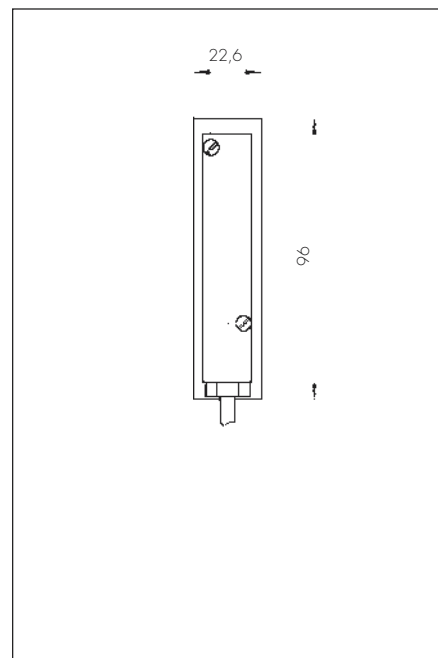
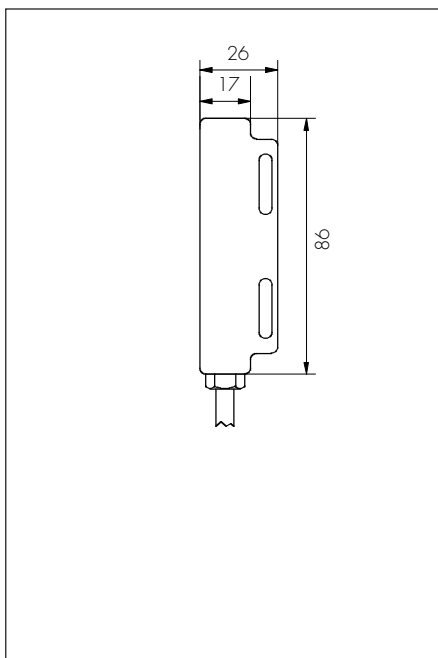
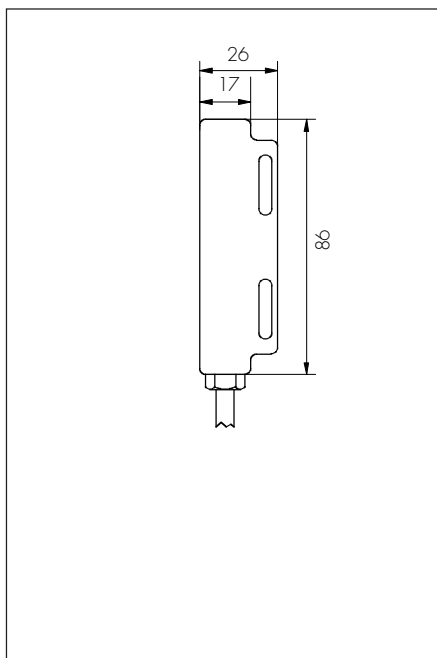


## Magnetic Switches

Page	Data Sheet	Type	Function	Housing material	Approval
2	20.01	<a href="#">27059/3</a>	bistable / SPST	Ultramid	PTB Nr. Ex-82/1085
		<a href="#">27069/3</a>	bistable /SPDT	Ultramid	PTB Nr. Ex-82/1085
		<a href="#">27159/3</a>	bistable / SPST	Ultramid	
3	20.02	<a href="#">27169/3</a>	bistable /SPDT	Ultramid	
4	21.01	<a href="#">29432/3</a>	bistable / SPST	316/316L	INIEX 91C.103.925X
		<a href="#">29436/3</a>	bistable /SPDT	316/316L	INIEX 91C.103.925X
5	22.01	<a href="#">31130-N/3</a>	bistable / SPST	316/316L	
		<a href="#">31130-N/3 AB</a>	bistable / SPST	316/316L	
		<a href="#">31130-N/KST</a>	bistable / SPST	316/316L	
6	22.02	<a href="#">31130-W/3</a>	bistable / SPST	316/316L	
7	22.03	<a href="#">31160/3</a>	bistable /SPDT	316/316L	
		<a href="#">31160/3 AB</a>	bistable /SPDT	316/316L	
		<a href="#">31160/KST</a>	bistable /SPDT	316/316L	
8	22.04	<a href="#">31741/3</a>	bistable /SPDT	316/316L	
9	23.01	<a href="#">32298/3</a>	bistable / SPST	316/316L	INIEX 91C.101.157U
		<a href="#">32299/3</a>	bistable /SPDT	316/316L	INIEX 91C.101.157U
10	24.01	<a href="#">33130-N/3</a>	bistable / SPST	Makrolon	
		<a href="#">33130-N/3 AB</a>	bistable / SPST	Makrolon	
		<a href="#">33130-N/KST</a>	bistable / SPST	Makrolon	
11	24.02	<a href="#">33130-W/3</a>	bistable / SPST	Craston	
12	24.03	<a href="#">37160/3</a>	bistable /SPDT	Makrolon	
		<a href="#">33160/3 AB</a>	bistable /SPDT	Makrolon	
		<a href="#">33160/KST</a>	bistable /SPDT	Makrolon	
13	26.01	<a href="#">26625</a>	monostable / SPDT	Makrolon	
14		<a href="#">33130-NAMUR/3</a>	bistable / SPST	Makrolon	
15		<a href="#">33130-W-NAMUR/3</a>	bistable / SPST	Ryton	
16		<a href="#">37557</a>	bistable / SPST	316/316L	
17		<a href="#">37589</a>	bistable / SPST	316/316L	


**Type 27059/3**

SPST bistable EEx d IIC T6

Housing: Ultramid, grey

Decal: silver

Mediatemperature: -25 to 75° C

 Switch-Rating: max. 250 V  
 max. 1.0 A ~  
 max. 0.4 A =  
 max. 60 VA ~  
 max. 30 W =

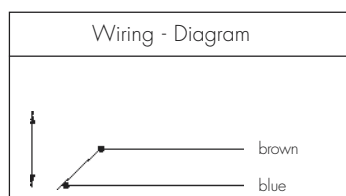
Contacts: Rhodium

 PVC-Cable, grey: 2 x 0.75 mm<sup>2</sup>

Enclosure: IP67

 Design according: EN 50 014  
 EN 50 018

Certification: PTB Nr.EX-82/1085


**Type 27069/3**

SPDT bistable EEx d IIC T6

Housing: Ultramid, grey

Decal: silver

Mediatemperature: -25 to 75° C

 Switch-Rating: max. 220 V  
 max. 0.6 A ~  
 max. 0.4 A =  
 max. 45 VA ~  
 max. 20 W =

