumination	=	RI

Illumination / Color		6
None	=	000
Red	=	0RD
Green	=	0GN
Blue	=	0BL
Yellow	=	0YL
White	=	0WT
Multicolor ¹⁾	=	RGB

Supply voltage illumination		7
No illumination	=	000
5 V	=	005
12 V	=	012
24 V	=	024
LED without resistor	=	00R

Housing material and color		*
PC-Lexan (Black)	=	P4BK

Actuator material		8
PC-Lexan (Black)	=	P4BK

Marking type		9
None	=	0000
Laser marking		
STOP	=	1057
ON	=	1065
OFF	=	1066
ON/OFF	=	1071
START	=	1072
	=	1074
	=	1075
	=	1076
	=	1077

further lettering on request

Accessories		*
Hex nut plastic with O-ring	=	C

1) Not available for DPDT

* Values marked with an asterisk depend on the selected properties.

*** All Indicator elements have IP rate 67 also from backside

Variants

Diameter	Switching current	Electrical contact	Circuit type illumination	IP specification backside	Illumination	Illumination color	Supply Voltage LED	Order Number
16mm	100mA	SPDT	common cathode	IP40	ring illumination	multicolor	24V DC	3-157-494
16mm	100mA	SPDT	none	IP40	none	none	none	3-157-496
16mm	100mA	SPDT	none	IP40	none	none	none	3-157-497
22mm	100mA	SPDT	common cathode	IP40	ring illumination	multicolor	24V DC	3-157-495
22mm	100mA	SPDT	none	IP40	none	none	none	3-157-498

Availability for all products can be searched real-time:<https://www.schurter.com/en/info-center/support-tools/stock-check-distributors>

- 1) Microswitch SPDT / Indicator with quick connect terminals
- 2) Subminiature Switch SPDT / Indicator with solder terminals
- 3) Subminiature Switch DPDT with solder terminals

Packaging unit	10 pcs.	In box or packed in air cushion bags
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The nut and micro switch are enclosed in the box.