



Front dimensions: Ø 28 mm
Panel cut-out: Ø 22 mm
Front bezel height: 2 mm
Travel: 2.3 mm



SHORTIRON



- 01 Pushbuttons
- 02 Spacer

page 172
page 176



degree of protection



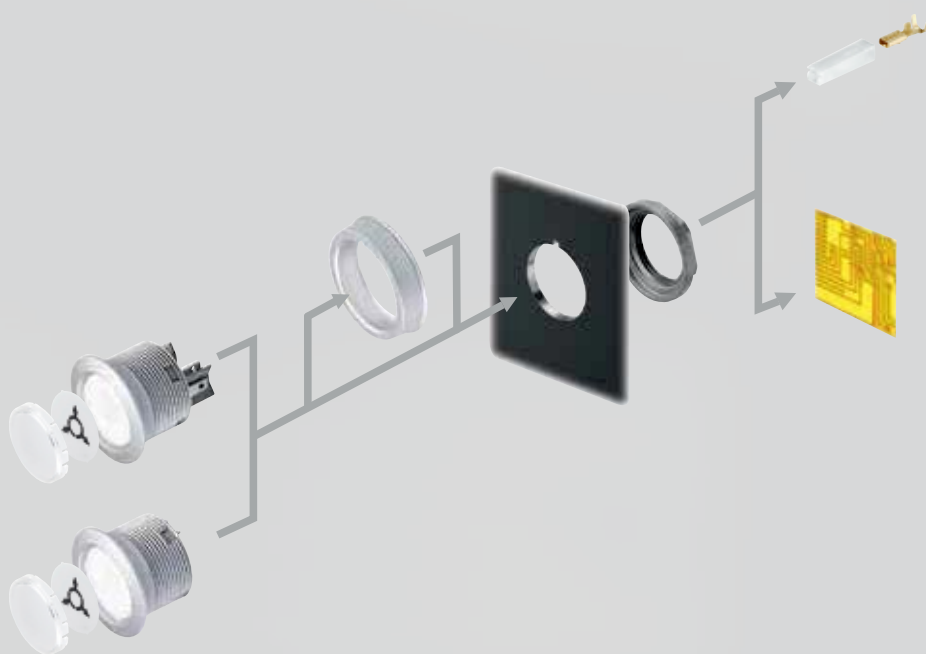
illuminating option



operating travel



labelling option



General Data

Type reference:	FRRJTK(L)(OO)(OI)(II)(OOI)(OII)(III)(OOO)(P)(Z)(L)AU
Description:	Short-stroke pushbutton with integrated contact block, flat/high version, with Faston or PCB-mount terminals available as front-panel-mount or base-plate-mount version
Approvals:	CE
Switch type:	2NC / 1NC+1NO / 2NO / 2NC+1NO / 1NC+2NO / 3NO / 3NC
Degree of protection:	IP65 / IP67
Operating travel:	2.3 mm
Connection:	Faston terminals 2.8x0.8 mm / PCB-mount terminals
Max. storage temperature:	-40°C ... 80°C
Max. operating temperature:	-25°C ... 70°C
Mechanical life:	1 million operations
Electrical life (rated load):	in process
Contact resistance NO:	< 20 mOhm / < 50 mOhm (Au)
Contact resistance NC:	< 20 mOhm / < 50 mOhm (Au)
Bouncing time NO:	< 10 ms
Bouncing time NC:	< 10 ms
Positive opening NC contact:	acc. to EN60947-5-1, appendix K

Electrical Data acc. to IEC/EN 60947-5-1 (VDE 0660 sect. 200)

Utilisation category:	alternating current AC15 B300	direct current DC13 Q300
Rated insulation voltage Ui:	250 V	250 V
Rated operating voltage Ue:	240V / 120V	250V / 125V / 60V / 24V
Rated operating current Ie:	1.5A / 3A	0.27A / 0.55A / 1A / 2A
Breaking capacity:	10Ie	1.1Ie
Continuous thermal current:	5A	

