

Metal indicator elements with different illumination surfaces



Indicator
Area illumination
red

See below:

Approvals and Compliances

Description

- Indicator elements in identical design as MSM II push buttons
- With torsion protection for easier positioning
- Equipped with quick connect terminals to permit fast connection

Unique Selling Proposition

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

Characteristics

- Housing material in stainless steel
- Surface in stainless steel or ceramic
- Housing and actuator material of the ring-illuminated RD version in black anodized aluminum
- All laser marked, ring-illuminated and point-illuminated versions have anti-rotation protection for easy mounting

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

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

Lifetime	1.5 million h
Shock Protection	IK08 / IK07
Mounting screw torque Plastic Nut	max. 3.5 Nm

Climatical Data

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

Material

Housing	Aluminium / Stainless Steel
Illumination area	PMMA / Aluminium / Stainless Steel / Ceramics
Seal Ring	NBR70
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](#)

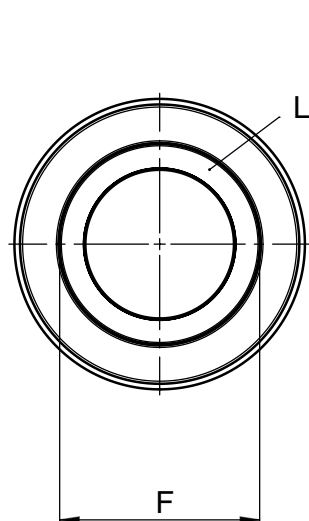
SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical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

Compliances

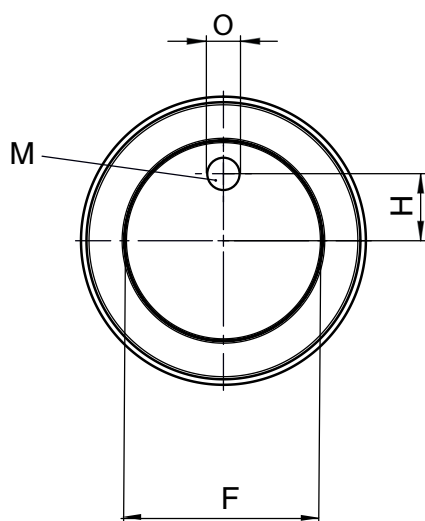
The product complies with following Guide Lines

Identification	Details	Initiator	Description
	CE 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 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	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
	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.

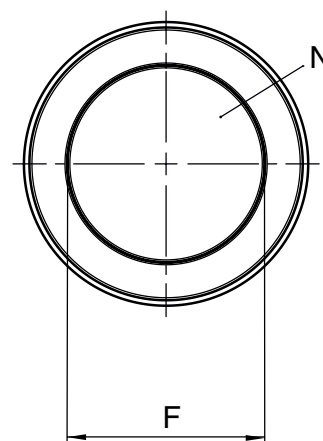
Dimension [mm]
Indicator



Ring illumination(RI)

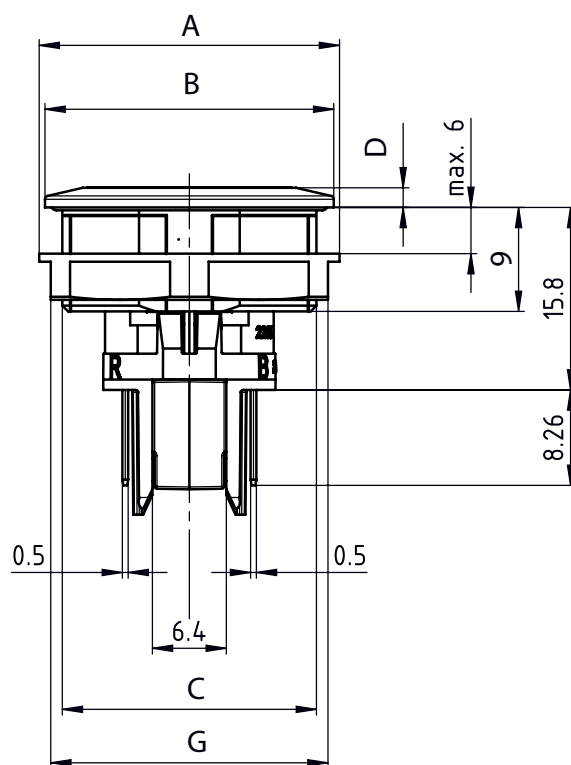
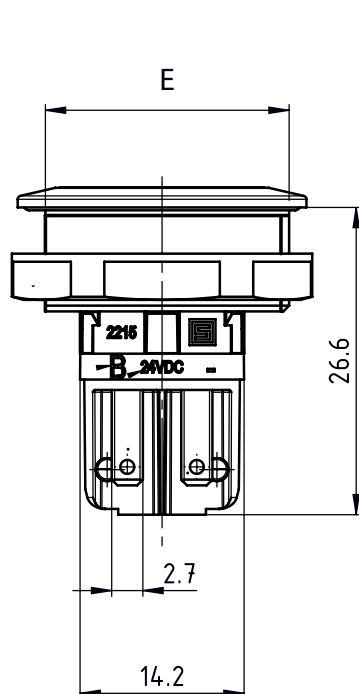


