#### Touchless Switch







#### See below:

#### **Approvals and Compliances**

#### **Description**

- Touchless momentary push button (MO1) or as latching switch (LA)
- Protection against unintended switching
- Precise operating
- Potential free output contactsLaser lettering possible
- Vandal resistant

# **Unique Selling Proposition**

- Variable supply voltage, RGB with integrated series resistor
- High reliability
- Wiping and cleaning the surface does not trigger a switching operation

## **Characteristics**

- Housing made from stainless steel
- With ring illumination
- Wearless, no moving parts
- Attractive design

**Mechanical Data** 

- Insensitive to water and rain

## Weblinks

pdf data sheet, html datasheet, General Product Information, CAD-Drawings, Product News, Detailed request for product, Landing Page

#### **Technical Data**

Electrical Data	
Switching Function	Momentary (MO1) or latching (LA)
Switching Voltage	max. 42 VAC / 60 VDC
Switching current	max. 100 mA
Electrical Rating	1 W
Switch Resistance OFF	> 10 MΩ
Switch Resistance ON	< 16Ω
Supply Voltage LED	5 - 28 VDC
Current Consumption all LEDs	6.0 mA (typ) / 13.0 mA (max)
off	Peak: 29 mA (switch is closed)
	8.0 mA (typ) / 15.0 mA (max)
	Peak: 34 mA (switch is open)
Current Consumption	10.0 mA (typ) / 17.0 mA (max)
llumination red, green or blue	Peak: 34 mA (switch is closed)
	11.0 mA (typ) / 19.0 mA (max)
	Peak: 38 mA (switch is open)
Current Consumption	14.0 mA (typ) / 21.0 mA (max)
Illumination yellow, cyan or magenta	Peak: 38 mA (switch is closed)
	16.0 mA (typ) / 22.0 mA (max)
	Peak: 43 mA (switch is open)
Current Consumption	19.0 mA (typ) / 25.0 mA (max)
Illumination white	Peak: 43 mA (switch is closed)
Reverse Polarity Protection	yes
Output Type	OptoMOS Relay
Lifetime	>20 million actuations
connection type <sup>2</sup>	TTS Bi-Color 4 Litzen, 26AWG, 0.128 mm <sup>2</sup>
	TTS RGB 6 Litzen, 26AWG, 0.128 mm <sup>2</sup>

Actuation Type	optical
Actuating Force	none
Shock Protection	IK06
Mounting Depth	16.5 mm
Tightening Torque Plastic Nut	2.5 Nm
Climatical Data	
Operating Temperature	-30 to 85 °C
Storage Temperature	-40 to 85 °C
IP Protection Class Front Side	IP67 acc. to IEC 60529
Material	
Housing	Stainless Steel
Illuminated Ring (Ring Illumi-	PMMA
nation)	
Sensor Window	PC
Seal Ring	NBR70

## **Approvals and Compliances**

 $<sup>^{\</sup>rm 1}$  on request also available as NC /  $^{\rm 2}$  on request also available with cable or connector

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

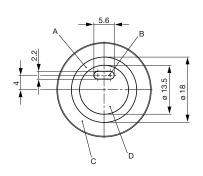
SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical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

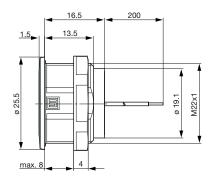
#### **Compliances**

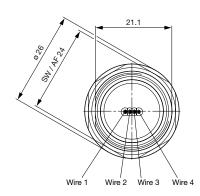
The product complies with following Guide Lines

Identification	Details	Initiator	Description
C€	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.
UK CA	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.

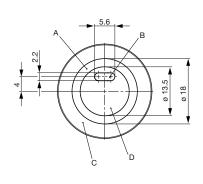
### Dimension [mm]

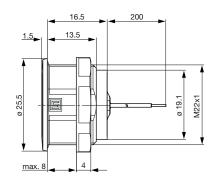


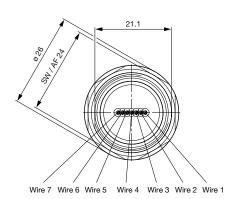




- Α ring illumination В sensor window С housing D actuator
- **Dimension for RGB Variants**



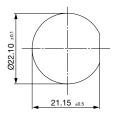




- ring illumination В sensor window С housing
- D actuator

## Dimension

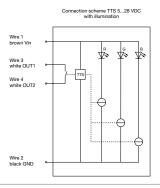
Mounting hole



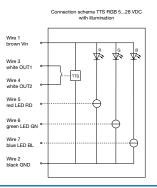
# **Diagrams**

Connection diagram

TTS Bicolor Connection wire assignment				
Wire-number Wire color function				
Wire 1	Vin = 5 VDC28 VDC			
Wire 2 black GND				
Wire 3	white	OUT1		
Wire 4	white	OUT2		



