

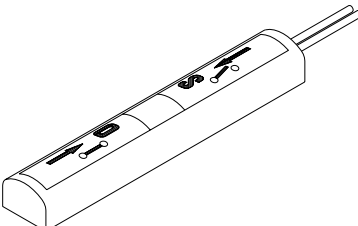
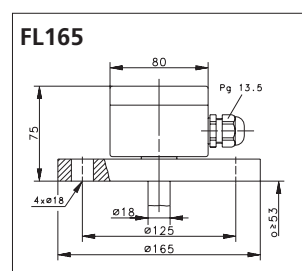


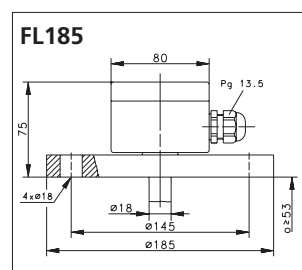
5	6	7	8
Adjustable	Connecting head		Length
VST		/	

Note!
Switching devices without switching modules!
Order separately, please!

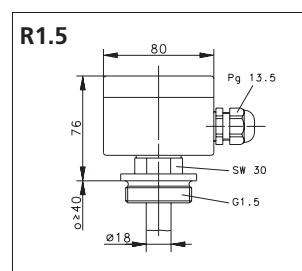
Terminal housing	Length	Switching module	Max. number switching modules/ switching units	
↓	↓			
Version	Other lengths (mm) on request		Normally-closed contact/ normally-open contact	Changeover contact
		Normally-closed contact/ normally-open contact Changeover contact	Lengths 250 mm 500 mm 750 mm 1000 mm	Lengths 250 mm 500 mm 750 mm 1000 mm



FL165	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3



FL185	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3




R1.5	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069	491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3

Adjustable float switches

Type code

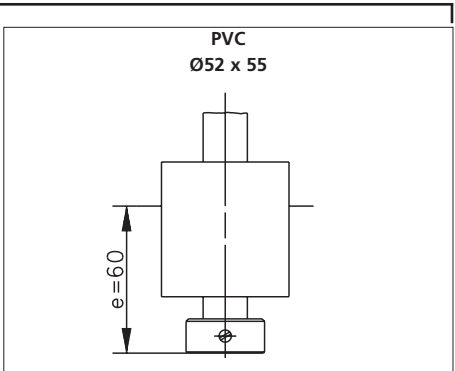
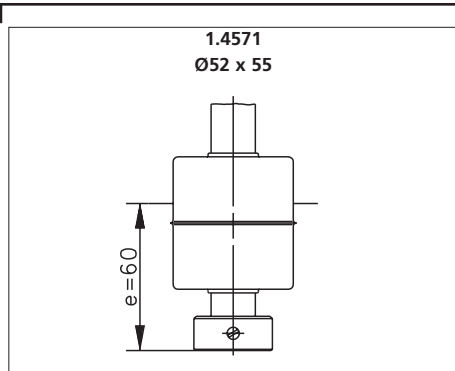
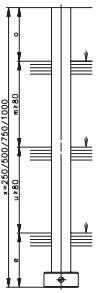
Ordering examples
s. page 222

Position	1	2	3	4
Version	Magnetic float switch	Output type reed contact	Combination switching tube/floats	
Type	M	A		-

Min./max. dimensions

Combination switching tube/float
(technical data see page 234 ff)

Sensing distances for falling levels



Tank cable gland R2"

