PUSHBUTTONS

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PUSHBUTTONS

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Concepts

1. Momentary pushbuttons are switching elements which are used for making or breaking contact while they are being pressed.

2. Latching pushbutton are used for making or breaking contact until they are returned to their initial position by being pressed again.

3. Illuminated pushbuttons have the same functions as described for (1) and (2) and feature an additional lamp socket for accomodating a filament, neon lamp or LED.

4. Legending can ce effected using kabel holders, legend inserts, by engraving or hot stamping. Grooved transparent lenses are not suitable for legending.

CE-Conformity

The products of the Chapter Pushbuttons" can – relating to the CE-conformity according to the Low-Voltage Directive 73/23/EWG – be divided into the following groups:

Emergency-stop components with an operating voltage < 50 V

F. ex. LUMOTAST 25 emergency-stop. For this pushbutton the Machine Directive 89/392/EWG applies.

All products with an operating voltage > 50 V

For these elements the Low-Voltage Directive 72/23/EWG applies.

All products with an operating voltage < 50 V

For these products no directive applies.

Single parts, accessories and illumination

For these products no directiveapplies.

EMC-Law

The components of this catalogue are within the meaning of the law concerning the Eletromagnetic Conformy (= EMC-Law) "basic components as, f. ex., switches, signal lamps or like" and, therefore, do not fall within the scope of the EMC-Law.

Marking

The marking will be corresponding to the Low-Voltage Directive 73/23/EWG resp. the Directive "CE-Marking 93/68/EWG" either on the packing or on the product itself.

LUMOTAST FK

LUMOTAST FK - Illuminated pushbutton range

- Illuminable pushbuttons and signal lamps with lamp socket T 1/T 1¼.
- Mounting hole diameter 16.2 mm
- 35 V / 100 mA max.
- Degree of protection: IP65 acc. to DIN EN 60529
- Low profile
- Keyed socket connector and flat ribbon cable in insulation displacement (IDC) technology or PCB plug-in socket
- Time-saving click fixing method: Insert pushbutton into front panel and press pushbutton once to fix it.
- All products are RoHS compliant.

PUSHBUTTONS
LUMOTAST FK
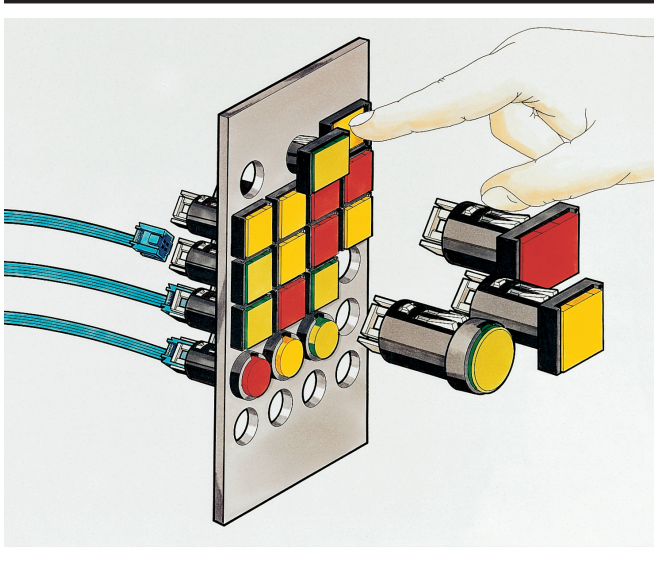
Content

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**LUMO
FK**

RAFI

Series LUMOTAST FK

16.2 mm mounting hole diameter

Mounting

① pushbutton as supplied
② Insert pushbutton into panel cut-out
③ Press once to fit
④ Attach connector with flat-ribbon cable

Disassembly from front side

1. Grip body/lens

2. Pull out body/lens

3. Release click lever

4. Pull out pushbutton/signal lamp with cable

1

Dimensional drawing

With quick connector and flat-ribbon cable

Connection diagram (PCB top view)

1 + 4 = pushbutton connection, 2 + 3 = lamp connection
If LED is used: connection 3 = cathode

With plug-in socket

Plug-in socket for PCB

Front panel top view

PCB top view

PCB hole diagram
Sight on component side

LUMOTAST FK Illuminated pushbuttons

Panel cut-out

1

with socket connector

with plug-in socket for PCB

Technical Data

➔ **General information**

Actuator	flat lens
Color of lens	see order block
Form of collar	see order block

➔ **Dimensions**

Length of collar	see order block
Width of collar	see order block
Diameter of collar	see order block
Overall height	6.6 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

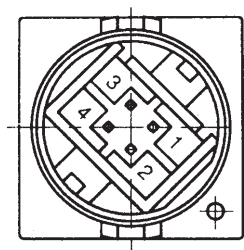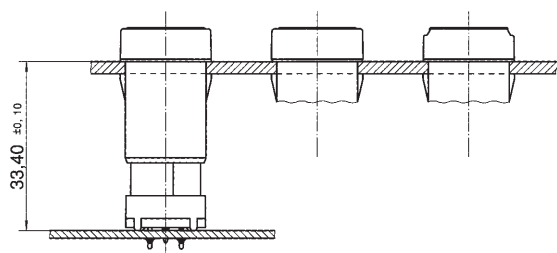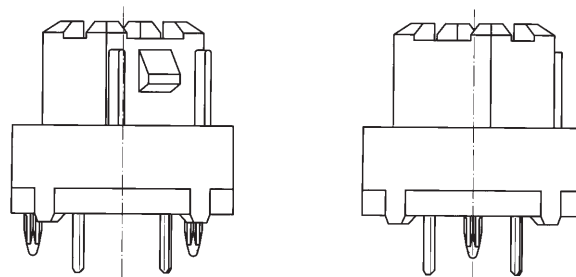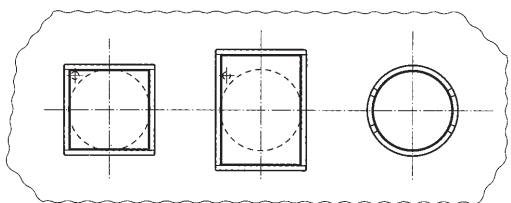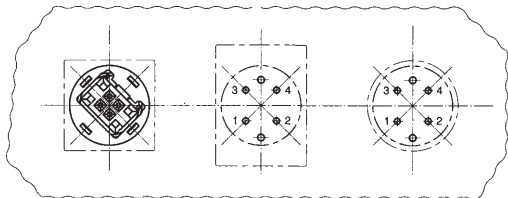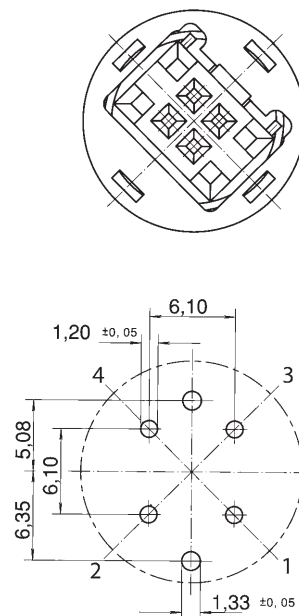➔ **Mechanical design**

Mounting	click quick connection
Terminals	pin connector 4-pole / plug-in socket
Contact system	snap-action contact
Contact function	momentary
Contact arrangement	1 NO
Contact materials	Au
Illumination	yes
Lamp socket	Bi-Pin T1 /T1¼

➔ **Mechanical characteristics**

Operating force max.	6 N
Operating travel	3 mm
Switching travel	1.9 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	0.01 mA
Contact resistance acc. to life max.	300 mΩ
Contact resistance when new max.	100 mΩ
Bouncing time max.	5 ms

➔ **Other specifications**

Operating life (operations)	1,000,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating max. with lamp /LED	+55 °C
Storage temperature min.	-40 °C

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– Technical data (continued) –
LUMOTAST FK - Illuminated pushbutton

Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	6 g
ROHS compliant	yes
REACH compliant	yes

Accessories LUMOTAST FK - Illuminated pushbutton

→ Description	Photo	Order no.	Additional accessories see page
Socket Bi-Pin T 1, LED		-	5 - 6
Socket Bi-Pin T 1, LED superbright		-	5 - 6
Plug-in socket for PCB		5.00.645.036/0000	5 - 28
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Disassembly tool for LUMOTAST FK		5.05.800.041/0000	5 - 27
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

LUMOTAST FK
Illuminated pushbutton, round collar

Technical data see page 1 - 7

Ø 15,5 Ø 18

20,1
26,6
5,1
6,6

16,1 $^{+0,15}$

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.114.936/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

– Table (continued) –
LUMOTAST FK - Illuminated pushbutton, round collar

Lenses:
Lens, round, transparent colorless: 5.49.075.016/1002
Lens, round, transparent red: 5.49.075.016/1306
Lens, round, transparent yellow: 5.49.075.016/1403
Lens, round, transparent green: 5.49.075.016/1505
Lens, round, transparent blue: 5.49.075.016/1607

LUMOTAST FK
Illuminated pushbutton,
square collar

Technical data see page 1 - 7

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.114.906/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.075.015/1002
Lens, square, transparent red: 5.49.075.015/1306
Lens, square, transparent yellow: 5.49.075.015/1403
Lens, square, transparent green: 5.49.075.015/1505
Lens, square, transparent blue: 5.49.075.015/1607

LUMOTAST FK
Illuminated pushbutton,
rectangular collar

Technical data see page 1 - 7

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.114.966/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, rectangular, transparent colorless: 5.49.075.017/1002
Lens, rectangular, transparent red: 5.49.075.017/1306
Lens, rectangular, transparent yellow: 5.49.075.017/1403
Lens, rectangular, transparent green: 5.49.075.017/1505
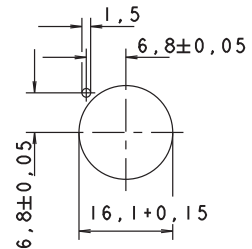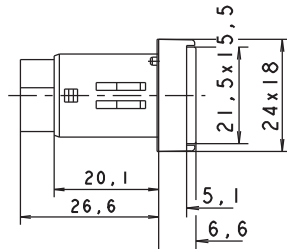Lens, rectangular, transparent blue: 5.49.075.017/1607

LUMOTAST FK
Signal lamps

Panel cut-out

1

Technical Data

➔ **General information**

Form of lens	flat lens
Color of lens	see order block
Form of collar	see order block

➔ **Dimensions**

Length of collar	see order block
Width of collar	see order block
Overall height	see order block
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

➔ **Mechanical design**

Mounting	click quick connection
Terminals	pin connector 4-pole / plug-in socket
Lamp socket	Bi-Pin T1 /T1¼
Lamp	filament lamp / LED

➔ **Electrical characteristics**

Voltage limit max.	24 V
Power limit max.	0.7 W

➔ **Other specifications**

Degree of protection from front side	IP65 (DIN EN 60529)
Weight	5 g
Operation temperature min.	-25 °C
Ambient temp. operating max.	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
ROHS compliant	yes
REACH compliant	yes

with socket connector

with plug-in socket for PCB

Accessories LUMOTAST FK - Signal lamp

➔ Description	Photo	Order no.	Additional acces-sories see page
Socket Bi-Pin T 1, LED		-	5 - 6
Socket Bi-Pin T 1, LED superbright		-	5 - 6
Plug-in socket for PCB		5.00.645.036/0000	5 - 28

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– Table (continued) –
Accessories LUMOTAST FK - Signal lamp

→ Description	Photo	Order no.	Additional acces- sories see page
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Disassembly tool for LUMOTAST FK		5.05.800.041/0000	5 - 27
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

LUMOTAST FK
Signal lamp, round collar

Technical data see page 1 - 11

Panel cut-out

→ Power limit max.	Voltage limit max.	Lamp socket	Order no.	Note
0.7 W	24 V	Bi-Pin T1 /T1¼	1.65.121.936/0000	Please include the desired lens in your order.