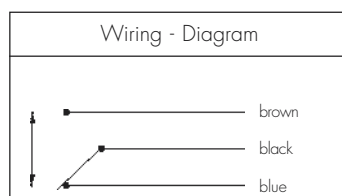
Contacts: Rhodium

 PVC-Cable, grey: 3 x 0.75 mm<sup>2</sup>

Enclosure: IP67

 Design according: EN 50 014  
 EN 50 018

Certification: PTB Nr.EX-82/1085


**Type 27159/3**

SPST bistable

Housing: Ultramid, grey

Decal: silver

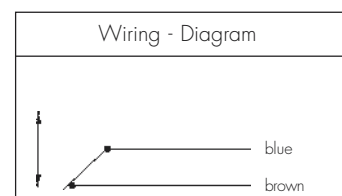
Mediatemperature: -50 to 150° C

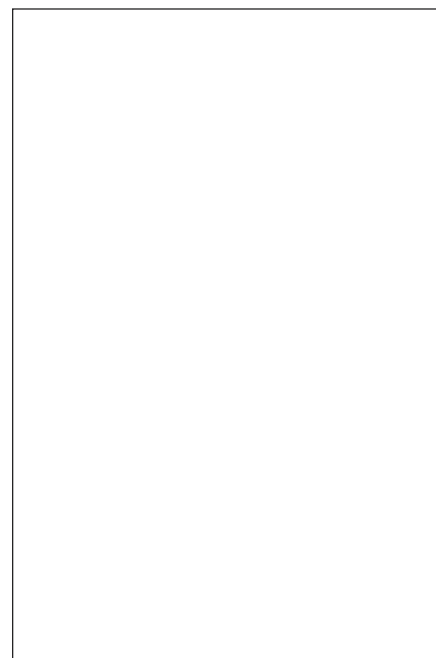
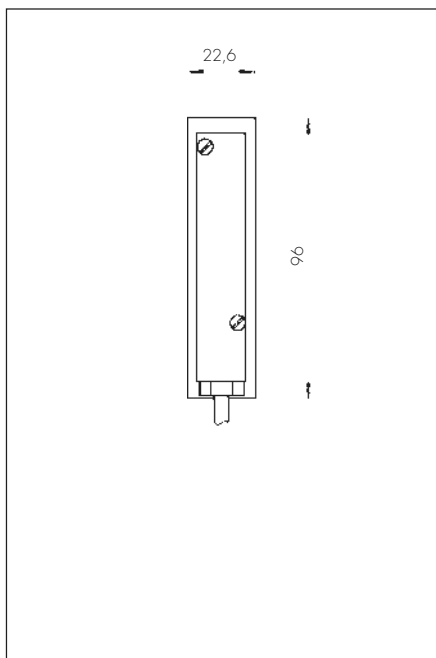
 Switch-Rating: max. 250 V  
 max. 1.5 A ~  
 max. 80 VA ~  
 max. 20 W =

Contacts: Rhodium

 PVC-Cable, grey: 2 x 0.75 mm<sup>2</sup>

Enclosure: IP67




**Type 27169/3**

SPDT bistable

Housing: Ultramid, grey

Decal: silver

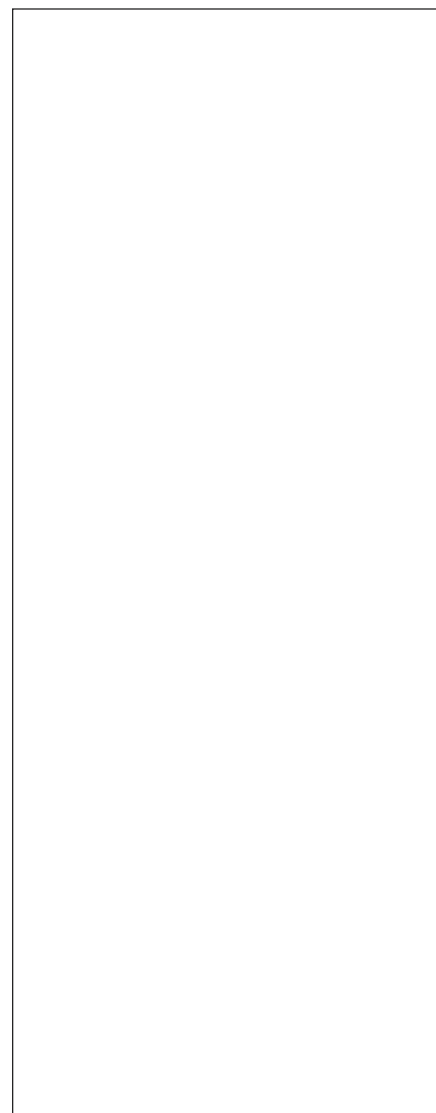
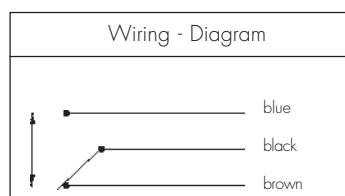
Mediatemperature: -50 to 150° C

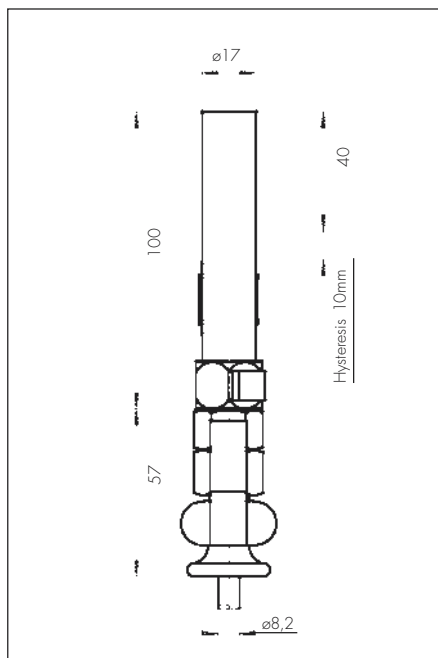
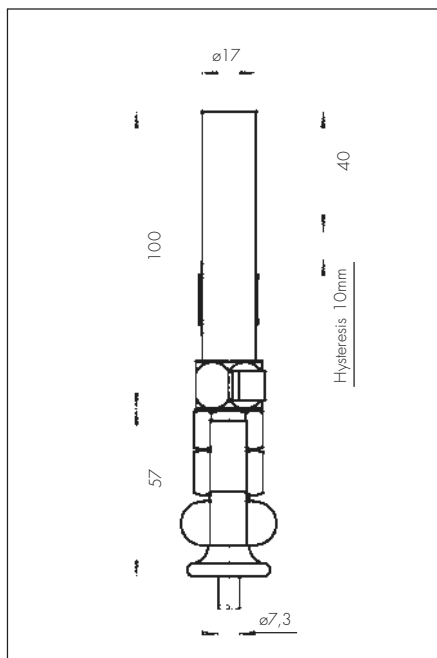
 Switch-Rating: max. 220 V  
 max. 0.8 A  
 max. 60 VA ~  
 max. 30 W =

Contacts: Rhodium

 PVC-Cable, grey: 3 x 0.75 mm<sup>2</sup>

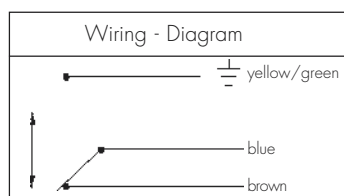
Enclosure: IP67




**Type 29432/3**

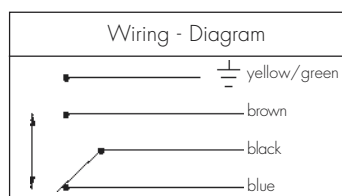
SPST bistable EExd IIC T6

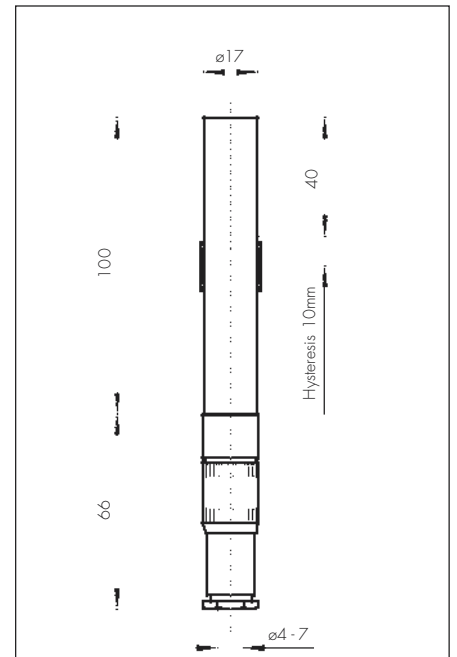
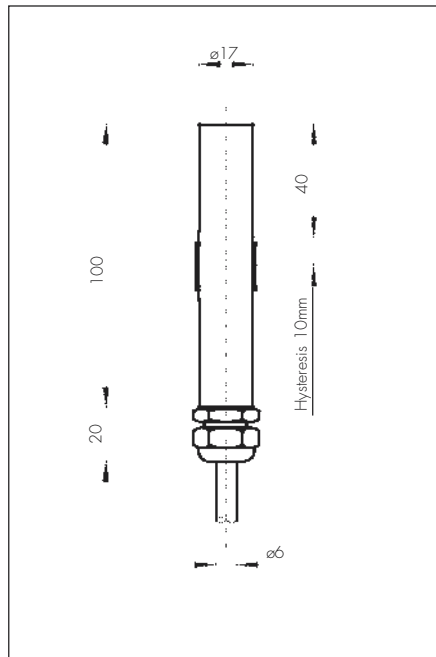
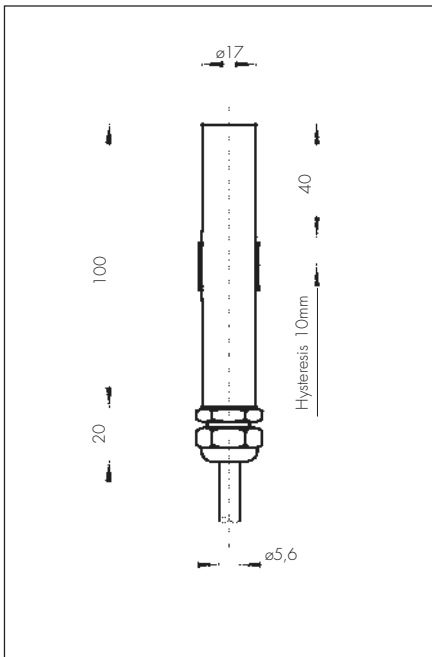
Housing:	1.4435
Decal:	silver
Mediateperature:	-50 to 120° C
Switch-Rating:	max. 250 V max. 1.0 A max. 220 VA ~ max. 160 W =
Contacts:	Rhodium
PVC-Cable, grey harmonised:	3 x 1.00 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP68
Design according:	EN 50014 EN 50018
Certification:	INEX 91C.103.925X