1.4571 / G-Al Si 12	1.4571	N	V
—	MS 63	—	—
PVC / Polyester	PVC	—	D





Flange enclosures Ø120

G-Al Si 12	1.4571	N	V
G-Al Si 12	MS 63	P	L
G-Al Si 12	PVC	—	D

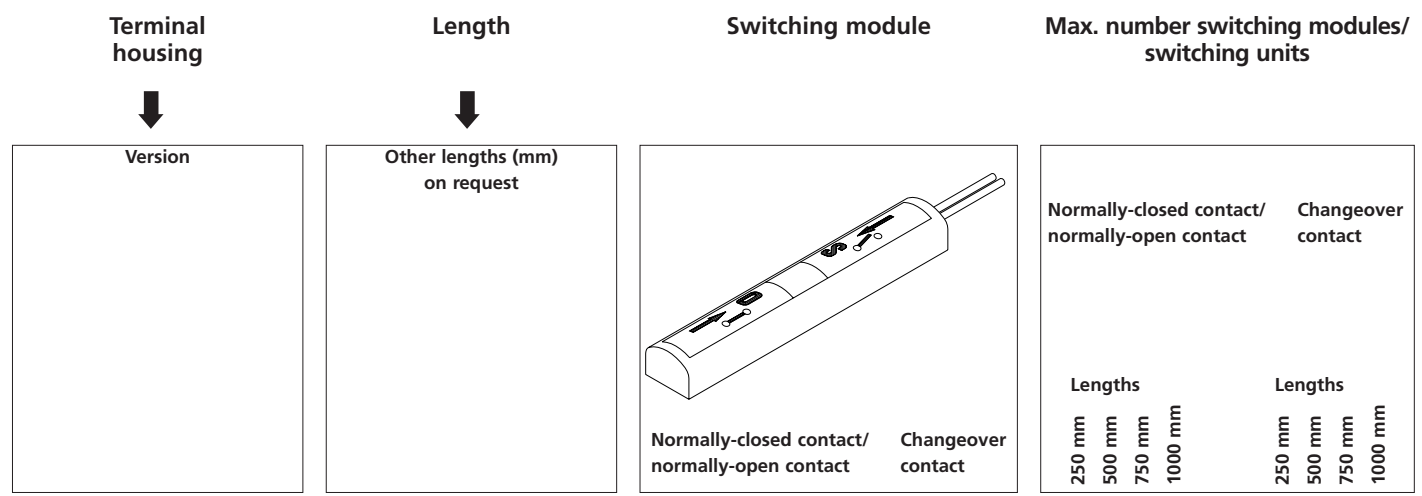


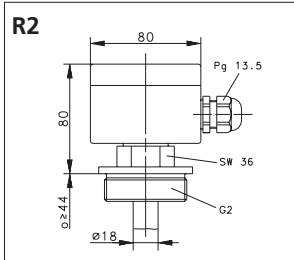
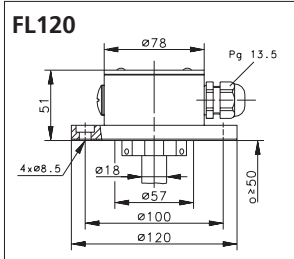
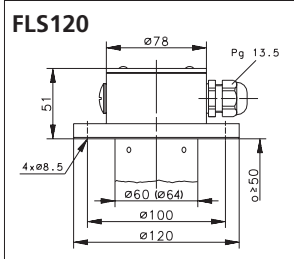
Flange enclosures Ø120 with gush protection

G-Al Si 12	1.4571	—	—
G-Al Si 12	MS 63 protect.: CuZn37	P	L
G-Al Si 12	PVC	—	—

5	6	7	8
Adjustable	Connecting head		Length
VST		/	

Note!
Switching devices without switching modules!
Order separately, please!




Terminal housing	Length	Switching module	Max. number switching modules/ switching units	
<p>R2</p> 	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
<p>FL120</p> 	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
<p>FLS120</p> 	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3
	250 / 500 / 750 / 1000	491.0007.069 491.6007.075	2 / 3 / 4 / 4	2 / 3 / 3 / 3

Mini-level float switches

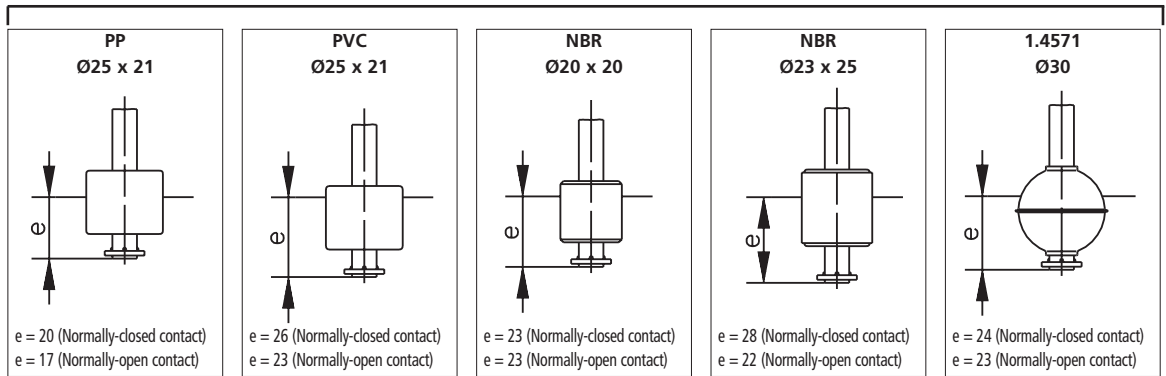
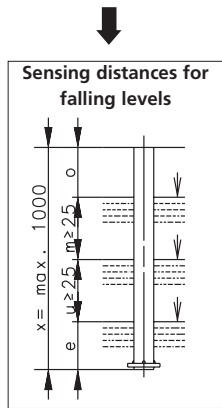
Type code