Do not press in lens in disassembled condition.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
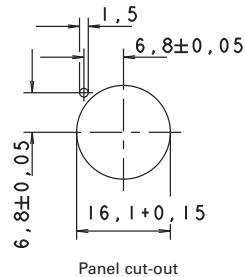Lens, round, transparent colorless: 5.49.075.016/1002
Lens, round, transparent red: 5.49.075.016/1306
Lens, round, transparent yellow: 5.49.075.016/1403
Lens, round, transparent green: 5.49.075.016/1505
Lens, round, transparent blue: 5.49.075.016/1607

LUMOTAST FK
Signal lamp, square collar

Technical data see page 1 - 11

Panel cut-out

→ Power limit max.	Voltage limit max.	Lamp socket	Order no.	Note
0.7 W	24 V	Bi-Pin T1 /T1¼	1.65.121.906/0000	Please include the desired lens in your order.

Do not press in lens in disassembled condition.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.075.015/1002
Lens, square, transparent red: 5.49.075.015/1306
Lens, square, transparent yellow: 5.49.075.015/1403
Lens, square, transparent green: 5.49.075.015/1505
Lens, square, transparent blue: 5.49.075.015/1607

LUMOTAST FK
Signal lamp, rectangular collar

Technical data see page 1 - 11

Panel cut-out

→ Power limit max.	Voltage limit max.	Lamp socket	Order no.	Note
0.7 W	24 V	Bi-Pin T1 /T1¼	1.65.121.966/0000	Please include the desired lens in your order.

Do not press in lens in disassembled condition.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, rectangular, transparent colorless: 5.49.075.017/1002

PUSHBUTTONS

– Table (continued) –
LUMOTAST FK - Signal lamp, rectangular collar

Lens, rectangular, transparent red: 5.49.075.017/1306
Lens, rectangular, transparent yellow: 5.49.075.017/1403
Lens, rectangular, transparent green: 5.49.075.017/1505
Lens, rectangular, transparent blue: 5.49.075.017/1607

LUMOTAST 25

LUMOTAST 25 - Pushbutton range
- Illuminable pushbuttons and signal lamps.
- Mounting hole diameter: 16.2 mm
- 35 V / 100 mA max.
- Degree of protection: IP65 acc. to DIN EN 60529
- Low profile
- Lamp socket Bi-Pin T 1 for LEDs and filament lamps
- Keyed socket connector and flat ribbon cable or PCB plug-in socket
- Ring nut or click fixing method.
- All products are RoHS compliant.

PUSHBUTTONS
LUMOTAST 25

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LUMO 25

Content

Series LUMOTAST 25

16.2 mm mounting hole diameter

Mounting of Click-Version

① As delivered
② Insert pushbutton in hole
③ Actuate once
④ Insert connector with flat-ribbon cable

Disassembly Click-Version from Front Side

Click-Version from front (only for pushbuttons and signal lamps with special tool for dismounting)

1. Grip body/lens

2. Pull out body/lens

3. Release click lever

4. Pull out pushbutton/signal lamp with cable

PUSHBUTTONS

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LUMO 25

Dimensional drawing

With quick connector and flat-ribbon cable

30,70 ±0,20

10,70

□ 2,54

9,50

6,10

Connection diagram (PCB top view)

3

4

1

2

1 + 4 = pushbutton connection, 2 + 3 = lamp connection
If LED is used: connection 3 = cathode

With plug-in socket

33,40 ±0,10

Front panel top view

PCB top view

3 4

1 2

3 4

1 2

1+4 contact connection
2+3 lamp connection

Plug-in socket for PCB

PCB hole diagram
Sight on component side

6,10

1,20 ±0,05

4   3

5,08

6,10

6,35

2   1

1,33 ±0,05

LUMOTAST 25 Illuminated pushbuttons

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LUMO 25

Panel cut-out

Technical Data

➔ **General information**

Form of lens	see order block
Color of lens	see order block
Form of collar	square

➔ **Dimensions**

Length of collar	25 mm
Width of collar	25 mm
Overall height	7.1 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

➔ **Mechanical design**

Mounting	see order block
Terminals	pin connector 4-pole / plug-in socket
Contact system	snap-action contact
Contact function	momentary
Contact arrangement	1 NO
Contact materials	Au
Illumination	yes
Lamp socket	Bi-Pin T1 /T1¼

➔ **Mechanical characteristics**

Operating force max.	6 N
Operating travel	3 mm
Switching travel	2 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	0.01 mA
Contact resistance acc. to life max.	100 mΩ
Bouncing time max.	5 ms

➔ **Other specifications**

Operating life (operations)	1,000,000
Degree of protection from front side	IP65 (DIN EN 60529)
Ambient temp. operating max. without lamp /LED	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating min. with lamp /LED	-25 °C
Ambient temp. operating max. with lamp /LED	+55 °C

with socket connector

with PCB plug-in socket

PUSHBUTTONS

1

– Technical data (continued) –
LUMOTAST 25 - Illuminated pushbutton

Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	7 g
ROHS compliant	yes
REACH compliant	yes

LUMO 25

Accessories LUMOTAST 25 - Illuminated pushbutton

→ Description	Photo	Order no.	Additional accessories see page
Socket Bi-Pin T 1, LED		-	5 - 6
Socket Bi-Pin T 1, LED superbright		-	5 - 6
Plug-in socket for PCB		5.00.645.036/0000	5 - 28
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Disassembly tool for LUMOTAST 25, RAFIX 16		5.05.800.042/0000	5 - 27
Blanking cap complete with sealing disc and ring nut, square		5.05.800.049/0100	2 - 83, 5 - 23
Label holder, flush, for square collar		5.07.620.004/0000	2 - 80
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Legend insert, blank, use only for transparent lenses		5.70.635.000/2000	-
Legend label 23 x 16 for label holder, without legend		5.73.111.000/0000	-
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

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LUMOTAST 25
Illuminated pushbutton
with flush lens,
„Click" quick-assembly feature

Technical data see page 1 - 19

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.150.506/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.011/1002
Lens, square, transparent red: 5.49.077.011/1306
Lens, square, transparent yellow: 5.49.077.011/1403
Lens, square, transparent green: 5.49.077.011/1505
Lens, square, transparent blue: 5.49.077.011/1607

LUMOTAST 25
Illuminated pushbutton
with flush lens, ring nut fixing

Technical data see page 1 - 19

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.150.556/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.011/1002

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LUMO 25

– Table (continued) –
LUMOTAST 25 - Illuminated pushbutton with flush lens, ring nut fixing

Lens, square, transparent red: 5.49.077.011/1306
Lens, square, transparent yellow: 5.49.077.011/1403
Lens, square, transparent green: 5.49.077.011/1505
Lens, square, transparent blue: 5.49.077.011/1607

LUMOTAST 25
Illuminated pushbutton
with protruding lens,
„Click" quick-assembly feature

Technical data see page 1 - 19

Panel cut-out

→	Contact function	Contact arrangement	Order no.	Note
	momentary	1 NO	1.15.150.606/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.012/1002
Lens, square, transparent red: 5.49.077.012/1306
Lens, square, transparent yellow: 5.49.077.012/1403
Lens, square, transparent green: 5.49.077.012/1505
Lens, square, transparent blue: 5.49.077.012/1607

LUMOTAST 25
Illuminated pushbutton with protruding lens, ring nut fixing

Technical data see page 1 - 19

Panel cut-out

→ Contact function	Contact arrangement	Order no.	Note
momentary	1 NO	1.15.150.656/0000	Please include the desired lens in your order.

Note when using LEDs: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.012/1002
Lens, square, transparent red: 5.49.077.012/1306
Lens, square, transparent yellow: 5.49.077.012/1403
Lens, square, transparent green: 5.49.077.012/1505
Lens, square, transparent blue: 5.49.077.012/1607

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LUMO 25

LUMOTAST 25
Selector switches

Panel cut-out

Technical Data

→ **General information**

Actuator	handle
Color of handle	black opaque
Form of collar	square

→ **Dimensions**

Length of collar	25 mm
Width of collar	25 mm
Overall height	17 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	see order block
Terminals	pin connector 4-pole / plug-in socket
Contact system	snap-action contact
Contact function	see order block
Contact arrangement	1 NO
Contact materials	Au
Illumination	no

→ **Mechanical characteristics**

Operating force min.	0.03 Nm
Rotating angle	see order block
Operating force max.	1.5 N

→ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	0.01 mA
Contact resistance acc. to life max.	100 mΩ
Bouncing time max.	5 ms

→ **Other specifications**

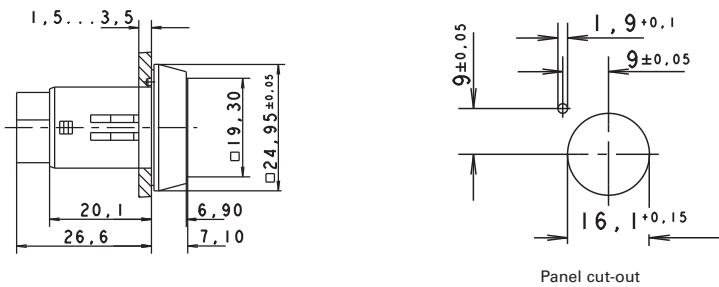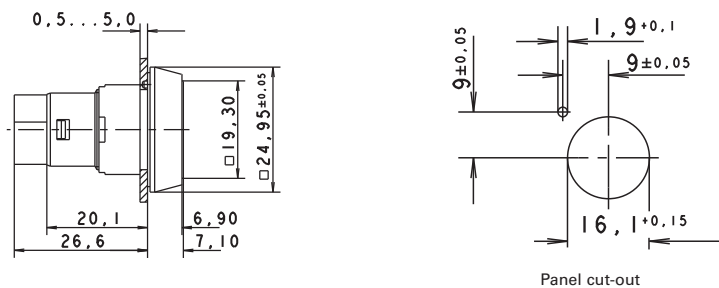|	
Operating life (operations)	500,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	8 g
ROHS compliant	yes
REACH compliant	yes

Accessories LUMOTAST 25 - Selector switch

→ Description	Photo	Order no.	Additional accessories see page
Plug-in socket for PCB		5.00.645.036/0000	5 - 28
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Blanking cap complete with sealing disc and ring nut, square		5.05.800.049/0100	2 - 83, 5 - 23
Label holder, flush, for square collar		5.07.620.004/0000	2 - 80
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

LUMOTAST 25
Selector switch, ring nut fixing

Technical data see page 1 - 24

Panel cut-out

→ Contact arrangement	Contact function	Rotating angle		Actuator	Order no.
1 NO	latching	right, 1 x 90°		handle	1.15.153.106/0100

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LUMOTAST 25
Keylock switches

Panel cut-out

→ The locking systems we use are created according to DIN EN 1303 by leading lock manufacturers. They are are open, mechanical systems that require occasional maintenance of the machinery or plant operator depending on environmental conditions.