**Type 29436/3**

SPDT bistable EExd IIC T6

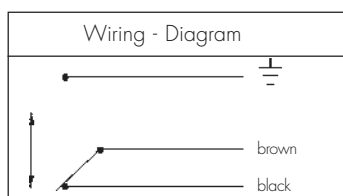
Housing:	1.4435
Decal:	silver
Mediateperature:	-50 to 120° C
Switch-Rating:	max. 250 V max. 1.0 A max. 60 VA ~ max. 40 W =
Contacts:	Rhodium
PVC-Cable, grey harmonised:	4 x 1.00 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP68
Design according:	EN 50014 EN 50018
Certification:	INEX 91C.103.925X




**Type 31130-N/3**

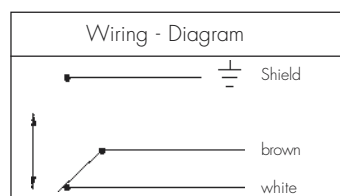
SPST bistable

Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 220 VA ~ max. 160 W =
Contacts:	Rhodium
PVC-Cable, grey:	3 x 0.75 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP67


**Type 31130-N/3AB**

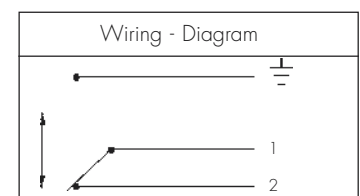
SPST bistable with shielded cable

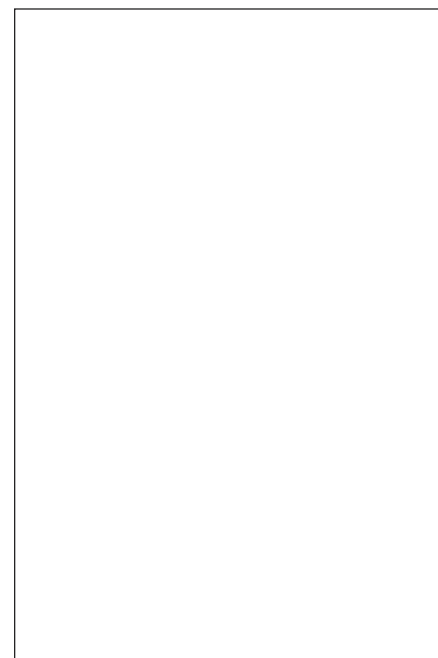
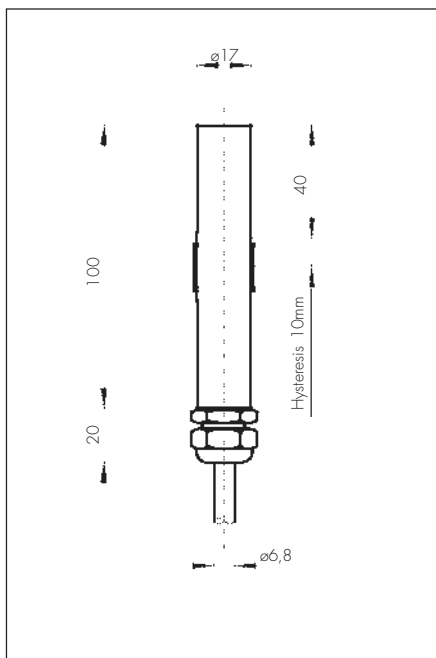
Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 220 VA ~ max. 160 W =
Contacts:	Rhodium
PVC-Cable, blue shielded:	3 x 0.75 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP67


**Type 31130/KST**

SPST bistable with 4-pole plug

Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 220 VA ~ max. 160 W =
Contacts:	Rhodium
Connection:	4-pole plug Chrome plated brass Wire terminating tab
Enclosure:	IP67




**Type 31130-W/3**

SPST bistable

Housing: 1.4435

Decal: silver

Mediatemperature: -50 to 350° C

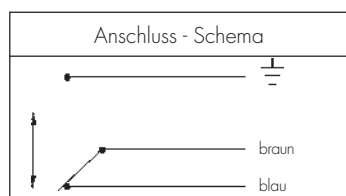
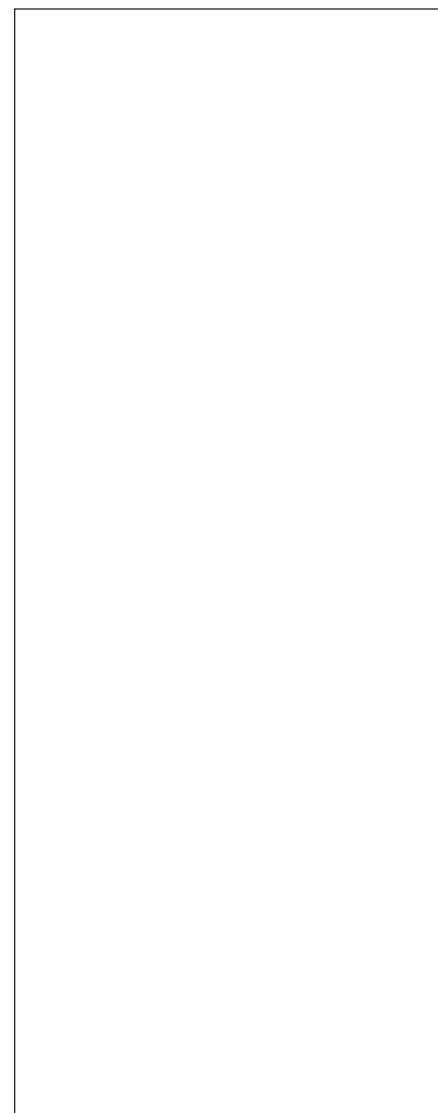
 Switch-Rating: max. 250 V  
 max. 1.0 A  
 max. 220 VA ~  
 max. 160 W =