Electrical Data acc to IEC/EN 61058-1 (VDE 0630 sect. 1)

Rated voltage Ue:	250 V~
Rated current Ie:	6(4) A

Technical Data - Lamps

Lamp socket:	none, integrated white 3mm LED
Max. lamp voltage:	30 V AC/DC
Max. lamp output:	14mA (bei 24 V DC)
Definition:	X1...anode, X2...cathode

Additional Data

Panel cut-out:	22.3mm
Tightening torque (mounting nut):	1.5 ... 1.9 Nm
Mounting position:	as required
Norms:	EN 60947-5-1, EN 61058

Electrical Features with 5µm gold-plating (type addition ... AU)

Operating voltage:	20mV ... 42V AC/DC
Switching current:	1mA ... 250mA
Contact resistance (new state):	< 50 mOhm

Note

Z=base-plate-mount version

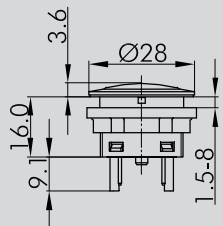
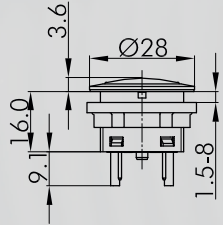
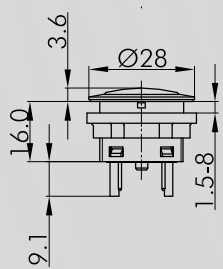
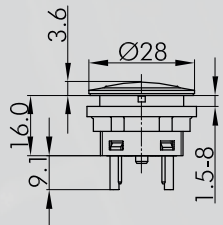
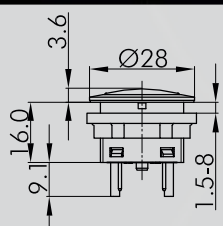
DC13:	> 100.000 switching cycles
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versions with Faston terminals:	use partially or fully insulated Faston clamps
illuminated versions (24 V LED):	overvoltage category II (2.5kV), pollution degree 2
versions with third contact:	overvoltage category II (2.5kV), pollution degree 2

Pushbutton Heads (momentary/push-push)

Lenses and nameplates to be ordered separately.

Type addition for gold-plated contacts _AU (e.g. FRRJTKLOO_AU)

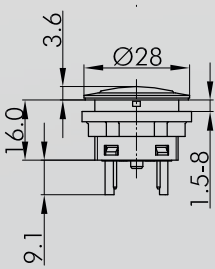
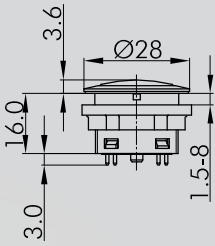
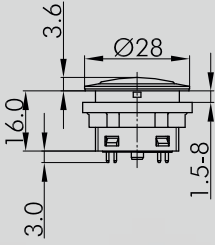
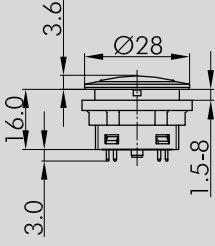
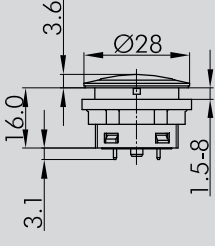
Illustration	Dimensions	Description	Type
  		Illuminated Pushbutton 2 NC incl. white LED Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKLOO
  		Illuminated Pushbutton 1 NO + 1 NC incl. white LED Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKLOI
  		Illuminated Pushbutton 2 NO incl. white LED Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKLII
  		Pushbutton 2 NC Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKOO
  		Pushbutton 1 NO + 1 NC Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKOI

Pushbutton Heads (momentary/push-push)

Lenses and nameplates to be ordered separately.