Technical Data

→ **General information**

Color of lens	black opaque
Form of collar	square

→ **Dimensions**

Length of collar	25 mm
Width of collar	25 mm
Overall height	32.3 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	ring nut
Terminals	pin connector 4-pol./ plug-in socket
Contact system	snap-action contact
Contact function	latching
Contact arrangement	1 NO
Contact materials	Au
Illumination	no
Lamp socket	no
Lock	cylinder lock
Wafers	8 pins
Lock type	5201
Number of locking positions	10,000
Main key	yes
Symmetric key	yes
Key removal position	see order block

→ **Mechanical characteristics**

Operating force max.	1.5 N
Rotating angle	90°

→ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	0.01 mA
Contact resistance acc. to life max.	100 mΩ
Bouncing time max.	5 ms

→ **Other specifications**

Operating life (operations)	50,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C

– Technical data (continued) –
LUMOTAST 25 - Keylock switch

Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	20 g
ROHS compliant	yes
REACH compliant	yes

Accessories LUMOTAST 25 - Keylock switch

➜ Description	Photo	Order no.	Additional accessories see page
Plug-in socket for PCB		5.00.645.036/0000	5 - 28
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Blanking cap complete with sealing disc and ring nut, square		5.05.800.049/0100	2 - 83, 5 - 23
Label holder, flush, for square collar		5.07.620.004/0000	2 - 80
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Spare key set (2 keys)		5.58.015.201/0000	-
Legend label 23 x 16 for label holder, without legend		5.73.111.000/0000	-
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

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# LUMOTAST 25
Keylock switch

Technical data see page 1 - 26

Panel cut-out

Contact arrangement	Contact function	Rotating angle	Key removal position	Color of lens	Order no.
1 NO	latching	90°	0	black opaque	1.15.156.001/0000
1 NO	latching	90°	0 + 1	black opaque	1.15.156.011/0000

Included: 2 keys.

LUMOTAST 25 Emergency stop pushbuttons

Panel cut-out

➜ Original manual see „Appendix"

Technical Data

➜ **General information**

Color of lens	opaque red
Form of collar	square
Color of collar	see order block

➜ **Dimensions**

Length of collar	25 mm
Width of collar	25 mm
Overall height	18.5 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

➜ **Mechanical design**

Mounting	ring nut
Terminals	pin connector 4-pole / plug-in socket
Contact system	snap-action contact
Contact function	latching
Contact arrangement	2 NC (forcibly actuated)
Contact materials	Au
Illumination	no
Reset	by pulling

➜ **Mechanical characteristics**

Operating force max.	10 N
Operating travel	2.6 mm
Switching travel	2 mm
Robustness max.	100 N

➜ **Electrical characteristics**

Rated voltage AC/DC max.	25 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	100 mA (1A short-circuit current)
Rated current AC/DC min.	0.01 mA
Contact resistance acc. to life max.	100 mΩ
Bouncing time max.	10 ms

➜ **Other specifications**

Operating life (operations)	15,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78

Approvals

IEC 60947-5-x,
60204, 60073

UL 9ZX6

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– Technical data (continued) –
LUMOTAST 25 - Emergency stop pushbutton

Weight	9 g
ROHS compliant	yes
REACH compliant	yes

LUMO 25

Accessories LUMOTAST 25 - Emergency stop pushbutton

→ Description	Photo	Order no.	Additional accessories see page
Plug-in socket for PCB		5.00.645.036/0000	5 - 28
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Blanking cap complete with sealing disc and ring nut, square		5.05.800.049/0100	2 - 83, 5 - 23
Label holder, flush, for square collar		5.07.620.004/0000	2 - 80
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Legend label 23 x 16 for label holder, without legend		5.73.111.000/0000	-
Adhesive label yellow, round 16.1 / 60 mm, without legend		5.76.204.425/0400	-
Adhesive label yellow, round 16.1 / 60 mm, with legend „Not-Aus"		5.76.204.426/0400	-
Adhesive label yellow, round 16.1 / 60 mm, with legend „ARRET-D'URGENCE"		5.76.204.427/0400	-
Adhesive label yellow, round 16.1 / 60 mm, with legend „EMERGENCY-STOP"		5.76.204.428/0400	-
Adhesive label yellow, round 16.1 / 60 mm, with legend „ARRESTO-D'EMERGENZA"		5.76.204.429/0400	-
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

LUMOTAST 25
Emergency stop pushbutton, ring nut fixing

Technical data see page 1 - 29

Panel cut-out

→	Contact function	Contact arrangement	Color of collar	Order no.
	latching	2 NC (forcibly actuated)	yellow	1.15.154.016/0301
	latching	2 NC (forcibly actuated)	black	1.15.154.006/0301

Original operating instructions see appendix.

1

LUMOTAST 25
Signal lamps

Panel cut-out

Technical Data

→ **General information**

Form of lens	square
Color of lens	see order block

→ **Dimensions**

Length of collar	25 mm
Width of collar	25 mm
Overall height	9.8 mm
Mounting depth with connector	30.7 mm
Mounting depth with plug-in socket	33.4 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	see order block
Terminals	pin connector 4-pole / plug-in socket
Lamp socket	Bi-Pin T1 /T1¼
Lamp	filament lamp / LED

→ **Electrical characteristics**

Voltage limit max.	24 V
Power limit max.	0.7 W

→ **Other specifications**

Degree of protection from front side	IP65 (DIN EN 60529)
Weight	7 g
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
ROHS compliant	yes
REACH compliant	yes

Accessories LUMOTAST 25 - Signal lamp

→ Description	Photo	Order no.	Additional accessories see page
Socket Bi-Pin T 1, LED		-	5 - 6
Socket Bi-Pin T 1, LED superbright		-	5 - 6
Plug-in socket for PCB		5.00.645.036/0000	5 - 28

– Table (continued) –
Accessories LUMOTAST 25 - Signal lamp

→ Description	Photo	Order no.	Additional accessories see page
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)		5.03.771.306/0000	5 - 29
Disassembly tool for LUMOTAST 25, RAFIX 16		5.05.800.042/0000	5 - 27
Blanking cap complete with sealing disc and ring nut, square		5.05.800.049/0100	2 - 83, 5 - 23
Label holder, flush, for square collar		5.07.620.004/0000	2 - 80
Flat ribbon cable, 4-wire, 1 m long		5.37.700.124/0000	5 - 28
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Legend insert, blank, use only for transparent lenses		5.70.635.000/2000	-
Legend label 23 x 16 for label holder, without legend		5.73.111.000/0000	-
Socket connector, 4-pin		5.92.025.368/0000	5 - 28

LUMOTAST 25
Signal lamp, 24 V,
„Click" quick-assembly feature

Technical data see page 1 - 32

Panel cut-out

→ Voltage limit max.	Power limit max.	Lamp socket	Order no.	Note
24 V	0.7 W	Bi-Pin T1 /T1¼	1.65.122.906/0000	Please include the desired lens in your order.

Do not press in lens in disassembled condition.
Please note when using a LED: A notch on the lamp identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.014/1002
Lens, square, transparent red: 5.49.077.014/1306
Lens, square, transparent yellow: 5.49.077.014/1403
Lens, square, transparent green: 5.49.077.014/1505
Lens, square, transparent blue: 5.49.077.014/1607

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LUMOTAST 25
Signal lamp, 24 V, ring nut fixing

Technical data see page 1 - 32

Panel cut-out

→	Voltage limit max.	Power limit max.	Lamp socket	Order no.	Note
	24 V	0.7 W	Bi-Pin T1 /T1¼	1.65.122.956/0000	Please include the desired lens in your order.

Please note when using LED: A notch on the lamp socket identifies the cathode side (-).

Lenses:
Lens, square, transparent colorless: 5.49.077.014/1002
Lens, square, transparent red: 5.49.077.014/1306
Lens, square, transparent yellow: 5.49.077.014/1403
Lens, square, transparent green: 5.49.077.014/1505
Lens, square, transparent blue: 5.49.077.014/1607

1

LUMOTAST 75 IP40

LUMOTAST 75 IP40 - Pushbutton range

Illuminated pushbuttons, signal lamps and keylock switches
• Mounting hole diameter 16.2 mm
• Degree of protection IP40 acc. DIN EN 60529
• Solder terminals for the following wire cross-sections:
  - Installed 0.5 mm^2 max.
  - Factory terminated 0.35 mm^2 max.
• 250 V/4 A max.
• 2 NC + 2 NO max.
• Lamp socket T 4.5
• Illumination: LED / filament lamp
• All products are RoHS compliant.

PUSHBUTTONS
LUMOTAST 75 IP40

Content

1

LUMO 75 (40)

LUMOTAST 75 IP40
Illuminated pushbuttons

1

16.2 +0.2

Mounting hole

LUMO 75 (40)

Technical Data

➔ **General information**

Form of lens	see order block
Form of collar	see order block
Color of collar	see order block

➔ **Dimensions**

Length of collar	see order block
Width of collar	see order block
Diameter of collar	see order block
Overall height	7.5 mm
Mounting depth	41.5/49.5/57.5 mm
Mounting hole	16.2 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Contact system	snap-action bridge contact
Contact function	see order block
Contact arrangement	see order block
Contact materials	Ag
Illumination	LED
Lamp socket	T 4.5

➔ **Mechanical characteristics**

Operating force max.	3 ... 6.5 N
Operating travel	2.7 mm
Switching travel NC	1.6 mm
Switching travel NO	0.9 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated voltage DC max.	230 V
Rated voltage AC/DC min.	12 V
Rated current AC max.	4 A
Rated current DC max.	0.2 A
Rated current AC/DC min.	5 mA
Contact resistance acc. to life max.	200 mΩ
Protection class	II
ESD-strength min.	14 kV

➔ **Other specifications**

Operating life, at 250 V/2 A (operations)	200,000 (momentary)
Operating life, at 250 V/4 A (operations)	60,000 (momentary), 10,000 (latching)
Degree of protection from front side	IP40 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C

8 max.

M16×1 ø15 ø18

5
7.5

41.5 (10 +1S)
49.5 (20 +2S)
57.5 (30 +3S)

Approvals

ENEC 25T70
without lamp,
25T55 with lamp

UL 508

C22.2
No. 14-M91

CCC S

DVE

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– Technical data (continued) –
LUMOTAST 75 IP40 - Illuminated pushbutton

Ambient temp. operating max. with lamp /LED	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Flame class acc. to UL 94	V 1
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

LUMO 75 (40)

Accessories LUMOTAST 75 IP40 - Illuminated pushbutton

→ Description	Photo	Order no.	Additional accessories see page
Socket T 4.5, LED		-	5 - 7
Socket T 4.5, LED superbright		-	5 - 7
Lamp extractor for lamp diameter 4 mm		1.90.900.002/0000	5 - 26
Lamp extractor for lamp diameter 5-6 mm		1.90.900.004/0000	5 - 26
Blanking cap, black, to cover spare holes, dimensions 18 x 18 mm		5.52.006.020/0103	5 - 22
Blanking cap, black, to cover spare holes, dimensions 18 x 24 mm		5.52.006.021/0100	5 - 22
Blanking cap, black, to cover spare holes, round 18 mm		5.52.006.022/0100	5 - 22
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

LUMOTAST 75 IP40
Illuminated pushbutton, protruding lens, round collar

Technical data see page 1 - 37

Mounting hole

Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.451/0000	Please include the desired lens and diffuser in your order.
1 NC + 1 NO	latching	black	1.15.108.551/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	momentary	black	1.15.108.452/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	latching	black	1.15.108.552/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.257.011/1002
Lens, round, transparent red, for LED: 5.49.257.011/1301
Lens, round, transparent yellow, for LED: 5.49.257.011/1402
Lens, round, transparent green, for LED: 5.49.257.011/1503
Diffuser, round, for LED, without legend: 5.72.050.000/0214

LUMOTAST 75 IP40
Illuminated pushbutton, flush lens, square collar

Technical data see page 1 - 37

Mounting hole

Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.251/0000	Please include the desired lens and diffuser in your order.
1 NC + 1 NO	latching	black	1.15.108.351/0000	Please include the desired lens and diffuser in your order.