TTS RGB Connection wire assignment				
Wire-number Wire color function				
Wire 1	brown	Vin = 5 VDC28 VDC		
Wire 2	black	GND		
Wire 3 white		OUT1		
Wire 4 white		OUT2		
Wire 5 red		LED red		
Wire 6 green		LED green		
Wire 7	blue	LED blue		



# **Lettering Colour of Laser Lettering**

Material	Lettering Colour	
Stainless Steel	black	Filled letters

## **Order Index Lettering**

	•		
Laser Marking			
001 = <b>A</b>	021 = <b>U</b>	041 =÷	061 = <b>EIN</b>
002 = <b>B</b>	022 = <b>V</b>	042 = *	062 = <b>AUS</b>
003 = <b>C</b>	023 = <b>W</b>	043 = <b>=</b>	063 = <b>AUF</b>
004 = <b>D</b>	024 = <b>X</b>	044 = #	064 = <b>AB</b>
005 = <b>E</b>	025 = <b>Y</b>	045 = ↔	065 = <b>ON</b>
006 = <b>F</b>	026 = <b>Z</b>	046 = ‡	066 = <b>OFF</b>
007 = <b>G</b>	027 = <b>0</b>	047 = →	067 = <b>UP</b>
008 = <b>H</b>	028 = <b>1</b>	048 = ←	068 = <b>DOWN</b>
009 = <b>I</b>	029 = <b>2</b>	049 = ↓	069 = <b>HIGH</b>
010 = <b>J</b>	030 = <b>3</b>	050 = ↑	070 = <b>LOW</b>
011 = <b>K</b>	031 =4	051 = %	071 = <b>ON/OFF</b>
012 = <b>L</b>	032 = <b>5</b>	052 = √	072 = <b>START</b>
013 = <b>M</b>	033 = <b>6</b>	053 = <b>CTRL</b>	073 = <b>RESET</b>
014 = <b>N</b>	034 = 7	054 = <b>RETURN</b>	074 = (1)
015 = <b>O</b>	035 = <b>8</b>	055 = <b>SHIFT</b>	075 =☆
016 = <b>P</b>	036 = <b>9</b>	056 = <b>LOCK</b>	076 =△
017 = <b>Q</b>	037 =+	057 = <b>STOP</b>	077 =
018 = <b>R</b>	038 =-	058 = <b>ENTER</b>	
019 = <b>S</b>	039 =.	059 = <b>BACK</b>	
020 = <b>T</b>	040 = x	060 = <b>LINE</b>	
Please note that the font size de	epends on the number of charact	ers	

# Order number key

TTS - 22 - LA NO	) A10	F0 - RI	ORG V	AR FO -	SO NC	- B - 06 -	SO NC NF	] - [	0 000 -	С
1 2 3	4	5 6	7	8 9	10 11	12 13	14 15 16		17 18	19
Diameter		Q	1			Housing color			Q	11
22 mm	=	22				Natural		=	NC	- 11
22 111111	_					Ivaturai		_		
Switch type		Q	2			Mounting			Q	12
Latching	=	LA				Thread (M) W/a	nti-rotation	=	В	
Momentary	=	MO				protection				
Switch function		Q	3			<b>Detection dista</b>	nce *		Q	13
Normally open	=	NO				6 cm		=	06	
Rated current		Q	4			<b>Actuator mater</b>	ial		Q	14
100mA	=	A10				Stainless steel		=	S0	
Terminal s witch		Q	5			<b>Actuator color</b>			Q	15
Flexible wires	=	F0				Natural		=	NC	
Illumination /		Q	6			Actuator style			Q	16
appearance		-				No Finger guide	d	=	NF	
Ring illumination	=	RI				Lettering type			Q	17
Illumination /		Q	7			None		=	0	
appearance color Red-green	=	0RG				Marking type			Q	18
RGB	=	RGB				None		=	000	10
RGD	-	KGD				None		_	000	
Supply voltage		Q	8			Accessories			Q	19
illumination						Hex nut plastic v	v /	=	С	
5-28V	=	VAR				O-Ring				
Terminal illuminatio	n	Q	9							
Flexible wires	=	F0								
Housing material		Q	10							
Stainless	=	S0								

<sup>\*</sup> Distance can be changed at the production site. MOQ > 100 pcs.

# **All Variants**

Diameter [mm]	Illumination	Illumination Color inactive / active	Function	Accessories	Order Number
22	Ring Illumination	multicolor	latching (LA)	Hex nut plastic	3-135-364
22	Ring Illumination	multicolor	momentary (MO)	Hex nut plastic	3-135-363
22	Ring Illumination	bi-colored green / red	latching (LA)	Hex nut plastic	3-131-913
22	Ring Illumination	bi-colored green / red	momentary (MO)	Hex nut plastic	3-131-894

Latching and momentary NO switch are open after power-up (protection against unintended switching)

Availability for all products can be searched real-time:https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER

Minimum order quantity for standard variants with or without laser marking is 10 pieces.

<b>Packaging</b>	unit	
i ackagiiig	uiiii	

10 Pcs

product selected for their own applications.