Point illumination(PI)

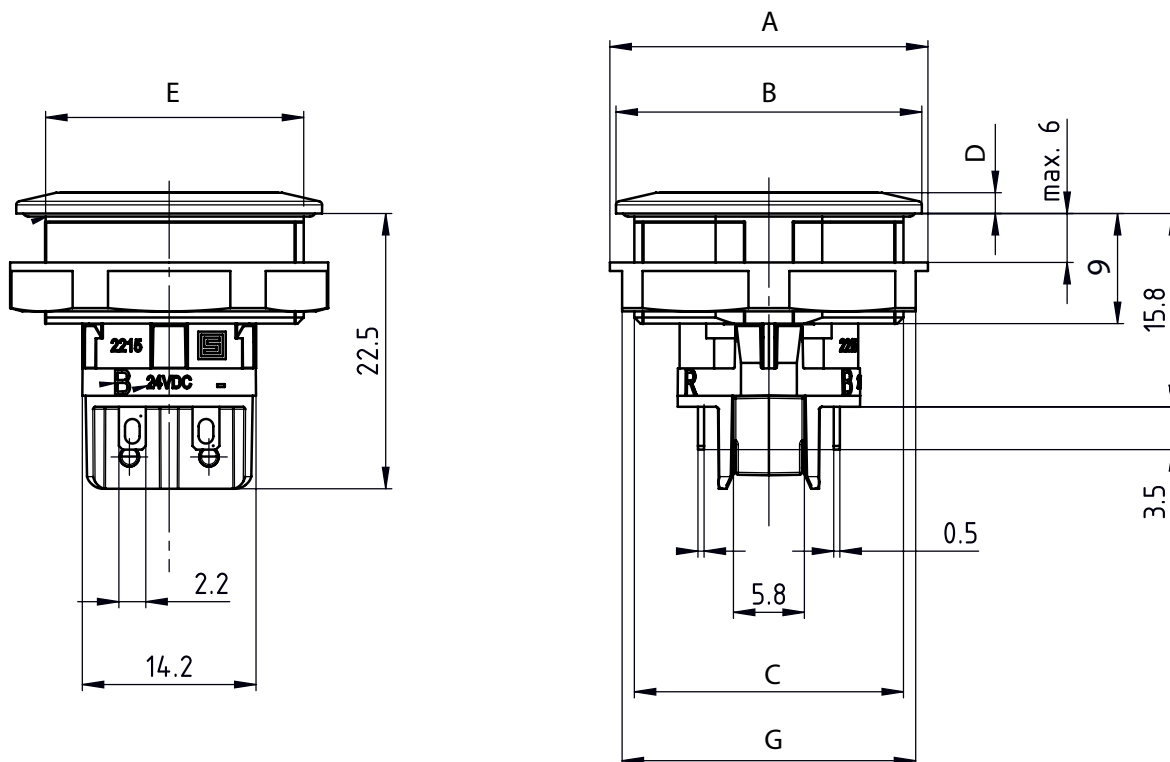


Area illumination (AI)

MSM II Indicator with Quick Connect Terminal



MSM II Indicator with Solder Terminal

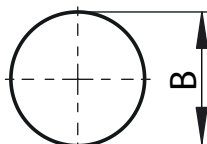
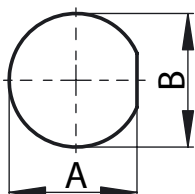