PUSHBUTTONS

1

– Table (continued) –
LUMOTAST 75 IP40 - Illuminated pushbutton, flush lens, square collar

→ Contact arrangement	Contact function	Color of collar	Order no.	Note
2 NC + 2 NO	momentary	black	1.15.108.252/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	latching	black	1.15.108.352/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.275.036/1002
Lens, square, transparent red, for LED: 5.49.275.036/1301
Lens, square, transparent yellow, for LED: 5.49.275.036/1402
Lens, square, transparent green, for LED: 5.49.275.036/1503
Diffuser, square, for LED, without legend: 5.73.013.000/0214

Accessoires:
LUMOTAST 75 IP40 - Protective cap for 18 x 18 collar: 5.05.800.030/0000
LUMOTAST 75 IP40 - Sealing cap for protection class IP 65, for 18 x 18 collar: 5.05.200.009/0000

LUMO 75 (40)

LUMOTAST 75 IP40 Illuminated pushbutton, protruding lens, square collar

Technical data see page 1 - 37

Mounting hole

→ Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.256/0000	Please include the desired lens and diffuser in your order.
1 NC + 1 NO	latching	black	1.15.108.356/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	momentary	black	1.15.108.257/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	latching	black	1.15.108.357/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.275.036/1002
Lens, square, transparent red, for LED: 5.49.275.036/1301
Lens, square, transparent yellow, for LED: 5.49.275.036/1402
Lens, square, transparent green, for LED: 5.49.275.036/1503
Diffuser, square, for LED, without legend: 5.73.013.000/0214

Accessoires:
LUMOTAST 75 IP40 - Protective cap for 18 x 18 collar: 5.05.800.030/0000
LUMOTAST 75 IP40 - Sealing cap for protection class IP 65, for 18 x 18 collar: 5.05.200.009/0000

LUMOTAST 75 IP40
Illuminated pushbutton,
flush lens, rectangular collar

Technical data see page 1 - 37

Panel cut-out

Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.051/0000	Please include the desired lens and diffuser in your order.
1 NC + 1 NO	latching	black	1.15.108.151/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	momentary	black	1.15.108.052/0000	Please include the desired lens and diffuser in your order.
2 NC + 2 NO	latching	black	1.15.108.152/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, rectangular, transparent colorless, for LED: 5.49.275.032/1002
Lens, rectangular, transparent red, for LED: 5.49.275.032/1301
Lens, rectangular, transparent yellow, for LED: 5.49.275.032/1402
Lens, rectangular, transparent green, for LED: 5.49.275.032/1503
Diffuser, rectangular, for LED, without legend: 5.73.012.000/0214

Accessoires:
LUMOTAST 75 IP40 - Protective cap for 18 x 24 collar: 5.05.800.027/0000
LUMOTAST 75 IP40 -Sealing cap for protection class IP65, for 18 x 24 collar: 5.05.200.008/0000

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LUMO 75 (40)

1

LUMOTAST 75 IP40
Keylock switches

Mounting hole

→ The locking systems we use are created according to DIN EN 1303 by leading lock manufacturers. They are are open, mechanical systems that require occasional maintenance of the machinery or plant operator depending on environmental conditions.

Approvals

ENEC 25T70   UL 508   C22.2 No. 14-M91

Technical Data

→ General information

Form of lens	see order block
Color of collar	see order block
Form of collar	see order block

→ Dimensions

Length of collar	see order block
Diameter of collar	see order block
Width of collar	see order block
Overall height (without key)	7.5 mm
Mounting depth	see order block
Mounting hole	16.2 mm

→ Mechanical design

Mounting	ring nut
Terminals	solder terminals
Contact system	snap-action bridge contact
Contact function	see order block
Contact arrangement	see order block
Contact materials	Ag
Illumination	no
Lock	cylinder lock
Wafers	4 pins
Lock type	1D 21
Number of locking positions	45
Main key	no
Symmetric key	no
Key removal position	see order block

→ Mechanical characteristics

Rotating angle	see order block

→ Electrical characteristics

Rated voltage AC max.	250 V
Rated voltage DC max.	230 V
Rated voltage AC/DC min.	12 V
Rated current AC max.	4 A
Rated current DC max.	0,2 A
Rated current AC/DC min.	5 mA
Contact resistance acc. to life max.	200 mΩ
ESD-strength min.	14 kV

→ Other specifications

Operating life, at 250 V/2 A (operations)	50,000 (momentary)
Operating life, at 250 V/4 A (operations)	50,000 (momentary)
Degree of protection from front side	IP40 (DIN EN 60529)

– Technical data (continued) –
LUMOTAST 75 IP40 - Keylock switch

Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	35 g
Flame class acc. to UL 94	V 1
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

Accessories LUMOTAST 75 IP40 - Keylock switch

➔ Description	Photo	Order no.	Additional accessories see page
Blanking cap, black, to cover spare holes, dimensions 18 x 24 mm		5.52.006.021/0100	5 - 22
Blanking cap, black, to cover spare holes, round 18 mm		5.52.006.022/0100	5 - 22
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Keylock switch cap		5.58.002.030/0000	-
LUMOTAST 75 - Spare key (1 piece)		5.58.004.721/0000	-

LUMOTAST 75 IP40
Keylock switch, round collar

Technical data see page 1 - 42

Mounting hole

➔ Contact arrangement	Contact function	Rotating angle	Key removal position	Color of collar	Order no.
1 NC + 1 NO	momentary	45°	0	black	1.15.108.941/0000
1 NC + 1 NO	latching	90°	0	black	1.15.108.851/0000

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– Table (continued) –
LUMOTAST 75 IP40 - Keylock switch, round collar

Contact arrangement	Contact function	Rotating angle		Key removal position	Color of collar	Order no.
1 NC + 1 NO	latching	90°		0+1	black	1.15.108.911/0000
2 NC + 2 NO	latching	90°		0	black	1.15.108.852/0000
2 NC + 2 NO	latching	90°		0+1	black	1.15.108.912/0000

Included: 2 keys.

Other lock variants and contact arrangements available on request.

LUMO 75 (40)

LUMOTAST 75 IP40
Keylock switch, rectangular collar

Panel cut-out

Contact arrangement	Contact function	Rotating angle		Key removal position	Color of collar	Order no.
1 NC + 1 NO	momentary	45°		0	black	1.15.108.661/0100
1 NC + 1 NO	latching	90°		0	black	1.15.108.571/0100
1 NC + 1 NO	latching	90°		0+1	black	1.15.108.631/0100
2 NC + 2 NO	latching	90°		0	black	1.15.108.572/0100
2 NC + 2 NO	latching	90°		0+1	black	1.15.108.632/0100

Included: 2 keys.

Other lock variants and contact arrangements available on request.

LUMOTAST 75 IP40 Signal lamps with lamp socket T 4.5

1

LUMO 75 (40)

16.2$^{+0.2}$

Mounting hole

Technical Data

➜ **General information**

Form of lens	see order block
Form of collar	see order block
Color of collar	see order block

➜ **Dimensions**

Length of collar	see order block
Width of collar	see order block
Diameter of collar	see order block
Overall height	7.5 mm
Mounting depth	33.5 mm
Mounting hole	16.2 mm

➜ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Lamp socket	T 4.5
Illumination	LED / filament lamp

➜ **Electrical characteristics**

Voltage limit max.	35 V
Power limit max.	1.2 W

➜ **Other specifications**

Degree of protection from front side	IP40 (DIN EN 60529)
Weight	5 g
Operation temperature min.	-25 °C
Ambient temp. operating max.	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
ROHS compliant	yes
REACH compliant	yes

M 16x1 ⌀15 ⌀18 8 max. 5 7.5 33.5

Approvals

IEC 61058   UL 508   C22.2 No. 14-M91

DVE

Accessories LUMOTAST 75 IP40 - Signal lamp with lamp socket T 4.5

➜ Description	Photo	Order no.	Additional accessories see page
Socket T 4.5, LED		-	5 - 7
Socket T 4.5, LED superbright		-	5 - 7

1

– Table (continued) –
Accessories LUMOTAST 75 IP40 - Signal lamp with lamp socket T 4.5

→ Description	Photo	Order no.	Additional accessories see page
Blanking cap, black, to cover spare holes, dimensions 18 x 18 mm		5.52.006.020/0103	5 - 22
Blanking cap, black, to cover spare holes, dimensions 18 x 24 mm		5.52.006.021/0100	5 - 22
Blanking cap, black, to cover spare holes, round 18 mm		5.52.006.022/0100	5 - 22
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

LUMO 75 (40)

LUMOTAST 75 IP40
Signal lamp with lamp socket
T 4.5, round collar, protruding lens

Technical data see page 1 - 45

Mounting hole

→ Voltage limit max.	Power limit max.	Lamp socket	Color of collar	Order no.	Note
35 V	1.2 W	T 4.5	black	1.65.111.071/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.257.011/1002
Lens, round, transparent red, for LED: 5.49.257.011/1301
Lens, round, transparent yellow, for LED: 5.49.257.011/1402
Lens, round, transparent green, for LED: 5.49.257.011/1503
Diffuser, round, for LED, without legend: 5.72.050.000/0214

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LUMOTAST 75 IP40
Signal lamp, square collar,
flush lens

Technical data see page 1 - 45

Mounting hole

Voltage limit max.	Power limit max.	Lamp socket	Color of collar	Order no.	Note
35 V	1.2 W	T 4.5	black	1.65.111.061/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.275.036/1002
Lens, square, transparent red, for LED: 5.49.275.036/1301
Lens, square, transparent yellow, for LED: 5.49.275.036/1402
Lens, square, transparent green, for LED: 5.49.275.036/1503
Diffuser, square, for LED, without legend: 5.73.013.000/0214

LUMOTAST 75 IP40
Signal lamp, square collar,
protruding lens

Technical data see page 1 - 45

Mounting hole

Voltage limit max.	Power limit max.	Lamp socket	Color of collar	Order no.	Note
35 V	1.2 W	T 4.5	black	1.65.111.081/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.275.036/1002
Lens, square, transparent red, for LED: 5.49.275.036/1301
Lens, square, transparent yellow, for LED: 5.49.275.036/1402
Lens, square, transparent green, for LED: 5.49.275.036/1503

PUSHBUTTONS

– Table (continued) –
LUMOTAST 75 IP40 - Signal lamp, square collar, protruding lens

Diffuser, square, for LED, without legend: 5.73.013.000/0214

Accessoires:
LUMOTAST 75 IP40 - Sealing cap for protection class IP 65, for 18 x 18 collar: 5.05.200.009/0000

LUMOTAST 75 IP40
Signal lamp, rectangular collar, flush lens

Technical data see page 1 - 45

Panel cut-out

	Voltage limit max.	Power limit max.	Lamp socket	Color of collar	Order no.	Note
→	35 V	1.2 W	T 4.5	black	1.65.111.051/0000	Please include the desired lens and diffuser in your order.