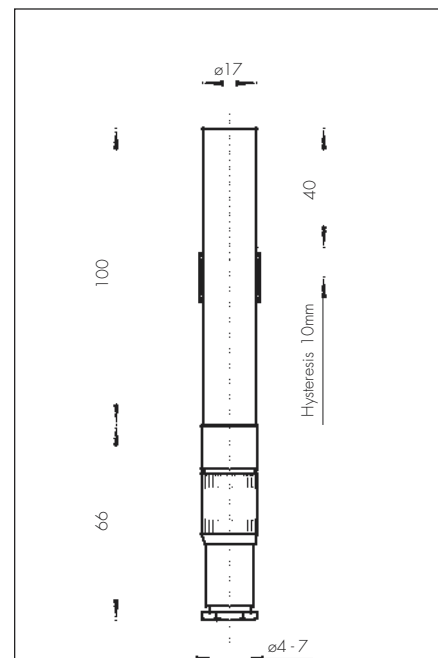
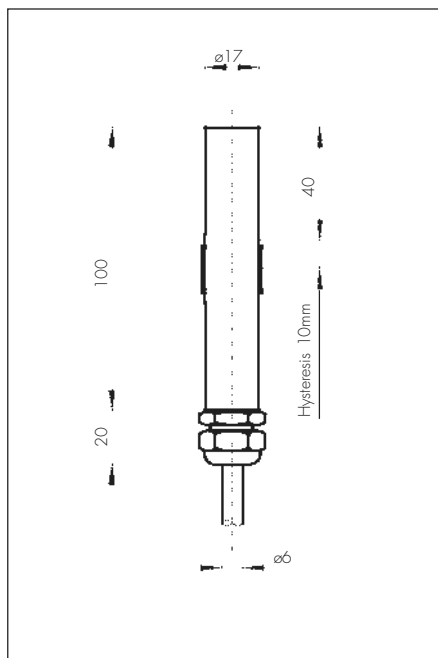
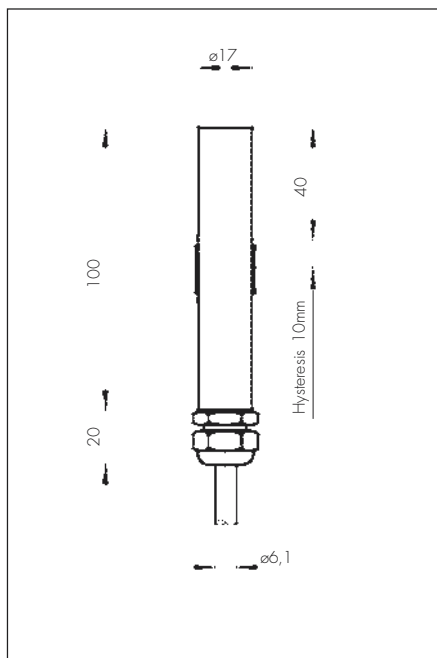
Contacts: Rhodium

 Silicone-cable, red: 3 x 0.75 mm<sup>2</sup>

 Cable gland: Nickel plated brass  
 Gland seal: Viton

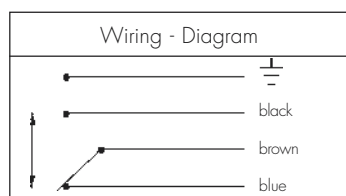
Enclosure: IP67




**Type 31160/3**

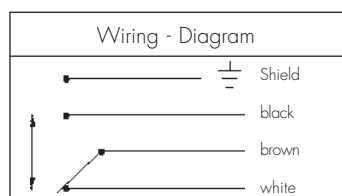
SPDT bistable

Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 60 VA ~ max. 40 W =
Contacts:	Rhodium
PVC-Cable, grey:	4 x 0.75 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP67


**Type 31160/3AB**

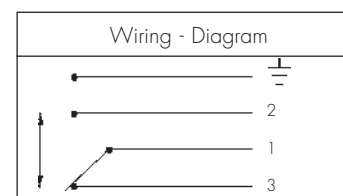
SPDT bistable with shielded cable

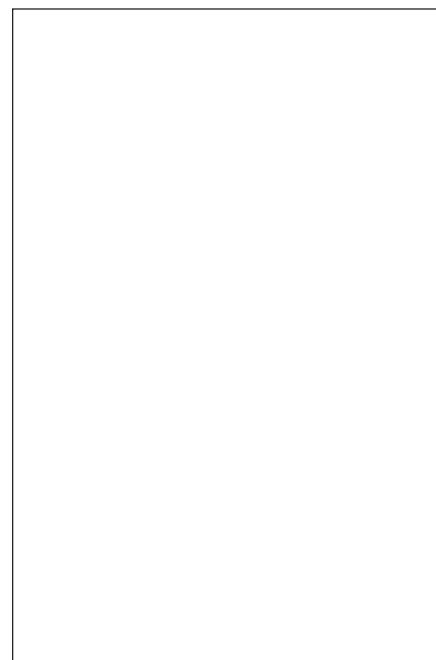
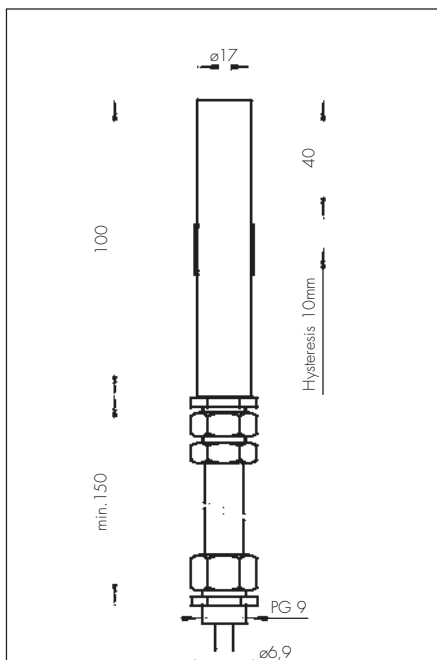
Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 60 VA ~ max. 40 W =
Contacts:	Rhodium
PVC-Cable, blue shielded:	3 x 0.75 mm <sup>2</sup>
Cable gland:	Nickel plated brass
Gland seal:	Perpunan N
Enclosure:	IP67


**Type 31160/KST**

SPDT bistable with 4-pole plug

Housing:	1.4435
Decal:	silver
Mediatemperature:	-50 to 150° C
Switch-Rating:	max. 250 V max. 1.0 A max. 60 VA ~ max. 40 W =
Contacts:	Rhodium
Connection:	4-pole plug Chrome plated brass Wire terminating tab
Enclosure:	IP67




**Type 31741/3**

SPDT bistable with armoured cable

Housing: 1.4435

Decal: silver

Mediatemperature: -50 to 150° C

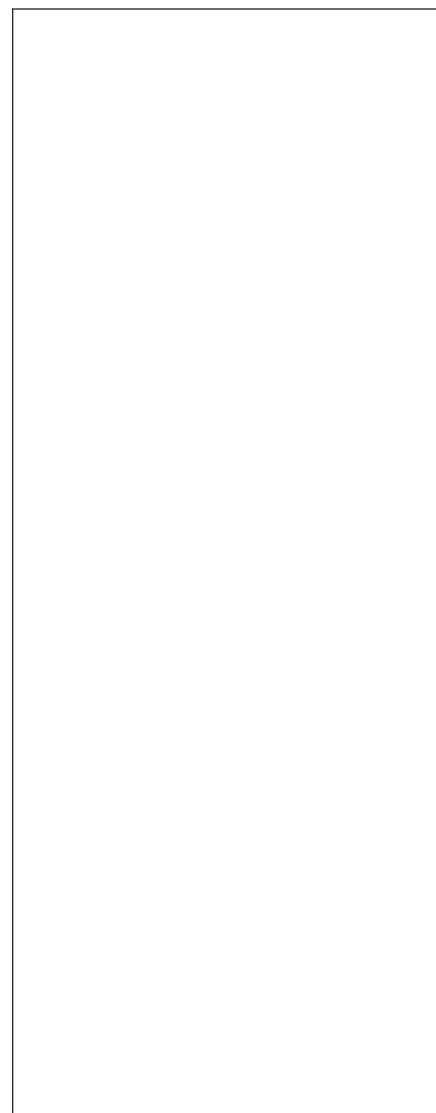
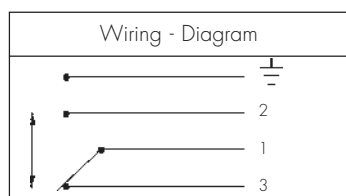
 Switch-Rating: max. 250 V  
 max. 1.0 A  
 max. 60 VA ~  
 max. 40 W =