Type addition for gold-plated contacts _AU (e.g. FRRJTKLOOPZ_AU)

Type addition for base-plate-mount version ...Z (e.g. FRRJTKLOOPZ)

Illustration	Dimensions	Description	Type
  		Pushbutton 2 NO Faston terminals 2.8x0.8mm front bezel metallic	FRRJTKII
  		Illuminated Pushbutton 2 NC incl. white LED PCB-mount terminals front bezel metallic	FRRJTKLOOP
  		Illuminated Pushbutton 1 NO + 1 NC incl. white LED PCB-mount terminals front bezel metallic	FRRJTKLOIP
  		Illuminated Pushbutton 2 NO incl. white LED PCB-mount terminals front bezel metallic	FRRJTKLIIP
  		Pushbutton 2 NC PCB-mount terminals front bezel metallic	FRRJTKOOP

Pushbutton Heads (momentary/push-push)

Lenses and nameplates to be ordered separately.

Type addition for gold-plated contacts _AU (e.g. FRRJKOIPZ_AU)

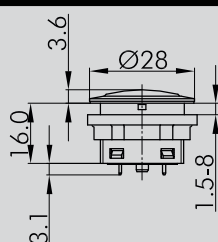
Type addition for base-plate-mount version ...Z (e. g. FRRJKOIPZ)

Illustration

Dimensions

Description

Type



Pushbutton 1 NO + 1 NC

PCB-mount terminals

front bezel

metallic

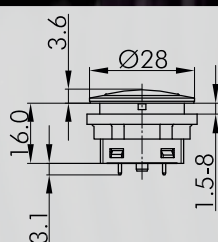
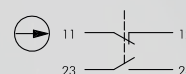
FRRJKOIP

0 1 2

11/12



23/24



Pushbutton 2 NO

PCB-mount terminals

front bezel

metallic

FRRJKIIP

0 1 2

13/14



23/24



Domed Lens, transparent

colour

blue

T22DRRBL

yellow

T22DRRGB

green

T22DRRGN

clear

T22DRRKL

red

T22DRRRT

opalwhite

T22DRRWS



Blank Nameplate

BSRRU



Nameplate

with standard imprint, please specify index number (see nameplates on pages 410)

BSRR...

Nameplate

with special imprint according to customer's specifications

BSRRB

Pilot Light Heads/Pilot Lights

Lenses and nameplates to be ordered separately.

Type addition for gold-plated contacts _AU (e.g. FRRJKOIPZ_AU)

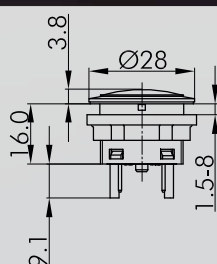
Type addition for base-plate-mount version ...Z (e. g. FRRJKOIPZ)

Illustration

Dimensions

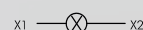
Description

Type

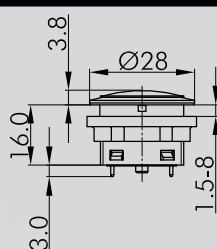


Pilot Light

incl. white LED
Faston terminals 2.8x0.8mm
front bezel metallic

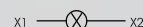


FRRJNKL



Pilot Light

incl. white LED,
PCB-mount terminals
front bezel metallic



FRRJNKLP



Lens

colour
blue
yellow
green
clear
red
opalwhite

K22RRBL
K22RRGB
K22RRGN
K22RRKL
K22RRRT
K22RRWS



Blank Nameplate

BSRRU



Nameplate

with standard imprint, please specify index number (see nameplates on pages 410)

BSRR...