Lenses:
Lens, rectangular, transparent colorless, for LED: 5.49.275.032/1002
Lens, rectangular, transparent red, for LED: 5.49.275.032/1301
Lens, rectangular, transparent yellow, for LED: 5.49.275.032/1402
Lens, rectangular, transparent green, for LED: 5.49.275.032/1503
Diffuser, rectangular, for LED, without legend: 5.73.012.000/0214

Accessoires:
LUMOTAST 75 IP40 -Sealing cap for protection class IP65, for 18 x 24 collar: 5.05.200.008/0000

LUMOTAST 75 IP65

LUMOTAST 75 IP65 - Pushbutton range
Illuminated pushbuttons and signal lamps with lamp socket T 4.5
• Mounting hole diameter 16.2 mm
• Degree of protection IP65 acc. to DIN EN 60529
• Solder terminals for the following wire cross-sections:
  - Installed 0.5 mm^2 max.
  - Factory terminated 0.35 mm^2 max.
• 250 V/4 A max.
• 2 NC + 2 NO max.
• Illumination: LED / filament lamp
• All products are RoHS compliant.

PUSHBUTTONS
LUMOTAST 75 IP65

Content

1

**LUMO
75 (65)**

LUMOTAST 75 IP65
Illuminated pushbuttons

16.2 +0.2

Mounting hole

8 max.

M16 x 1

16.5

□ 19

7.5

10.5

41.5 (10 +1S)
49.5 (20 +2S)
57.5 (30 +3S)

Technical Data

➔ **General information**

Form of lens	see order block
Color of lens	see order block
Form of collar	see order block
Color of collar	black

➔ **Dimensions**

Length of collar	see order block
Diameter of collar	see order block
Width of collar	see order block
Overall height	10.5 mm
Mounting depth	see order block
Mounting hole	16.2 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Contact system	snap-action bridge contact
Contact function	see order block
Contact arrangement	see order block
Contact materials	Ag
Illumination	LED / filament lamp
Lamp socket	T 4.5

➔ **Mechanical characteristics**

Operating force	3 ... 6.5 N
Operating travel	2.5 mm
Switching travel NC	1.8 mm
Switching travel NO	0.9 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated voltage DC max.	230 V
Rated voltage AC/DC min.	12 V
Rated current AC max.	4 A
Rated current DC max.	0.2 A
Rated current AC/DC min.	5 mA
Contact resistance acc. to life max.	200 mΩ
Protection class	II
ESD-strength min.	14 kV

➔ **Other specifications**

Operating life, at 250 V/2 A (operations)	200,000 (momentary), 50,000 (latching)
Operating life, at 250 V/4 A (operations)	60,000 (momentary)
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C

Approvals

ENEC 25T70
without lamp,
25T55 with lamp

UL 508

C22.2
No. 14-M91

1

– Technical data (continued) –
LUMOTAST 75 IP65 - Illuminated pushbutton

Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating max. with lamp /LED	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	15 g
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

LUMO 75 (65)

Accessories LUMOTAST 75 IP65 - Illuminated pushbutton

→ Description	Photo	Order no.	Additional accessories see page
Socket T 4.5, LED		-	5 - 7
Socket T 4.5, LED superbright		-	5 - 7
Lamp extractor for lamp diameter 4 mm		1.90.900.002/0000	5 - 26
Lamp extractor for lamp diameter 5-6 mm		1.90.900.004/0000	5 - 26
Blanking cap, black, to cover spare holes, dimensions 18 x 18 mm		5.52.006.020/0103	5 - 22
Blanking cap, black, to cover spare holes, dimensions 18 x 24 mm		5.52.006.021/0100	5 - 22
Blanking cap, black, to cover spare holes, round 18 mm		5.52.006.022/0100	5 - 22
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

1

LUMOTAST 75 IP65
Illuminated pushbutton,
flush lens, round collar

Technical data see page 1 - 51

16.2⁺⁰·²

ø 19

10,5

Mounting hole

**LUMO
75 (65)**

→ Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.481/0000	Please include the desired lens in your order.
1 NC + 1 NO	latching	black	1.15.108.981/0000	Please include the desired lens in your order.
2 NC + 2 NO	momentary	black	1.15.108.482/0000	Please include the desired lens in your order.
2 NC + 2 NO	latching	black	1.15.108.982/0000	Please include the desired lens in your order.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.259.013/1002
Lens, round, transparent red, for LED: 5.49.259.013/1301
Lens, round, transparent yellow, for LED: 5.49.259.013/1402
Lens, round, transparent green, for LED: 5.49.259.013/1503

Accessoires:
Legend insert, round, without legend: 5.70.059.000/2000

LUMOTAST 75 IP65
Illuminated pushbutton,
protruding lens, round collar

Technical data see page 1 - 51

16.2⁺⁰·²

ø 16,4
ø 19

7,5

10,5

Mounting hole

→ Contact arrangement	Contact function	Color of collar	Order no.	Note
1 NC + 1 NO	momentary	black	1.15.108.476/0000	Please include the desired lens in your order.

1

– Table (continued) –
LUMOTAST 75 IP65 - Illuminated pushbutton, protruding lens, round collar

→	Contact arrangement	Contact function	Color of collar	Order no.	Note
	1 NC + 1 NO	latching	black	1.15.108.976/0000	Please include the desired lens in your order.
	2 NC + 2 NO	momentary	black	1.15.108.477/0000	Please include the desired lens in your order.
	2 NC + 2 NO	latching	black	1.15.108.977/0000	Please include the desired lens in your order.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.259.013/1002
Lens, round, transparent red, for LED: 5.49.259.013/1301
Lens, round, transparent yellow, for LED: 5.49.259.013/1402
Lens, round, transparent green, for LED: 5.49.259.013/1503

Accessoires:
Legend insert, round, without legend: 5.70.059.000/2000

**LUMO
75 (65)**

LUMOTAST 75 IP65
Illuminated pushbutton,
flush lens, square collar

Technical data see page 1 - 51

Mounting hole

→	Contact arrangement	Contact function	Color of collar	Order no.	Note
	1 NC + 1 NO	momentary	black	1.15.108.276/0000	Please include the desired lens in your order.
	1 NC + 1 NO	latching	black	1.15.108.376/0000	Please include the desired lens in your order.
	2 NC + 2 NO	momentary	black	1.15.108.277/0000	Please include the desired lens in your order.
	2 NC + 2 NO	latching	black	1.15.108.377/0000	Please include the desired lens in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.277.052/1002
Lens, square, transparent red, for LED: 5.49.277.052/1301
Lens, square, transparent yellow, for LED: 5.49.277.052/1402
Lens, square, transparent green, for LED: 5.49.277.052/1503

Accessoires:
Legend insert, square, without legend: 5.70.629.000/2000

1

LUMOTAST 75 IP65
Illuminated pushbutton,
protruding lens, square collar

Technical data see page 1 - 51

Mounting hole

→	Contact arrangement	Contact function	Color of collar	Order no.	Note
	1 NC + 1 NO	momentary	black	1.15.108.281/0000	Please include the desired lens in your order.
	1 NC + 1 NO	latching	black	1.15.108.381/0000	Please include the desired lens in your order.
	2 NC + 2 NO	momentary	black	1.15.108.282/0000	Please include the desired lens in your order.
	2 NC + 2 NO	latching	black	1.15.108.382/0000	Please include the desired lens in your order.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.277.052/1002
Lens, square, transparent red, for LED: 5.49.277.052/1301
Lens, square, transparent yellow, for LED: 5.49.277.052/1402
Lens, square, transparent green, for LED: 5.49.277.052/1503

Accessoires:
Legend insert, square, without legend: 5.70.629.000/2000

LUMOTAST 75 IP65
Illuminated pushbutton,
flush lens, rectangular collar

Technical data see page 1 - 51

Panel cut-out

→	Contact arrangement	Contact function	Color of collar	Order no.	Note
	1 NC + 1 NO	momentary	black	1.15.108.076/0000	Please include the desired lens in your order.

PUSHBUTTONS
LUMOTAST 75 IP65 - ILLUMINATED PUSHBUTTONS

– Table (continued) –
LUMOTAST 75 IP65 - Illuminated pushbutton, flush lens, rectangular collar

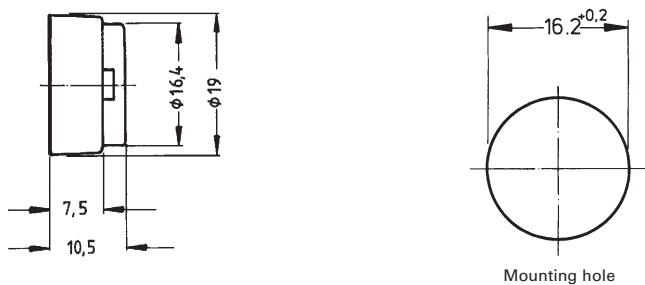| →	Contact arrangement	Contact function	Color of collar	Order no.	Note
	1 NC + 1 NO	latching	black	1.15.108.176/0000	Please include the desired lens in your order.
	2 NC + 2 NO	momentary	black	1.15.108.077/0000	Please include the desired lens in your order.
	2 NC + 2 NO	latching	black	1.15.108.177/0000	Please include the desired lens in your order.

Lenses:
Lens, rectangular, transparent colorless, for LED: 5.49.277.058/1002
Lens, rectangular, transparent red, for LED: 5.49.277.058/1301
Lens, rectangular, transparent yellow, for LED: 5.49.277.058/1402
Lens, rectangular, transparent green, for LED: 5.49.277.058/1503

Accessoires:
Legend insert, rectangular without legend: 5.70.630.000/2000

LUMO 75 (65)

LUMOTAST 75 IP65
Signal lamps

1

Mounting hole

Technical Data

→ **General information**

Form of lens	see order block
Form of collar	see order block
Diameter of collar	see order block

→ **Dimensions**

Length of collar	see order block
Width of collar	see order block
Overall height	10.5 mm
Mounting depth	33.5 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Lamp socket	T 4.5
Lamp	LED / filament lamp

→ **Electrical characteristics**

Voltage limit max.	35 V
Power limit max.	1.2 W

→ **Other specifications**

Degree of protection from front side	IP65 (DIN EN 60529)
Weight	5 g
Operation temperature min.	-25 °C
Ambient temp. operating max.	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
ROHS compliant	yes
REACH compliant	yes

LUMO 75 (65)

Approvals

IEC 61058	UL 508	C22.2 No. 14-M91

DVE

Accessories LUMOTAST 75 IP65 - Signal lamp

→ Description	Photo	Order no.	Additional accessories see page
Socket T 4.5, LED		-	5 - 7
Socket T 4.5, LED superbright		-	5 - 7
Lamp extractor for lamp diameter 4 mm		1.90.900.002/0000	5 - 26

1

– Table (continued) –
Accessories LUMOTAST 75 IP65 - Signal lamp

→ Description	Photo	Order no.	Additional accessories see page
Lamp extractor for lamp diameter 5-6 mm		1.90.900.004/0000	5 - 26
Blanking cap, black, to cover spare holes, dimensions 18 x 18 mm		5.52.006.020/0103	5 - 22
Blanking cap, black, to cover spare holes, dimensions 18 x 24 mm		5.52.006.021/0100	5 - 22
Blanking cap, black, to cover spare holes, round 18 mm		5.52.006.022/0100	5 - 22
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

LUMO 75 (65)

LUMOTAST 75 IP65
Signal lamp, flush lens, round collar

Technical data see page 1 - 57

Mounting hole

→ Voltage limit max.	Power limit max.	Lamp socket	Form of collar	Order no.	Note
35 V	1.2 W	T 4.5	round	1.65.111.096/0000	Please include the desired lens in your order.