Contacts: Rhodium

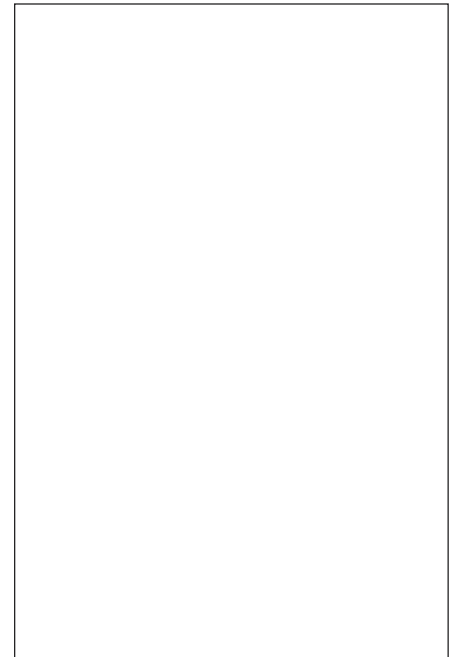
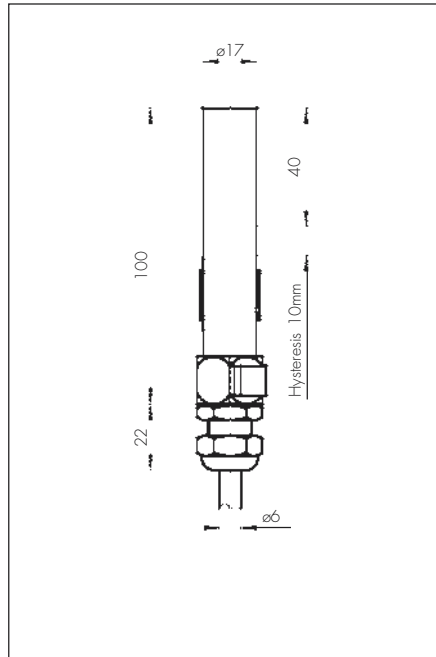
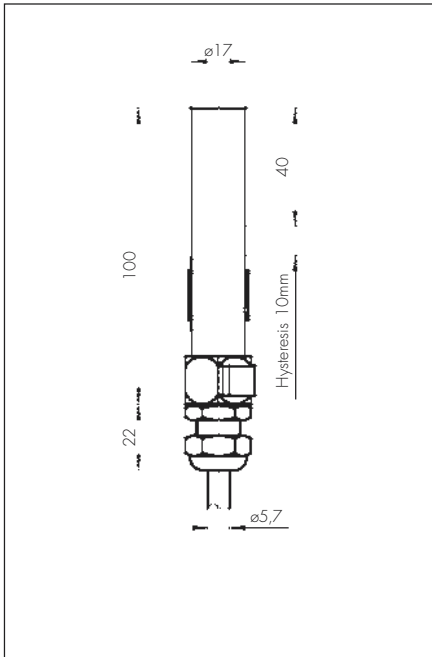
 Flame retardant cable, halogen free: 4 x 0.75 mm<sup>2</sup>

 Cable gland: Nickel plated brass  
 Gland seal: Perpunan N

Enclosure: IP65







**Type 32298/3**  
 SPST bistable EEx ia II

Housing: 1.4435  
 Decal: silver  
 Mediateperature: -50 to 120° C

Parameters:  $C_{int} = 250 \text{ pF}$   
 $L_{int} = \mu 5 \text{ H}$   
 $T_{max} = 80^{\circ}\text{C}$

Contacts: Rhodium

PVC-Cable, blue shielded: 2 x 0.75 mm<sup>2</sup>  
 Cable gland: Polyamid, blue  
 Gland seal: Neoprene

Enclosure: IP68

Design according: EN 50014  
 EN 50020

Certification: INIEX 91C.101.157U

Wiring - Diagram

**Type 32299/3**  
 SPDT bistable EEx ia II

Housing: 1.4435  
 Decal: silver  
 Mediateperature: -50 to 120° C

Parameters:  $C_{int} = 250 \text{ pF}$   
 $L_{int} = \mu 5 \text{ H}$   
 $T_{max} = 80^{\circ}\text{C}$

Contacts: Rhodium

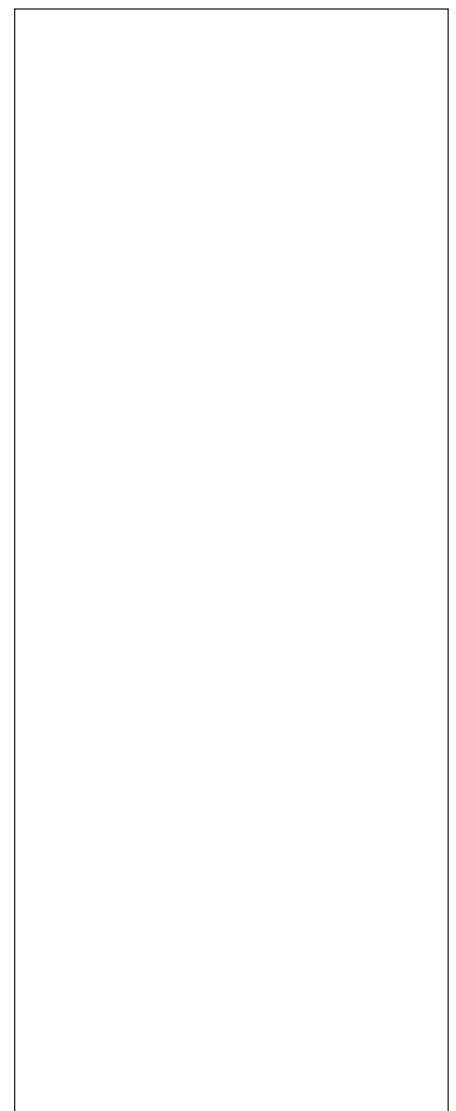
PVC-Cable, blue shielded: 3 x 0.75 mm<sup>2</sup>  
 Cable gland: Polyamid, blue  
 Gland seal: Neoprene

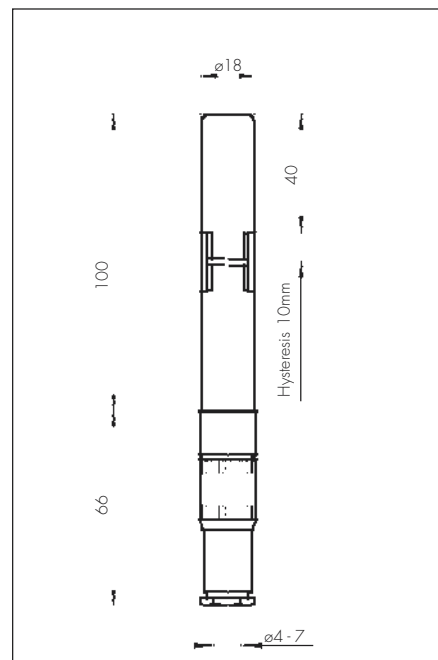
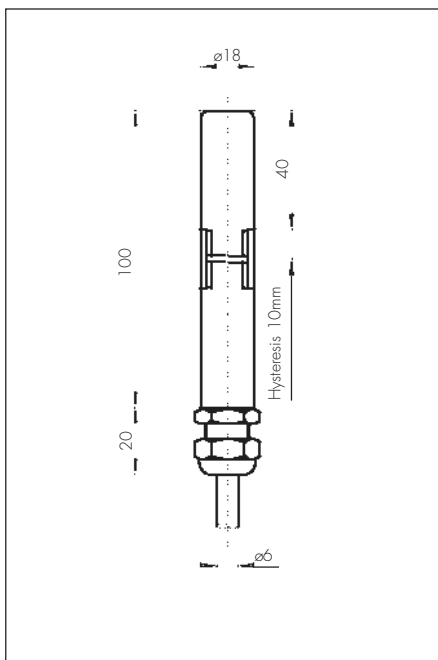
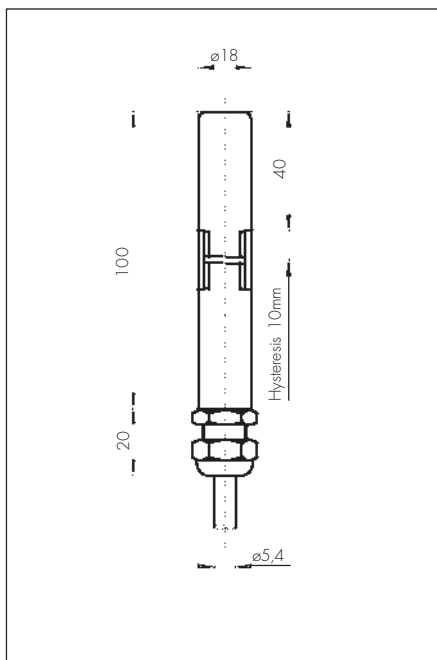
Enclosure: IP68