Ordering examples
s. page 222

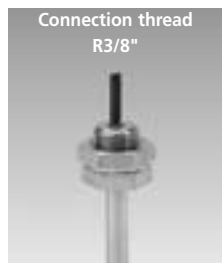
Position	1	2	3
Version	Mini float switch	Float	
Type	MS		-

Min./max. dimensions

Float



K1	K2	K3	K4	N1
K1	K2	K3	K4	N1
K1	—	K3	K4	—
—	K2	K3	K4	—



K1	K2	K3	K4	N1
K1	K2	K3	K4	N1
K1	—	K3	K4	—
—	K2	K3	K4	—

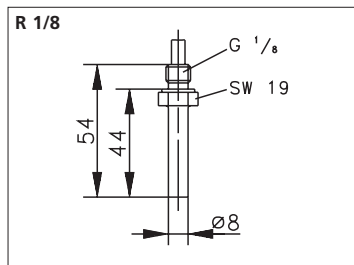


K1	K2	K3	K4	N1
K1	K2	K3	K4	N1
K1	—	K3	K4	—
—	K2	K3	K4	—

4	5	6	7	8	9	10
Enclosure material		Terminal housing		Switching function		Characteristics (see page 223)
□	-	□	-	□		□

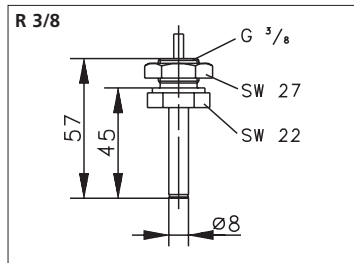
Enclosure material	Terminal housing	Switching function	max. total length	max. number of switching points	Cable length in m
↓	↓	↓			
<p>Ni = 1.4571</p> <p>MS = MS 63</p> <p>PP = polypropylene</p> <p>PVC = polyvinyl chloride version</p>	Version	<p>S = Normally-open contact (250 V-0.5 A-10 VA)</p> <p>O = Normally-closed contact (250 V-0.5 A-10 VA)</p> <p>U = Changeover contact (100 V-0.3 A-3 VA)</p>	X = max. total length	max. number of switching points	Cable length in m

- Ni
- MS
- PP
- PVC



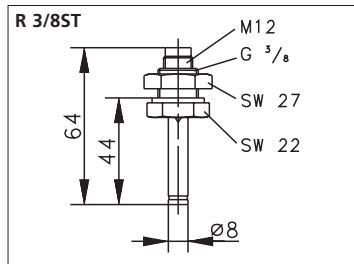
S	O	U	1000	3	1
S	O	U	1000	3	1
S	O	U	40.5	1	1
S	O	U	500	3	1

- Ni
- MS
- PP
- PVC



S	O	U	1000	3	1
S	O	U	1000	3	1
S	O	U	40.5	1	1
S	O	U	500	3	1

- Ni
- MS
- PP
- PVC




S	O	U	1000	3	—
S	O	U	1000	3	—
S	O	U	40.5	1	—
S	O	U	500	3	—

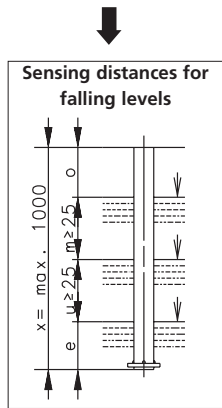
Mini-level float switches

Type code

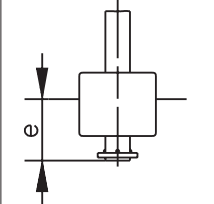
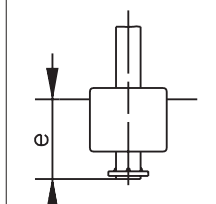
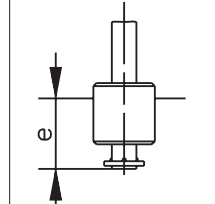
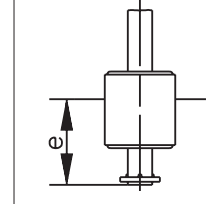
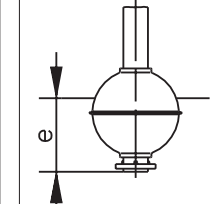
Ordering examples
s. page 222

Position	1	2	3
Version	Mini level float switch	Float	
Type	MS		-

Min./max. dimensions



Float

PP Ø25 x 21	PVC Ø25 x 21	NBR Ø20 x 20	NBR Ø23 x 25	1.4571 Ø30
				
e = 20 (Normally-closed contact) e = 17 (Normally-open contact)	e = 26 (Normally-closed contact) e = 23 (Normally-open contact)	e = 23 (Normally-closed contact) e = 23 (Normally-open contact)	e = 28 (Normally-closed contact) e = 22 (Normally-open contact)	e = 24 (Normally-closed contact) e = 23 (Normally-open contact)