For assembly, press the lens as far as possible.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.259.013/1002
Lens, round, transparent red, for LED: 5.49.259.013/1301
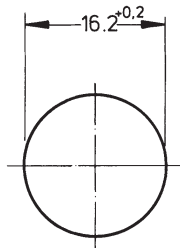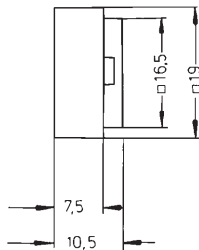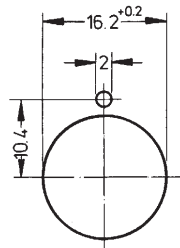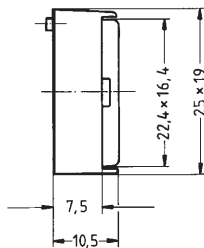Lens, round, transparent yellow, for LED: 5.49.259.013/1402
Lens, round, transparent green, for LED: 5.49.259.013/1503

Accessoires:
Legend insert, round, without legend: 5.70.059.000/2000

1

LUMOTAST 75 IP65
Signal lamp, protruding lens, round collar

Technical data see page 1 - 57

Mounting hole

	Voltage limit max.	Power limit max.	Lamp socket	Form of collar	Order no.	Note
→	35 V	1.2 W	T 4.5	round	1.65.111.076/0000	Please include the desired lens in your order.

For assembly, press the lens as far as possible.

Lenses:
Lens, round, transparent colorless, for LED: 5.49.259.013/1002
Lens, round, transparent red, for LED: 5.49.259.013/1301
Lens, round, transparent yellow, for LED: 5.49.259.013/1402
Lens, round, transparent green, for LED: 5.49.259.013/1503

Accessoires:
Legend insert, round, without legend: 5.70.059.000/2000

LUMO
75 (65)

LUMOTAST 75 IP65
Signal lamp, flush lens, rectangular collar

Technical data see page 1 - 57

Panel cut-out

	Voltage limit max.	Power limit max.	Lamp socket	Form of collar	Order no.	Note
→	35 V	1.2 W	T 4.5	rectangular	1.65.111.056/0000	Please include the desired lens in your order.

For assembly, press the lens as far as possible.

1

**LUMO
75 (65)**

LUMOTAST 75 IP65 - Signal lamp, flush lens, rectangular collar

Lenses:
Lens, rectangular, transparent colorless, for LED: 5.49.277.058/1002
Lens, rectangular, transparent red, for LED: 5.49.277.058/1301
Lens, rectangular, transparent yellow, for LED: 5.49.277.058/1402
Lens, rectangular, transparent green, for LED: 5.49.277.058/1503
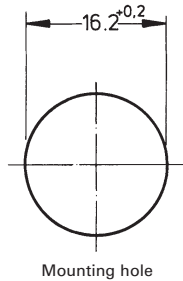
Accessoires:
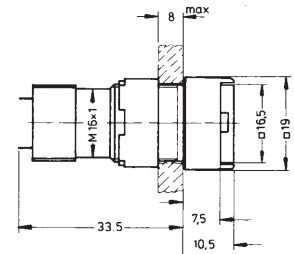Legend insert, rectangular without legend: 5.70.630.000/2000

LUMOTAST 75 IP65
Signal lamp, protruding lens, square collar

Mounting hole

→	Voltage limit max.	Power limit max.	Lamp socket	Form of collar	Order no.	Note
	35 V	1.2 W	T 4.5	square	1.65.111.086/0000	Please include the desired lens in your order.

For assembly, press the lens as far as possible.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.277.052/1002
Lens, square, transparent red, for LED: 5.49.277.052/1301
Lens, square, transparent yellow, for LED: 5.49.277.052/1402
Lens, square, transparent green, for LED: 5.49.277.052/1503

Accessoires:
Legend insert, square, without legend: 5.70.629.000/2000

LUMOTAST 75 IP65
Signal lamp, flush lens,
square collar

Technical data see page 1 - 57

Mounting hole

Voltage limit max.	Power limit max.	Lamp socket	Form of collar	Order no.	Note
35 V	1.2 W	T 4.5	square	1.65.111.066/0000	Please include the desired lens in your order.

For assembly, press the lens as far as possible.

Lenses:
Lens, square, transparent colorless, for LED: 5.49.277.052/1002
Lens, square, transparent red, for LED: 5.49.277.052/1301
Lens, square, transparent yellow, for LED: 5.49.277.052/1402
Lens, square, transparent green, for LED: 5.49.277.052/1503

Accessoires:
Legend insert, square, without legend: 5.70.629.000/2000

1

LUMO 75 (65)

Other keylock switches

Keylock switch for a mounting hole diameter of 16.2 mm
• 35 V max.
• 100 mA
• Design matches with LUMOTAST FK and LUMOTAST 75 IP40.
• All products are RoHS compliant.

PUSHBUTTONS
OTHER KEYLOCK SWITCHES

1

Content

Key
Swit-
ches

KEYLOCK SWITCHES

Mounting hole

➔ The locking systems we use are created according to DIN EN 1303 by leading lock manufacturers. They are are open, mechanical systems that require occasional maintenance of the machinery or plant operator depending on environmental conditions.

Technical Data

➔ **General information**

Form of collar	see order block

➔ **Dimensions**

Length of collar	see order block
Diameter of collar	see order block
Width of collar	see order block
Overall height	7.5 mm
Mounting depth	39.5 mm; with plug-in socket 41.25 mm
Mounting hole	16.2 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Contact system	sliding contact, self cleaning
Contact function	latching
Contact arrangement	1 NO at every switching position
Contact materials	Au alloy
Illumination	no

➔ **Mechanical design of lock**

Lock	cylinder lock with pin tumblers
Wafers	5 pins
Lock type	5001
Number of locking positions	10,000
Main key	on request
Symmetric key	on request
Key removal position	see order block

➔ **Mechanical characteristics**

Operating force min.	0.035 Nm
Operating force max.	1.8 Nm

➔ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	5 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	5 mA
ESD strength max.	12 kV
Insulation resistance	$6 \times 10^8 \ \Omega$
Contact resistance max.	200 mΩ

➔ **Other specifications**

Operating life (operations)	50,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C

1

Key Swit-ches

with plug-in socket

PCB hole pattern, sight on component side

PUSHBUTTONS
KEYLOCK SWITCHES

– Technical data (continued) –
Keylock switch

Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Soldering temperature max.	350 °C
Soldering time max.	3 s
Weight	29 g
Rotating angle	see order block
ROHS compliant	yes
REACH compliant	yes

Accessories Keylock switch

→ Description	Photo	Order no.	Additional accessories see page
Plug-in socket for PCB mounting		5.05.510.298/0000	1 - 71
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Spare key (1 piece)		5.58.011.001/0000	-

Keylock switch round collar

Technical data see page 1 - 65

Mounting hole

→ Contact arrangement	Contact function	Rotating angle		Key removal position	Order no.
1 NO at every switching position	latching	1 x 90°		0+1	1.10.118.612/0000
1 NO at every switching position	latching	3 x 90°		0+1+2+3	1.10.118.814/0000
1 NO at every switching position	latching	2 x 90°		0	1.10.118.513/0000
1 NO at every switching position	latching	2 x 90°		0+1+2	1.10.118.713/0000

Included: 2 keys.

Keylock switch
rectangular collar

Technical data see page 1 - 65

1

Contact arrangement	Contact function	Rotating angle		Key removal position	Order no.
1 NO at every switching position	latching	1 x 90°		0+1	1.10.118.212/0000
1 NO at every switching position	latching	3 x 90°		0+1+2+3	1.10.118.414/0000
1 NO at every switching position	latching	2 x 90°		0+1+2	1.10.118.313/0000

Included: 2 keys.

Key Switches

1

PRIORITY KEYLOCK SWITCHES

⌀ 16.20

Panel cut-out

max.8

M16x1 ⌀18,00 Rafi

3,50 36,00 7,50

max.8

M16x1 ⌀18,00 Rafi

3,75 41.25 7,50

with plug-in socket

2
1 + 3
0

Schlüssel

PCB hole pattern, sight on component side

4,45
2
4,45
P
12,7
1
3
0,8 +0,1
0
12,7

PCB hole pattern, sight on component side

→ The locking systems used in our switches are produced in accordance with DIN EN 1303 by leading lock manufacturers. The locking systems in key switches are open mechanical systems, which require occasional maintenance of the machinery or plant operator, according to the ambient conditions.

Technical Data

→ **General information**

Form of collar	see order block

→ **Dimensions**

Length of collar	see order block
Diameter of collar	see order block
Width of collar	see order block
Overall height	7.5 mm
Mounting depth	39.5 mm; with plug-in socket 41.25 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Contact system	sliding contact, self cleaning
Contact function	latching
Contact arrangement	1 NO at every switching position
Contact materials	Au alloy
Illumination	no

→ **Mechanical design of lock**

Lock	cylinder lock with pin tumblers
Wafers	5 pins
Lock type	5001
Number of locking positions	10,000
Main key	yes
Symmetric key	yes
Key removal position	see order block

→ **Mechanical characteristics**

Operating force min.	0.035 Nm
Operating force max.	1.8 Nm

→ **Electrical characteristics**

Rated voltage AC/DC max.	35 V
Rated voltage AC/DC min.	5 V
Rated current AC/DC max.	100 mA
Rated current AC/DC min.	5 mA
ESD strength max.	12 kV
Insulation resistance	6×10^8 Ω
Contact resistance max.	200 mΩ

→ **Other specifications**

1

– Technical data (continued) –
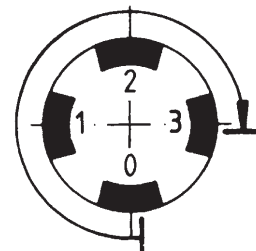**Priority keylock switch**

Operating life (operations)	50,000
Degree of protection from front side	IP65 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Soldering temperature max.	350 °C
Soldering time max.	3 s
Weight	29 g
Rotating angle	see order block
ROHS compliant	yes
REACH compliant	yes

Accessories Priority keylock switch

| Description	Photo	Order no.	Additional accessories see page
Plug-in socket for PCB mounting		5.05.510.298/0000	1 - 71
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25
Set of spare keys (4 keys) for 3 x 90° type		5.58.099.010/0000	-
Set of spare keys (2 keys) for 2 x 90° type		5.58.099.011/0000	-

Key Switches

Priority keylock switch
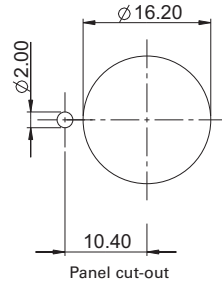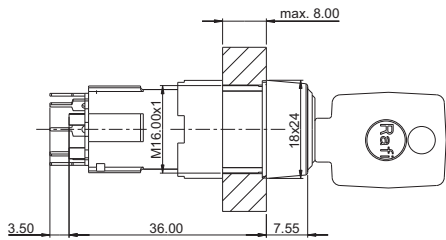# round collar

Technical data see page 1 - 68

max.8

16.2 +0,2

M16x1 Ø18,00

3,50   36,00   7,50

Mounting hole

Contact arrangement	Contact function	Rotating angle		Key removal position	Order no.
1 NO at every switching position	latching	3 x 90°		0	1.10.119.617/0000
1 NO at every switching position	latching	3 x 90°		0+1+2+3	1.10.119.967/0000

1

– Table (continued) –
Priority keylock switch - round collar

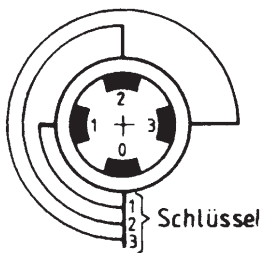| Contact arrangement	Contact function	Rotating angle		Key removal position	Order no.
1 NO at every switching position	latching	2 x 90°		0	1.10.119.611/0000

Included with 2 x 90° type: 2 keys; with 3 x 90° type: 3 keys.