Diameter in mm	16	19	22	30
A	Ø20	Ø24	Ø26	Ø34.5
B	Ø19	Ø22	Ø25	Ø34
C	M16x1	M19x0.75	M22x1	M30x1.5
D	1.7	1.7	1.7	2
E	15.1	18.1	21.1	28.8
F Operating area / illumination area	Ø12.8	Ø15.8	Ø18	Ø25
G	AF19	AF22	AF24	AF32
H	4.3	5.3	6.1	8.4
O	2.2	2.7	3.1	4.3
I	O-Ring			
J	Nut			
K	Anti-rotation lock			
L	Lighting ring			
M	Point illumination			
N	Area illumination			

Dimension

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

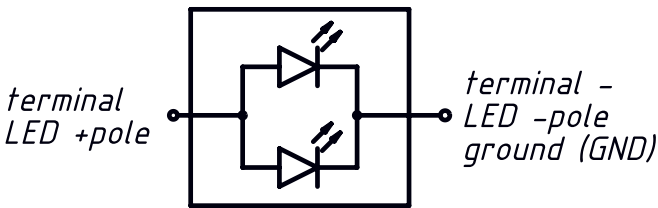
Non-illuminated push-buttons are supplied without anti-rotation protection



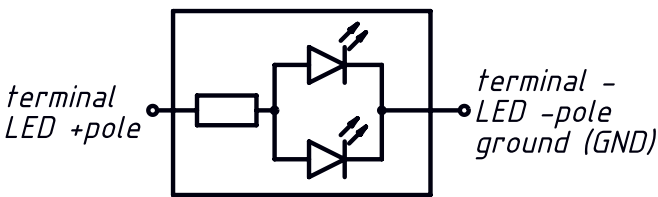
Diameter (mm)	A	B
16	15.15±0.05	16.1 ±0.1
19	18.15±0.05	19.1 ±0.1
22	21.15±0.05	22.1 ±0.1
24	23.50±0.05	24.1 ±0.1
30	28.85±0.05	30.1 ±0.1

Diagrams

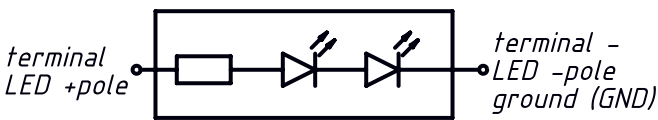
Illumination single color
Terminal assignment without series resistor



Illumination single color
Terminal assignment with resistors for 5 VDC



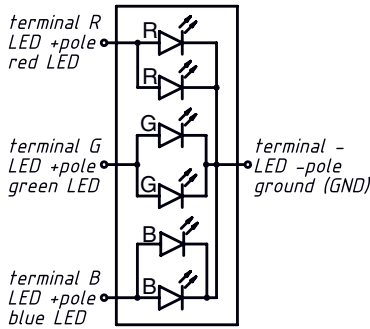
Illumination single color
Terminal assignment with resistors for 12 VDC and 24 VDC



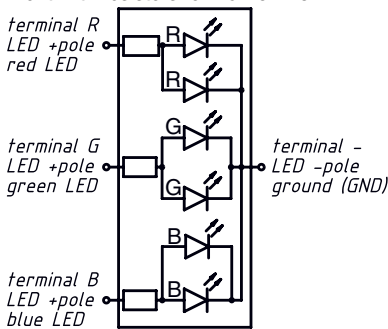
Illumination options for RGB

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

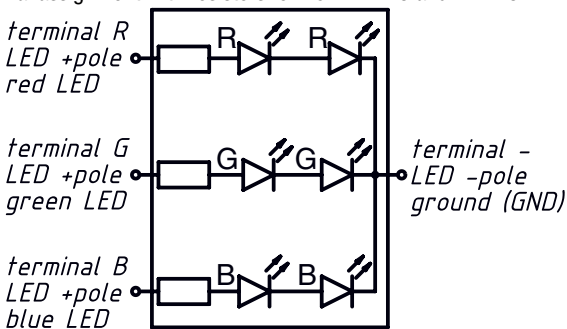
Illumination RGB
Terminal assignment without series resistor



Illumination RGB
Terminal assignment with resistors for RGB 5 VDC



Illumination RGB
Terminal assignment with resistors for RGB 12 VDC and 24 VDC



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

Order number key

M	S	M	II	-	19	-	00	00	000	-	0	1	-	0	00	-	0	-	PI	0GN	012	A0	-	S0	NC	B	-	S0	NC	NF	-	1	074	-	C
					1		*				2								3	4	5	*	*	*			6				7	*			

Diameter			1
16 mm	=		16
19 mm	=		19
22 mm	=		22
30 mm ¹⁾	=		30

Switch function		*
Indicator element		0000

Indicator Elements		2
Quick connect	=	01
Solder terminal	=	02

Illumination / Appearance		3
Area illumination	=	AI
Ring illumination	=	RI
Point illumination	=	PI
Ring illumination Discreet/DeadFront	=	RD