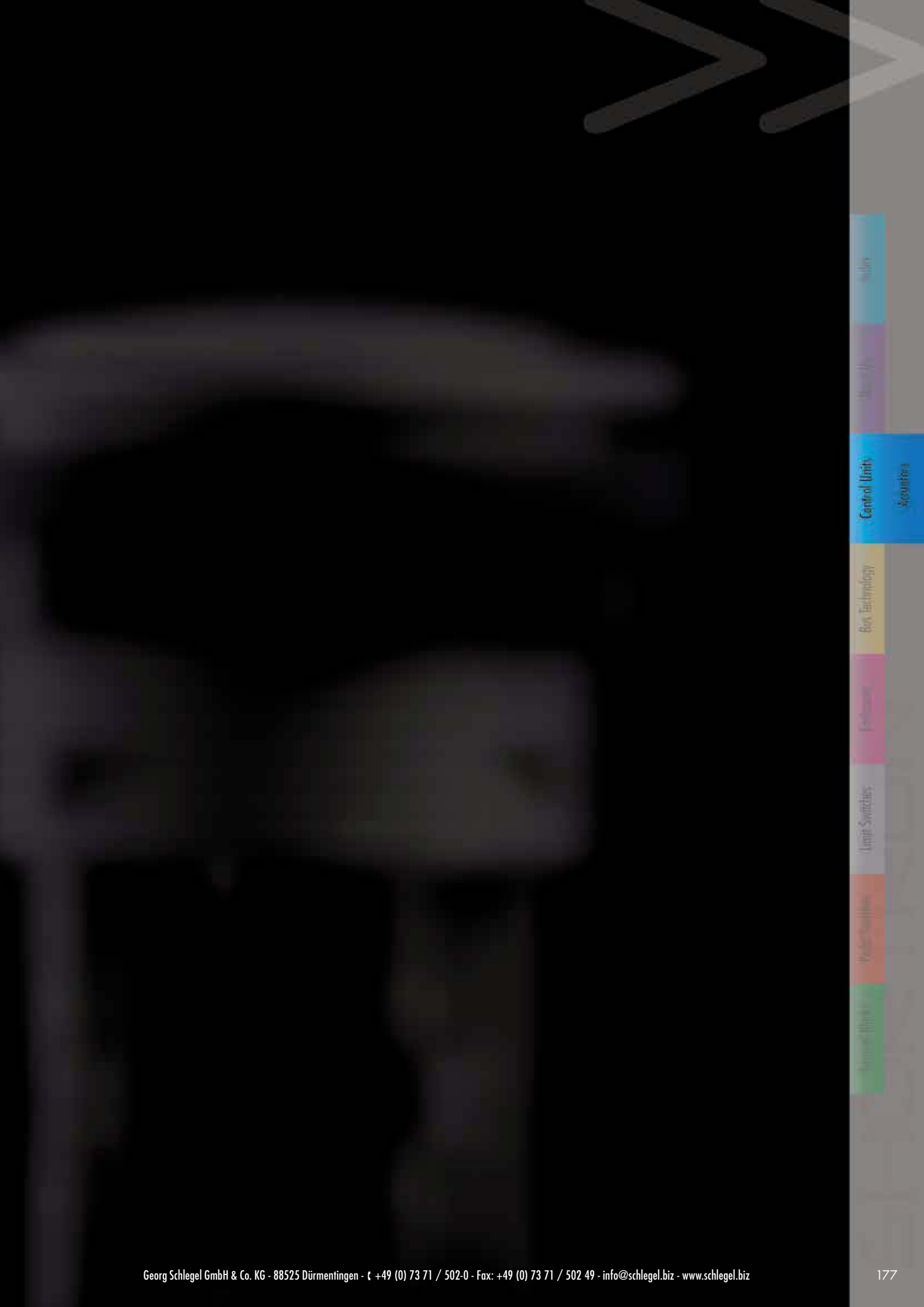
Nameplate

with special imprint according to customer's specifications

BSRRB

Accessories for Control Units

Illustration	Dimensions	Description	Type
		Spacer Ring suitable for the Shortron series for panel thickness from 0.5 to 2.5 mm colour metallic	FRRDR
		Faston Clamp 2.8 x 0.8 mm with snap-in pin Cross section 0.75 - 1.50 mm ² , brass, with pin to snapfit into the socket XA, XAL and the insulating case IH2.8	FH2,8
		Insulating Case for Faston clamp FH2,8, slip on from the front	IH2,8



Index	Index
Accessories	Accessories
Control Units	Control Units
Box Technology	Box Technology
Followers	Followers
Limit Switches	Limit Switches
Motor Run/Stop	Motor Run/Stop
Signal Markers	Signal Markers