Design according: EN 50014  
 EN 50020

Certification: INIEX 91C.101.157U

Wiring - Diagram





### Type 33130-N/3

SPST bistable

Housing: Makrolon, white

Decal: blue

Mediateperature: -50 to 150° C

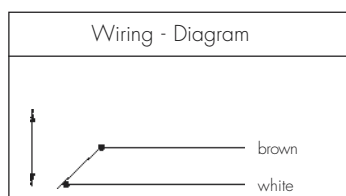
Switch-Rating: max. 250 V  
max. 1.0 A  
max. 220 VA ~  
max. 160 W =

Contacts: Rhodium

PVC-Cable, grey: 2 x 0.75 mm<sup>2</sup>

Cablegland: Agromid, grey  
Gland seal: Perpunan N

Enclosure: IP68



### Type 33130-N/3AB

SPST bistable with shielded cable

Housing: Makrolon, white

Decal: silver

Mediateperature: -50 to 150° C

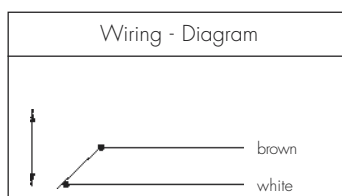
Switch-Rating: max. 250 V  
max. 1.0 A  
max. 220 VA ~  
max. 160 W =

Contacts: Rhodium

PVC-Cable, blue shielded: 2 x 0.75 mm<sup>2</sup>

Cablegland: Polyamid, blue  
Gland seal: Perpunan N

Enclosure: IP68



### Type 33130/KST

SPST bistable with 4-pole plug

Housing: Makrolon, white

Decal: silver

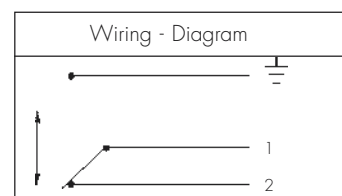
Mediateperature: -50 to 150° C

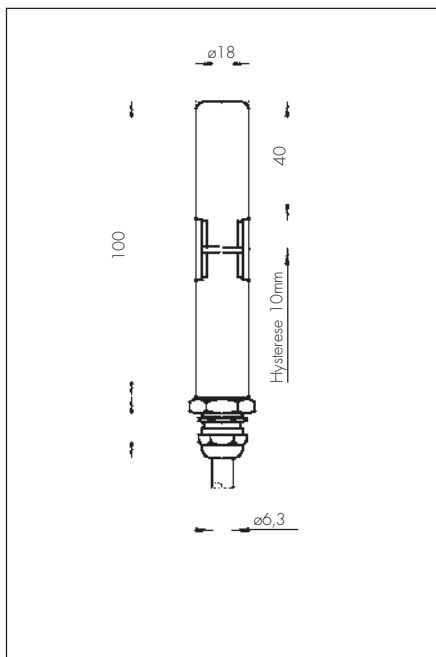
Switch-Rating: max. 250 V  
max. 1.0 A  
max. 220 VA ~  
max. 160 W =

Contacts: Rhodium

Connection: 4-pole plug  
Chrome plated brass  
Wire terminating tab

Enclosure: IP67




**Type 33130-W/3**

SPST bistable

 Housing: ©Craston XMB 3100,  
black

Decal: silver

Mediatemperature: -50 to 250° C

 Switch-Rating: max. 250 V  
max. 1.0 A  
max. 220 VA ~  
max. 160 W =

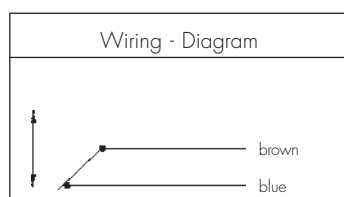
Contacts: Rhodium

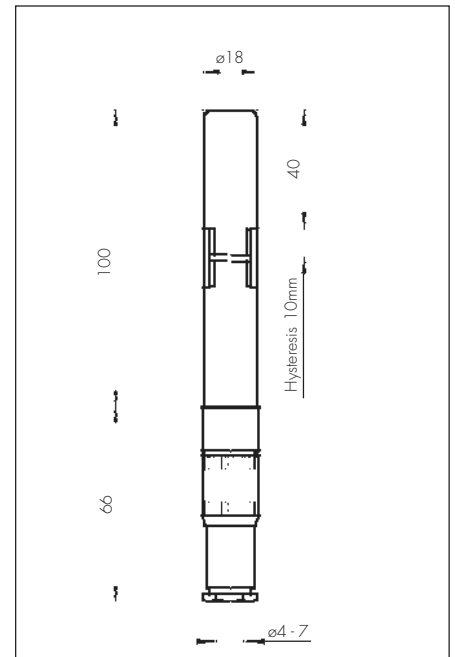
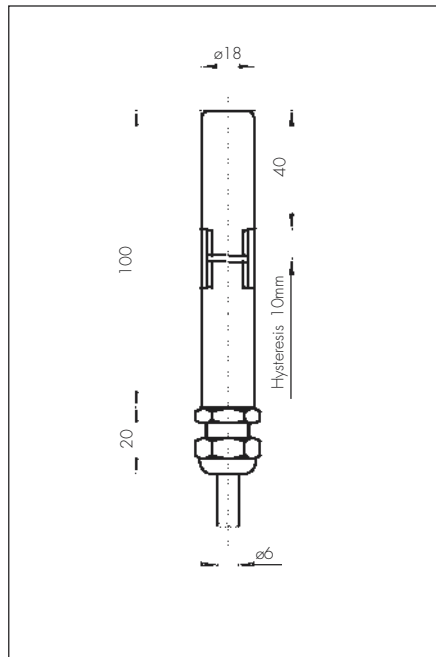
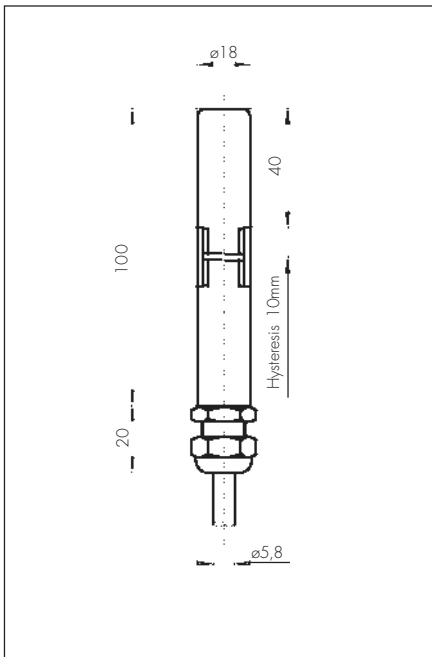
 Silicone-Cable, red: 2 x 0.75 mm<sup>2</sup>