Key 1 switches to lock position 1, key 2 switches to lock positions 1 and 2, etc...

Key Swit-ches

Priority keylock switch rectangular collar

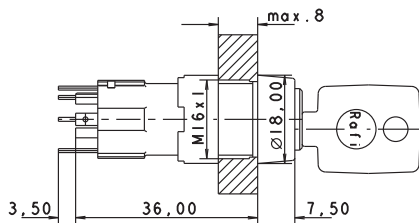Technical data see page 1 - 68

Contact arrangement	Contact function	Rotating angle		Key removal position	Order no.
1 NO at every switching position	latching	3 x 90°		0	1.10.119.117/0000
1 NO at every switching position	latching	3 x 90°		0+1+2+3	1.10.119.467/0000
1 NO at every switching position	latching	2 x 90°		0	1.10.119.111/0000

Included with 2 x 90° type: 2 keys; with 3 x 90° type: 3 keys.

Key 1 switches to lock position 1, key 2 switches to lock positions 1 and 2, etc...

Keylock switch
PCB plug-in socket

Technical data see page 1 - 68

PCB hole pattern, sight on component side

with plug-in socket

→	Description	Order no.
	Plug-in socket for PCB mounting	5.05.510.298/0000

1

Other pushbuttons

- Various pushbuttons for mounting hole diameters from 9.1 mm to 22.3 mm.
- All products are RoHS compliant.

PUSHBUTTONS
OTHER PUSHBUTTONS

1

Content

Other Pushb.

PUSHBUTTONS NON-ILLUMINATED 9.1 mm, 24 V / 100 mA

Technical Data

➔ **General information**

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

➔ **Dimensions**

Diameter of collar	11 mm
Overall height	4.5 mm
Mounting depth	25.5 mm
Mounting hole	9.1 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	solder terminals
Contact system	bridge contact
Contact function	momentary
Contact arrangement	1 NO
Contact materials	Ag
Illumination	no
Lamp socket	no

➔ **Mechanical characteristics**

Operating force max.	7 N
Operating travel	2 mm
Switching travel NO	1.3 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC max.	24 V
Rated voltage DC max.	24 V
Rated current max.	0.1 A
Contact resistance max.	200 mΩ

➔ **Other specifications**
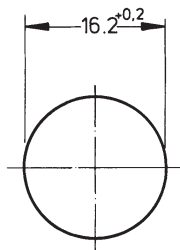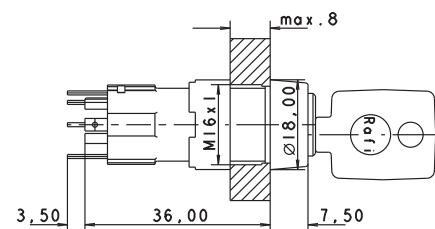
Operating life (operations)	40,000
Degree of protection from front side	IP40 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental resistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	2 g
Soldering time max.	3 s
Soldering temperature max.	350 °C
ROHS compliant	yes
REACH compliant	yes

$9{,}1 + 0{,}1$

Panel cut-out

Other Pushb.

1

Accessories Pushbutton non-illuminated - 9.1 mm, 24 V / 100 mA

→	Description	Photo	Order no.	Additional accessories see page
	Fixing spanner M 9, M 10		5.58.002.025/0105	5 - 25

Other Pushb.

Pushbutton non-illuminated mounting hole diameter 9.1 mm, 24 V / 100 mA

Technical data see page 1 - 75

→	Contact arrangement	Contact function	Color of lens	Order no.
	1 NO	momentary	opaque red	1.10.107.011/0301
	1 NO	momentary	opaque yellow	1.10.107.011/0404
	1 NO	momentary	opaque green	1.10.107.011/0507
	1 NO	momentary	opaque white	1.10.107.011/0205
	1 NO	momentary	opaque black	1.10.107.011/0104

PUSHBUTTONS
9.1 mm, 24 V / 0.5 A

Technical Data

➔ General information

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

➔ Dimensions

Diameter of collar	11 mm
Overall height	7 mm
Mounting depth	25 mm
Mounting hole	9.1 mm

➔ Mechanical design

Mounting	ring nut
Terminals	solder terminals
Contact system	bridge contact
Contact function	momentary
Contact arrangement	1 NC + 1 NO
Contact materials	Au
Illumination	see order block
Lamp socket	no

➔ Mechanical characteristics

Operating force max.	5 N
Operating travel	1.5 mm
Switching travel NC	0.5 mm
Switching travel NO	1 mm
Robustness max.	100 N

➔ Electrical characteristics

Rated voltage AC/DC max.	24 V
Rated voltage DC max.	24 V
Rated current max.	0.5 A
Contact resistance when new max.	50 mΩ
Contact resistance acc. to life max.	300 mΩ
Bouncing time max.	10 ms
Lamp voltage	see order block

➔ Other specifications

Operating life key switch	200,000
Degree of protection from front side	IP40 (DIN EN 60529)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+70 °C, LED +55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Soldering temperature max.	350 °C
Soldering time max.	3 s
Weight	3 g
LED operating voltage	see order block
LED forward current	see order block
LED forward voltage	see order block
LED reverse voltage	see order block
LED reverse current	see order block
LED power dissipation	see order block
LED series resistor 5-7 V	see order block
LED series resistor 12-14 V	see order block
LED series resistor 24-28 V	see order block
ROHS compliant	yes
REACH compliant	yes

9,1 + 0,1

Panel cut-out

1

Other Pushb.

1

Accessories Pushbutton - 9.1 mm, 24 V / 0.5 A

→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 9, M 10		5.58.002.025/0105	5 - 25

Pushbutton
mounting hole diameter 9.1 mm,
24 V / 0.5 A

Technical data see page 1 - 77

Panel cut-out

→ Contact arrangement	Contact function	Illumination	Color of lens	Order no.
1 NC + 1 NO	momentary	no	opaque red	1.15.106.301/0313
1 NC + 1 NO	momentary	no	opaque yellow	1.15.106.301/0410
1 NC + 1 NO	momentary	no	opaque green	1.15.106.301/0518
1 NC + 1 NO	momentary	no	opaque white	1.15.106.301/0214
1 NC + 1 NO	momentary	no	opaque black	1.15.106.301/0104
1 NC + 1 NO	momentary	LED super bright red	transparent red	1.15.106.501/1300
1 NC + 1 NO	momentary	LED super bright yellow	transparent yellow	1.15.106.503/1400
1 NC + 1 NO	momentary	LED super bright green	transparent green	1.15.106.502/1500
1 NC + 1 NO	momentary	LED super bright blue	transparent blue	1.15.106.504/1600
1 NC + 1 NO	momentary	LED superbright white	transparent white	1.15.106.505/1000

Recommended values for external series resistor for LED
- 5 - 7 V = 270 Ω, 0.25 W
- 12 - 14 V = 680 Ω, 0.5 W
- 24 - 28 V = 1500 Ω, 1 W

LED forward current: max. 10 mA at T = 25° C
LED forward voltage: 2V at 10 mA
LED reverse voltage: 5 V
LED reverse current: 0,1 mA
LED power dissipation: max. 120 mW at T = 50° C

Contact arangement: 1-2 = NC, 3-4 = NO, X1-X2 = LED. Please note: connect plus with the LED anode, which is marked with a color point.

PUSHBUTTONS NON-ILLUMINATED 15.2 mm, 250 V / 0.7 A

1

Technical Data

➔ **General information**

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

➔ **Dimensions**

Diameter of collar	19 mm
Overall height	8.2 mm
Mounting depth	21.5 mm
Mounting hole	15.2 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	see order block
Contact system	bridge contact
Contact function	momentary
Contact arrangement	see order block
Contact materials	Ag
Illumination	no
Lamp socket	no

➔ **Mechanical characteristics**

Operating force max.	7.5 N
Operating travel	3 mm
Switching travel NC	1.2 mm
Switching travel NO	2.0 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated current max.	0.7 A
Contact resistance when new max.	50 mΩ
Contact resistance acc. to life max.	300 mΩ

➔ **Other specifications**

Operating life (operations)	25,000
Degree of protection from front side	IP40 acc. to DIN EN 60529 (IP65 with sealing cap)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+85 °C
Storage temperature min.	-40 °C
Storage temperature max.	+90 °C
Environmental resistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	7 g
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

Panel cut-out

15.2 +0,2

Other Pushb.

Approvals

ENEC 25T85

PUSHBUTTONS

1

**Other
Pushb.**

Accessories Pushbutton non-illuminated - 15.2 mm, 250 V / 0.7 A

➜ Description	Photo	Order no.	Additional accessories see page
Sealing cap, transparent, for protection acc. to IP65		5.52.008.115/0000	-
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

Pushbutton non-illuminated mounting hole diameter 15.2 mm

Technical data see page 1 - 79

screw terminals

Panel cut-out

➜ Contact arrangement	Contact function	Color of lens	Terminals	Order no.
1 NO	momentary	opaque red	screw terminals	1.10.001.001/0301
1 NO	momentary	opaque red	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.011/0301
1 NO	momentary	opaque green	screw terminals	1.10.001.001/0507
1 NO	momentary	opaque green	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.011/0507
1 NO	momentary	opaque white	screw terminals	1.10.001.001/0205
1 NO	momentary	opaque white	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.011/0205
1 NO	momentary	opaque black	screw terminals	1.10.001.001/0104
1 NO	momentary	opaque black	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.011/0104
1 NC	momentary	opaque red	screw terminals	1.10.001.151/0301
1 NC	momentary	opaque red	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.161/0301
1 NC	momentary	opaque black	screw terminals	1.10.001.151/0104
1 NC	momentary	opaque black	solder/quick connector 6.3x0.8 / 2x 2.8x0.8mm	1.10.001.161/0104

Quick-connector 6.3 x 0.8 mm. The connector is splitted and also usable for two connectors 2.8 x 0.8 mm.

PUSHBUTTONS NON-ILLUMINATED 16.2 mm, 250 V / 2 A

1

Technical Data

→ **General information**

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

→ **Dimensions**

Diameter of collar	20 mm
Overall height	9 mm
Mounting depth	41 mm
Mounting hole	16.2 mm

→ **Mechanical design**

Mounting	ring nut
Terminals	screw terminals
Contact system	bridge contact
Contact function	momentary
Contact arrangement	see order block
Contact materials	Ag
Illumination	no
Lamp socket	no

→ **Mechanical characteristics**

Operating force max.	7.5 N
Operating travel	4.3 mm
Switching travel NC	1.3 mm
Switching travel NO	2.2 mm
Robustness max.	100 N

→ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated current max.	2 A
Contact resistance when new max.	100 mΩ

→ **Other specifications**

Operating life (operations)	150,000
Degree of protection from front side	IP40 acc. to DIN EN 60529 (IP65 with sealing cap)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+85 °C
Storage temperature min.	-40 °C
Storage temperature max.	+90 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	11 g
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

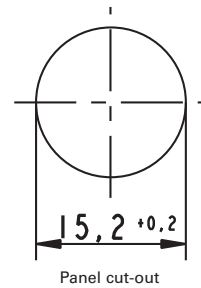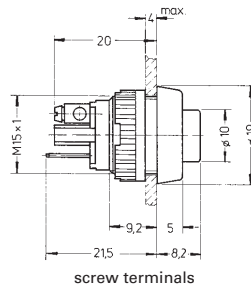16.2 $^{+0,2}$

Panel cut-out

Other Pushb.