Illumination / Color		4
Red	=	0RD
Green	=	0GN
Blue	=	0BL
Yellow	=	0YL
White	=	0WT
Multicolor	=	0RG

Supply voltage illumination		5
5 V	=	005
12 V	=	012
24 V	=	024
LED without resistor	=	00R

Housing material and color		*
Stainless steel 1.4305 (Silver)	=	S0NC
Aluminum EN AW-6082 (3.3215) (Black)	=	A0BK

Actuator material		6
Stainless steel 1.4305 (Silver)	=	S0NC
Ceramic (only with stainless steel) (White)	=	C0WT
Aluminum (only on RD version) (Black)	=	A0BK

Marking type		7
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

Stainless steel nut can be ordered additionally

0098.9260	Stainless steel nut M16
0098.9250	Stainless steel nut M19
0098.9253	Stainless steel nut M22
0098.9216	Stainless steel nut M30

1) 30 mm diameter not available with Area Illumination

All Indicator elements have IP rate 67 also from backside

Variants

Diameter	Illumination	Illumination color	Supply Voltage LED	Terminal	Order Number
16	RI	RGB	24VDC	Quick Connect Terminal	3-148-084
16	RI	RGB	5VDC	Quick Connect Terminal	3-148-278
16	RI	RGB	5VDC	Solder terminal	3-148-279
16	AI	RGB	5VDC	Quick Connect Terminal	3-148-339
16	AI	RGB	5VDC	Solder terminal	3-148-342
16	RI	RGB	12VDC	Quick Connect Terminal	3-148-345
16	RI	RGB	12VDC	Solder terminal	3-148-355
16	AI	RGB	12VDC	Quick Connect Terminal	3-148-356
16	AI	RGB	12VDC	Solder terminal	3-148-357
16	RI	RGB	24VDC	Solder terminal	3-148-372
16	AI	RGB	24VDC	Quick Connect Terminal	3-148-392
16	AI	RGB	24VDC	Solder terminal	3-148-396
19	RI	RGB	5VDC	Quick Connect Terminal	3-148-398
19	AI	RGB	5VDC	Quick Connect Terminal	3-148-400
19	AI	RGB	5VDC	Solder terminal	3-148-401
19	RI	RGB	12VDC	Quick Connect Terminal	3-148-412
19	RI	RGB	12VDC	Solder terminal	3-148-413
19	AI	RGB	12VDC	Quick Connect Terminal	3-148-414
19	AI	RGB	12VDC	Solder terminal	3-148-415
19	RI	RGB	24VDC	Quick Connect Terminal	3-148-416
19	RI	RGB	24VDC	Solder terminal	3-148-417
19	AI	RGB	24VDC	Quick Connect Terminal	3-148-418
19	AI	RGB	24VDC	Solder terminal	3-148-419
19	RI	RGB	5VDC	Solder terminal	3-148-420
22	RI	RGB	5VDC	Quick Connect Terminal	3-148-421
22	RI	RGB	5VDC	Solder terminal	3-148-422
22	AI	RGB	5VDC	Quick Connect Terminal	3-148-423
22	AI	RGB	5VDC	Solder terminal	3-148-424
22	RI	RGB	12VDC	Quick Connect Terminal	3-148-425
22	RI	RGB	12VDC	Solder terminal	3-148-426
22	AI	RGB	12VDC	Quick Connect Terminal	3-148-427
22	AI	RGB	12VDC	Solder terminal	3-148-428
22	RI	RGB	24VDC	Quick Connect Terminal	3-148-429
22	RI	RGB	24VDC	Solder terminal	3-148-430
22	AI	RGB	24VDC	Quick Connect Terminal	3-148-431
22	AI	RGB	24VDC	Solder terminal	3-148-432
30	RI	RGB	5VDC	Quick Connect Terminal	3-148-433
30	RI	RGB	5VDC	Solder terminal	3-148-434
30	RI	RGB	12VDC	Quick Connect Terminal	3-148-435
30	RI	RGB	12VDC	Solder terminal	3-148-436
30	RI	RGB	24VDC	Quick Connect Terminal	3-148-437
30	RI	RGB	24VDC	Solder terminal	3-148-438

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

Packaging unit

10 pcs.

In box or packed in air cushion bags



The nut with gasket and micro switch are enclosed in the box.