 Cablegland: Nickel plated brass  
Gland seal: Viton

Enclosure: IP68

Wiring - Diagram




**Type 37160/3**

SPDT bistable

Housing: Makrolon, yellow

Decal: silver

Mediatemperature: -50 to 150° C

 Switchrating: max. 250 V  
 max. 1.0 A  
 max. 60 VA ~  
 max. 40 W =

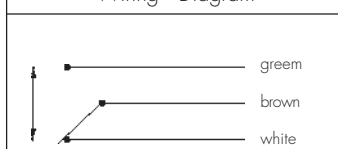
Contacts: Rhodium

 PVC-Cable, grey: 3 x 0.75 mm<sup>2</sup>

 Cablegland: Agromid, grey  
 Gland seal: Perpunan N

Enclosure: IP68

Wiring - Diagram


**Type 33160/3AB**

SPDT bistable with shielded cable

Housing: Makrolon, yellow

Decal: silver

Mediatemperature: -50 to 150° C

 Switchrating: max. 250 V  
 max. 1.0 A  
 max. 60 VA ~  
 max. 40 W =

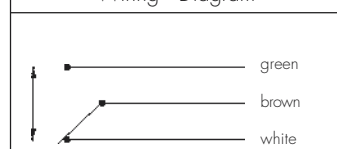
Contacts: Rhodium

 PVC-Cable, blue shielded: 3 x 0.75 mm<sup>2</sup>

 Cablegland: Polyamid, blue  
 Gland seal: Perpunan N

Enclosure: IP68

Wiring - Diagram


**Type 33160/KST**

SPDT bistable with 4-pole plug

Housing: Makrolon, yellow

Decal: silver

Mediatemperature: -50 to 150° C

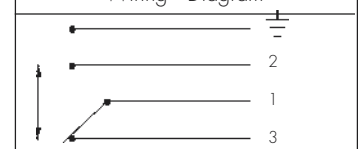
 Switchrating: max. 250 V  
 max. 1.0 A  
 max. 60 VA ~  
 max. 40 W =

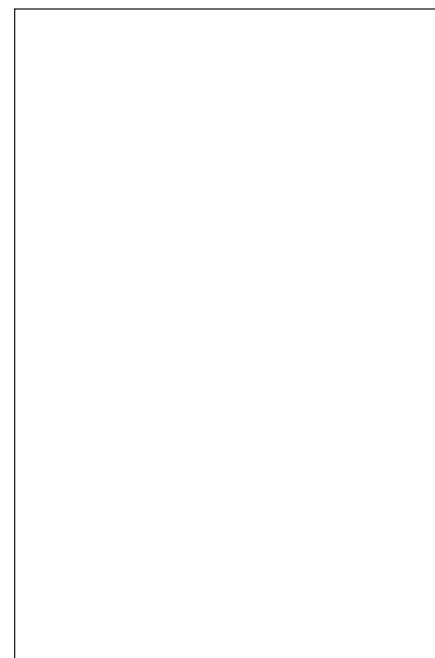
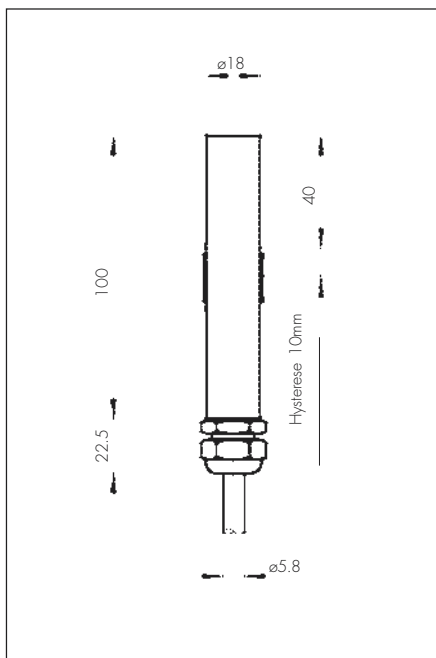
Contacts: Rhodium

 Connection: 4-pole plug  
 Nickel plated brass  
 Wire terminating tab

Enclosure: IP67

Wiring - Diagram




**Type 26625/3**

SPDT monostable

Housing: Makrolon, yellow

Decal: silver

Mediateperature: -50 to 150° C

 Switch-Rating:
 

- max. 400 V
- max. 1.0 A
- max. 60 VA ~
- max. 60 W =

Contacts: Rhodium

 PVC-Cable, grey: 3 x 0.75 mm<sup>2</sup>

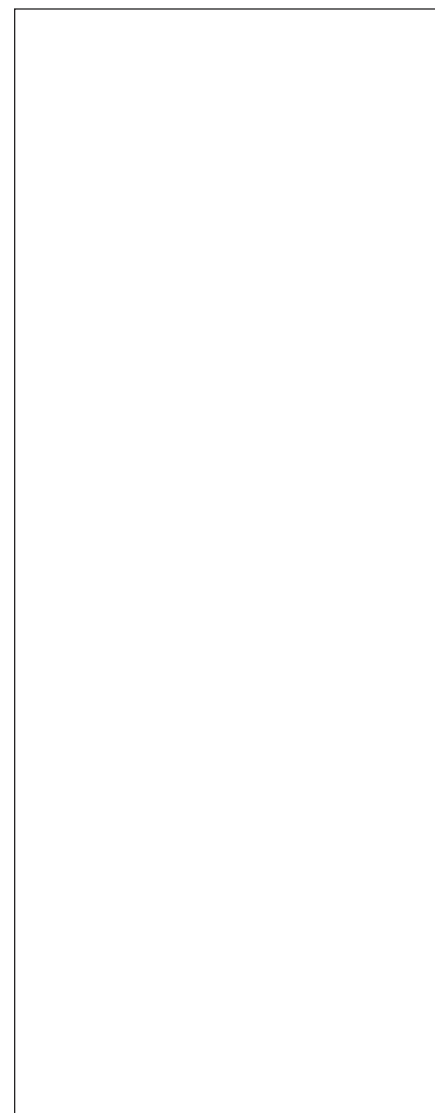
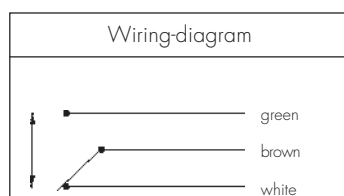
Cablegland: Agromid grey

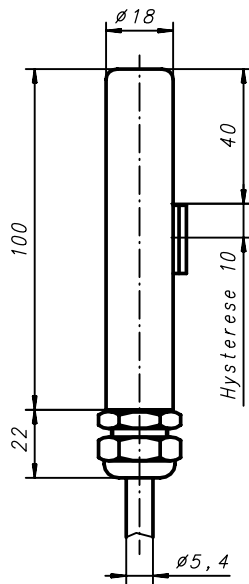
Gland seal: Viton

Enclosure: IP68

 Accessories to switch mounting for tube- $\varnothing$ :
 

30 - 40	clip 36253
40 - 60	clip 36242
60 - 80	clip 36543





**Function**

**On/Off switch (SPST)  
bistable, with plug-type connection**

**Order data**

**Magnetic switch 33130-NAMUR/3**

Standard with 3m cable length

33130-NAMUR/...

... = cable length (3, 5, 10 or 20m)

**Materials**

Housing	Makrolon, yellow
Cable gland	Polyamid, blue
Seal	Perpunan N
Cable	PVC, blue
Tag-label	Polyester, silver

**Operating temperatures**

Media temperature	-50°C ... +150°C
Ambient temperature Ta	-20°C ... +50°C

**Enclosure acc. DIN40050 and EN60529**

Enclosure	IP67
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**Electric data**

(for operation as simple electric operating material)

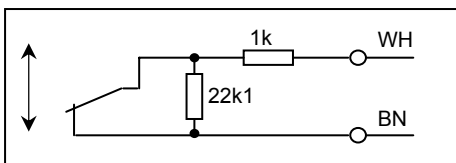
Input power	Pi	max. 200mW
Input voltage	Ui	max. 10.6V
Input current	Ii	max. 60mA
Inside inductance	Li	ca. 0mH
Inside capacity	Ci	ca. 0nF

**Reed-Switch**

Contact material	Rhodium
Activation speed	ca. 5ms
Bouncing time	ca. 0,5ms

**Wiring diagram**

- when mounted ca. 180° opposite of the indication rail (Data sheet 20010501)
- when cable exits bottom side
- when Float is below switch (rising fluid actuates switch)



**Fixation to VLI float tube/pipe**

If ordered with a VLI fixation is included in the delivery,  
if fixation is ordered separately please indicate tube diameter

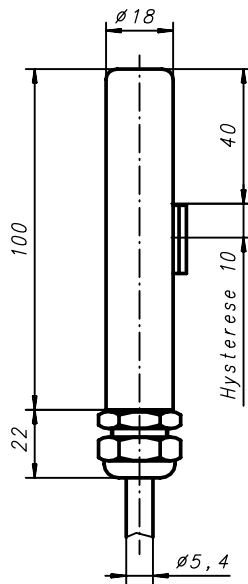
for tube diameter	30 ... 40mm	Article no.	36253
for tube diameter	40 ... 57mm	Article no.	36242
for tube diameter	57 ... 80mm	Article no.	36243

**Remarks**

For mounting method refer to data sheet 20010501.