Approvals

CCC S

Accessories Pushbutton non-illuminated - 16.2 mm, 250 V / 2 A

→ Description	Photo	Order no.	Additional accessories see page
Sealing cap, black, for protection acc. to IP65		5.52.008.101/0100	-

– Table (continued) –
Accessories Pushbutton non-illuminated - 16.2 mm, 250 V / 2 A

→ Description	Photo	Order no.	Additional accessories see page
Sealing cap, red, for protection acc. to IP65		5.52.008.101/0300	-
Protective sleeve for terminals		5.52.011.026/0100	-
Protection against contact to VBG 4		5.55.101.715/0200	5 - 31
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

Pushbutton non-illuminated mounting hole diameter 16.2 mm, 250 V / 2 A

Technical data see page 1 - 81

Panel cut-out

→ Contact arrangement	Contact function	Color of lens	Order no.
1 NO	momentary	opaque red	1.10.102.001/0301
1 NO	momentary	opaque green	1.10.102.001/0507
1 NO	momentary	opaque white	1.10.102.001/0205
1 NO	momentary	opaque black	1.10.102.001/0104
1 NC	momentary	opaque red	1.10.102.011/0301
1 NC	momentary	opaque black	1.10.102.011/0104

PUSHBUTTONS NON-ILLUMINATED 18.2 mm, 250 V / 2 A

1

Technical Data

➔ **General information**

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

➔ **Dimensions**

Diameter of collar	22 mm
Overall height	10.5 mm
Mounting depth	34 mm
Mounting hole	18.2 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	see order block
Contact system	sliding bridge contact
Contact function	momentary
Contact arrangement	see order block
Contact materials	Ag
Illumination	no
Lamp socket	no

➔ **Mechanical characteristics**

Operating force max.	9.5 N
Operating travel	5 mm
Switching travel NC	2.1 mm
Switching travel NO	3.7 mm
Robustness max.	100 N

➔ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated current max.	2 A
Contact resistance acc. to life max.	200 mΩ

➔ **Other specifications**

Operating life (operations)	50,000
Degree of protection from front side	IP40 acc. to DIN EN 60529 (IP65 with sealing cap)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+85 °C
Storage temperature min.	-40 °C
Storage temperature max.	+90 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	14 g
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

$18.2^{+0.2}$
Mounting hole

Approvals

Other Pushb.

Accessories Pushbutton non-illuminated - 18.2 mm, 250 V / 2 A

➔

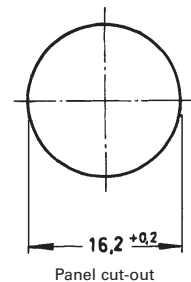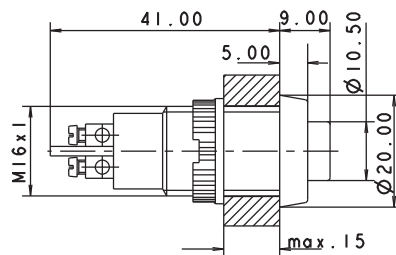| Description	Photo	Order no.	Additional accessories see page
Neoprene sealing cap, black, for protection acc. to IP65		5.52.008.061/0100	-

1

– Table (continued) –
Accessories Pushbutton non-illuminated - 18.2 mm, 250 V / 2 A

→	Description	Photo	Order no.	Additional accessories see page
	Silicone sealing cap, for protection acc. to IP65		5.52.008.065/0000	-
	Protective sleeve for terminals		5.52.011.028/0100	-
	Fixing spanner M 18, M 19		5.58.002.017/0105	5 - 25

Other Pushb.

Pushbutton non-illuminated mounting hole diameter 18.2 mm, 250 V / 2 A

Technical data see page 1 - 83

Mounting hole

→ Contact arrangement	Color of lens	Order no.
2 NO	opaque red	1.01.102.001/0301
2 NO	opaque green	1.01.102.001/0507
2 NO	opaque black	1.01.102.001/0104
1 NC + 1 NO	opaque red	1.01.102.011/0301
1 NC + 1 NO	opaque green	1.01.102.011/0507
1 NC + 1 NO	opaque white	1.01.102.011/0205
1 NC + 1 NO	opaque black	1.01.102.011/0104

PUSHBUTTONS ILLUMINABLE 20.3 mm, 250 V / 2 A

1

Technical Data

➜ **General information**

Form of lens	protruding lens
Color of lens	see order block
Form of collar	round

➜ **Dimensions**

Diameter of collar	24 mm
Overall height	9 mm
Mounting depth	45.5 mm
Mounting hole	20.3 mm

➜ **Mechanical design**

Mounting	ring nut
Terminals	solder/quick connect terminals 2.8 x 0.8 mm
Contact system	bridge contact
Contact function	momentary
Contact arrangement	see order block
Contact materials	Ag
Illumination	yes
Lamp socket	BA 9 s

➜ **Mechanical characteristics**

Operating force max.	10 N
Operating travel	3.6 mm
Switching travel NC	0.8 mm
Switching travel NO	2.9 mm
Robustness max.	100 N

➜ **Electrical characteristics**

Rated voltage AC max.	250 V
Rated current max.	2 A
Contact resistance acc. to life max.	200 mΩ

➜ **Other specifications**

Operating life (operations)	100,000
Degree of protection from front side	IP40 acc. to DIN EN 60529 (IP65 with sealing cap)
Operation temperature min.	-25 °C
Ambient temp. operating max.	+85 °C
Storage temperature min.	-40 °C
Storage temperature max.	+90 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Weight	18 g
Flame class acc. to UL 94	V 0
Hot wire ignition acc. to IEC 60695-2-1	yes
ROHS compliant	yes
REACH compliant	yes

Other Pushb.

Mounting hole

Approvals

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Accessories Pushbutton illuminable - 20.3 mm, 250 V / 2 A

→	Description	Photo	Order no.	Additional accessories see page
	LED BA 9s (MBC/MCC) superbright, red, 24 V		1.90.690.341/0000	5 - 8
	LED BA 9s (MBC/MCC) superbright, green, 24 V		1.90.690.342/0000	5 - 8
	LED BA 9s (MBC/MCC) superbright, yellow, 24 V		1.90.690.343/0000	5 - 8
	LED BA 9s (MBC/MCC) superbright, blue, 24 V		1.90.690.344/0000	5 - 8
	LED BA 9s (MBC/MCC) superbright, white, 24 V		1.90.690.345/0000	5 - 8
	Silicone sealing cap, for protection acc. to IP65		5.52.008.065/0000	-
	Protective sleeve for terminals		5.52.011.030/0100	-
	Fixing spanner M 20, M 22, for ring nut		5.58.002.018/0105	5 - 25

Other Pushb.

Pushbutton with lamp socket BA9s (MBC/MCC), mounting hole diameter 20.3 mm, 250 V / 2 A

Technical data see page 1 - 85

Mounting hole

→	Contact arrangement	Contact function	Order no.	Note
	1 NO	momentary	1.15.112.101/0000	Please include the desired lens in your order.
	1 NC + 1 NO	momentary	1.15.112.121/0000	Please include the desired lens in your order.

Lenses:
Lens, transparent colorless: 5.49.205.008/1002
Lens, transparent red: 5.49.205.008/1303
Lens, transparent yellow: 5.49.205.008/1402
Lens, transparent green: 5.49.205.008/1502

LUMOTAST 22 E-STOP PUSH-BUTTONS, 22.3 MM

➔ The emergency stop pushbuttons comply with IEC 60 204, IEC 60 073, IEC 60 947 and VDE 0113 Part 1.
They are designed dupe-proof according to EN 418 with a positive mechanical movement sequence. A certain operating force must be exerted at the action point in order to prevent inadvertent operation. The pushbutton latches when pressed.
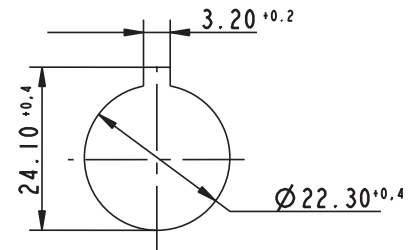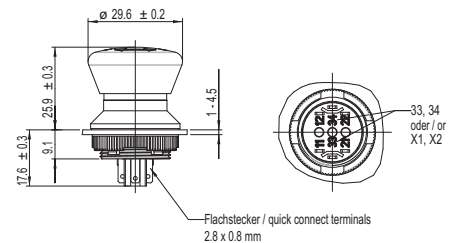
The special shape of the actuator prevents the emergency stop pushbutton from being blocked. This means that the emergency stop process - once initiated - cannot be impeded by any jamming objects.
Original manual see „Appendix"

Technical Data

➔ **General information**

Form of lens	conical mushroom form
Color of lens	red
Form of collar	round

➔ **Dimensions**

Mushroom Diameter	30 mm
Overall height	25.9 mm
Mounting depth	17.6 mm
Mounting hole	22.3 mm

➔ **Mechanical design**

Mounting	ring nut
Terminals	quick connector 2.8 x 0.8 mm, solderable
Torque for nut ring	1.9 Nm
Contact function	latching
Contact arrangement	see order block
Illuminability	see order block
Reset	by rotation

➔ **Mechanical characteristics**

Robustness max.	100 N

➔ **Electrical characteristics acc. to IEC/EN 60947-5-1 (VDE 0660 Part 200)**

Application category	AC15/DC13
Rated insulation voltage U_i	250V (AC/DC)
Rated operating voltage U_e	250V AC, 240V DC
{Term. Dauerstrom}	2.5A (AC/DC)

➔ **Other specifications**

Ambient temp. operating min.	-25 °C
Ambient temp. operating max.	+70 °C
Robustness	acc. to IEC 600 68-2-3 und 2-30
Operating life (operations) / B10	15,000
Degree of protection from front side	IP65 (DIN EN 60529)
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Environmental restistance	acc. to IEC 60068-2-14, -30, -33 and -78
Salt spray	IEC 600 68-2-11
Solder techniques	manual soldering, lead-free
Soldering temperature max.	350 °C
Soldering time max.	5 s
ROHS compliant	yes
REACH compliant	yes

ø 29.6 ± 0.2
25.9 ± 0.3
1 - 4.5
17.6 ± 0.3
9.1
33, 34 oder / or X1, X2
Flachstecker / quick connect terminals 2.8 x 0.8 mm

3.20 +0.2
24.10 +0.4
Ø 22.30 +0.4

Panel cut-out to IEC 60947-5-1

Approvals

UL LISTED

CCC S

1

Other Pushb.

1

Accessories LUMOTAST 22 E-Stop, 22.3 mm

➔ Description	Photo	Order no.	Additional accessories see page
Fixing spanner for ring nut		5.05.800.062/0000	2 - 145, 2 - 261, 5 - 25

LUMOTAST 22 E-Stop

Technical data see page 1 - 87

ø 29.6 ± 0.2

25.9 ± 0.3

1 - 4.5

17.6 ± 0.3 · 9.1

33, 34 oder / or X1, X2

Flachstecker / quick connect terminals 2.8 x 0.8 mm

3.20 +0.2

24.10 +0.4

Ø 22.30 +0.4

Panel cut-out to IEC 60947-5-1

➔ Contact arrangement	Illuminability	Degree of protection from front side	Order no.
2 NC + 1 NO	no	IP65 (DIN EN 60529)	1.15.105.021/0000
2 NC	arrows with 2 LED	IP65 (DIN EN 60529)	1.15.105.011/0000
2 NC	no	IP65 (DIN EN 60529)	1.15.105.001/0000