Acc. EN50020, paragraph 5.4, the switch counts as simple operating apparatus  
and may be used in explosion hazard area

For the evaluation of the NAMUR circuit and a complimentary intrinsically safe operating apparatus (Eex ia IIC)  
we recommend a switch amplifier of the company "Stahl", i.e. Type 9350-...-...



### Function

**On/Off switch (SPST)  
bistable, with plug-type connection**

### Order data

**Magnetic switch 33130-W-NAMUR/3**  
Standard with 3m cable length

33130-W-NAMUR/...  
... = cable length (3, 5, 10 or 20m)

### Materials

Housing	Ryton R4, black
Cable gland	Brass, nickel
Seal	Viton, green
Cable	Silicone, 2 x 0.75mm <sup>2</sup> , red
Tag-label	Polyester, silver

### Operating temperatures

Media temperature	-50°C ... +250°C
Ambient temperature Ta	-20°C ... +50°C

### Enclosure acc. DIN40050 and EN60529

Enclosure	IP67
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### Electric data

(for operation as simple electric operating material)

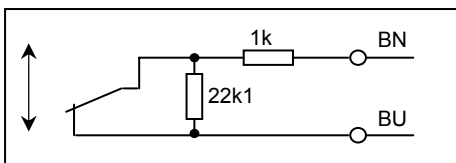
Input power	Pi	max. 200mW
Input voltage	Ui	max. 10.6V
Input current	Ii	max. 60mA
Inside inductance	Li	ca. 0mH
Inside capacity	Ci	ca. 0nF

### Reed-Switch

Contact material	Rhodium
Activation speed	ca. 5ms
Bouncing time	ca. 0,5ms

### Wiring diagram

- when mounted ca. 180° opposite of the indication rail (Data sheet 20010501)
- when cable exits bottom side
- when Float is below switch (rising fluid actuates switch)



### Fixation to VLI float tube/pipe

If ordered with a VLI fixation is included in the delivery,  
if fixation is ordered separately please indicate tube diameter

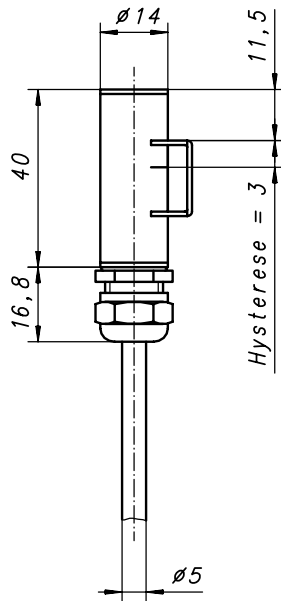
for tube diameter	30 ... 40mm	Article no.	36253
for tube diameter	40 ... 57mm	Article no.	36242
for tube diameter	57 ... 80mm	Article no.	36243

### Remarks

For mounting method refer to data sheet 20010501.

Acc. EN50020, paragraph 5.4, the switch counts as simple operating apparatus  
and may be used in explosion hazard area

For the evaluation of the NAMUR circuit and a complimentary intrinsically safe operating apparatus (Eex ia IIC)  
we recommend a switch amplifier of the company "Stahl", i.e. Type 9350-...-...



### Function

On/Off switch (SPST)  
bistable

### Order data

**Magnetic switch 37557/3**

Standard with 3m cable length

37557/...

... = Cable length (3, 5, 10 or 20m)

### Materials

Housing	316 / 316L
Cable gland	Brass, nickel
Seal	Neoprrene (CR)
O-Ring	Perbunan (NBR)
Cable	PVC, 2 x 0.5mm <sup>2</sup> , grey
Tag-label	Polyester, silver

### Operating temperatures

Media temperature -50°C ... +150°C

### Enclosure acc. DIN40050 and EN60529

Enclosure IP68

### Electric data

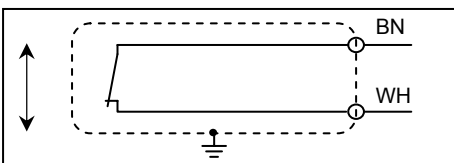
Switch rating	P	max. 10W
		max. 10VA
Voltage	U	max. 100V
Current	I	max. 0,5A

### Reed-Switch

Contact material	Rhodium
Activation speed	ca. 5ms
Bouncing time	ca. 0,5ms

### Wiring diagram

- when mounted approximately 180° opposite of the indication rail (Data sheet 20010501)
- when cable exits bottom side
- when float is below switch (rising fluid actuates switch)



### Fixation to VLI float tube/pipe

If ordered with a VLI fixation is included in the delivery,

if fixation is ordered separately please indicate tube diameter

for tube diameter 30...40mm and 40...57mm Article no. 80648

for tube diameter 57...80mm Article no. 84043

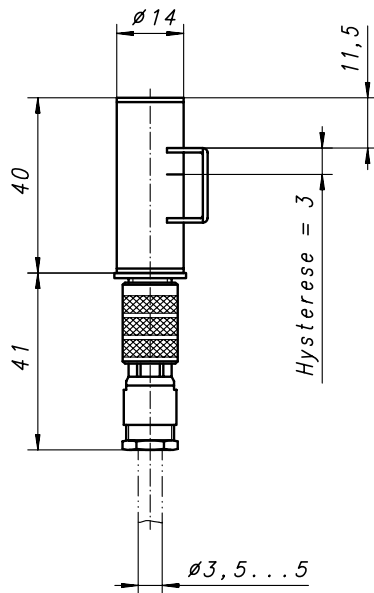
### Remarks

For mounting method refer to data sheet 20010501.

The magnetic switch is especially developed for operation with low power, i.e. control lines, series-parallel-series memory etc.

Excessive load can destroy the switches!





### Function

**On/Off switch (SPST)  
bistable, with plug-type connection**

### Order data

#### Magnetic switch 37589

Standard :  
Delivery with counter plug, without cable

For cable diameter 3,5 ... 5mm  
solder-hook terminated  
Wire square max. 0.25mm<sup>2</sup> / AWG 24

### Materials

Housing 316 / 316L  
Cable gland Brass, nickel  
Seal PA 66 (UL 94 HB)

Cable Polyester, silver  
Tag-label

### Electric data

Switch rating	P	max. 10W max. 10VA
Voltage	U	max. 100V
Current	I	max. 0,5A

### Operating temperatures

Media temperature -50°C ... +150°C

### Enclosure acc. DIN40050 and EN60529

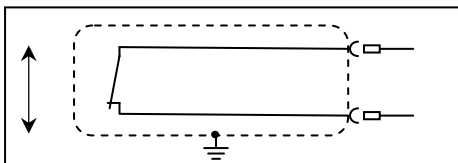
Enclosure IP67

### Reed-Switch

Contact material	Rhodium
Activation speed	ca. 5ms
Bouncing time	ca. 0,5ms

### Wiring diagram

- when mounted approximately 180° opposite of the indication rail (Data sheet 20010501)
- when cable exits bottom side
- when float is below switch (rising fluid actuates switch)



### Fixation to VLI float tube/pipe

If ordered with a VLI fixation is included in the delivery,

if fixation is ordered separately please indicate tube diameter

for tube diameter	30...40mm and 40...57mm	Article no.	80648
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for tube diameter	57...80mm	Article no.	84043
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### Remarks

For mounting method refer to data sheet 20010501.

The magnetic switch is especially developed for operation with low power, i.e. control lines, series-parallel-series memory etc.

Excessive load can destroy the switches!