Connection thread Pg7



K1	K2	K3	K4	N1
K1	K2	K3	K4	N1
K1	—	K3	K4	—
—	K2	K3	K4	—

MSKS-PA-FL36-OS



—	—	—	—	—
---	---	---	---	---

MSKS-PA-FL36ST-OS



—	—	—	—	—
---	---	---	---	---

4	5	6	7	8	9	10
Enclosure material		Terminal housing		Switching function		Characteristics (see page 223)
□	-	□	-	□		□

Enclosure material

Terminal housing

Switching function



Ni = 1.4571
 MS = MS 63
 PP = polypropylene
 PVC = polyvinyl chloride
 Version

Version

S = Normally-open contact
 (250 V-0.5 A-10 VA)
 O = Normally-closed contact
 (250 V-0.5 A-10 VA)
 U = Changeover contact
 (100 V-0.3 A-3 VA)

X = max. total length
 max. number of switching points
 Cable length in m

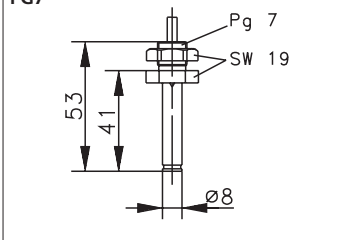
Ni

MS

PP

PVC

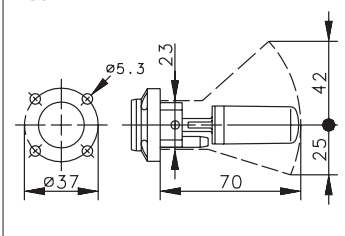
PG7



S	O	U	1000	3	1
S	O	U	1000	3	1
S	O	U	40.5	1	1
S	O	U	500	3	1

PA12
 (Enclosure & float)

FL36

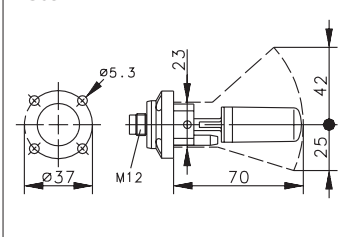


S O —
 (with 1 m cable)

for lateral mounting

PA12
 (Enclosure & float)

FL36ST




S O —
 (with plug)

for lateral mounting

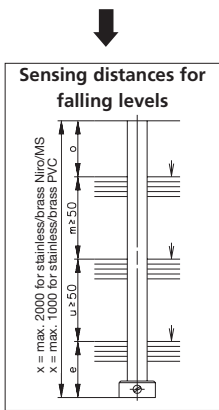
Standard float switches

Type code

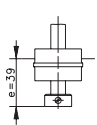
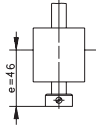
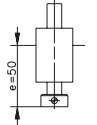
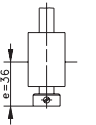
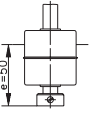
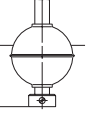
Ordering example
s. page 222

Position	1	2	3	4
Version	Magnetic float switch	Output type reed contact	Combination switching tube/float	
Typ	M	A		-

Min./max. dimensions



Combination switching tube/float

Material connecting head	Material switching tube	POM Ø40 x 27	PVC Ø42 x 44	PP Ø30 x 44	NBR Ø30 x 44	1.4571 Ø45 x 47	1.4571 Ø52
							



1.4571	1.4571	A	V	T	R	N	E
MS 59	MS 63	M	L	C	S	P	F
PVC	PVC	K	D	I	U	—	—



1.4571	1.4571	A	V	T	R	N	E
MS 58 / gal. Zn25C	MS 63	M	L	C	S	P	F
PVC	PVC	K	D	I	U	—	—




PC	1.4571	A	V	T	R	N	E
PC	MS 63	M	L	C	S	P	F
PC	PVC	K	D	I	U	—	—

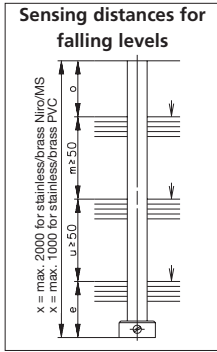
Standard float switches

Type code

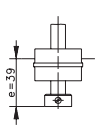
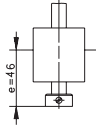
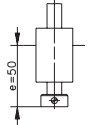
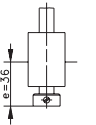
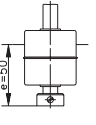
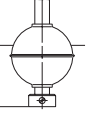
Ordering examples
s. page 222

Position	1	2	3	4
Version	Magnetic float switch	Output type reed contact	Combination switching tube/float	
Type	M	A		-

Min./max. dimensions



Combination switching tube/float

		POM Ø40 x 27	PVC Ø42 x 44	PP Ø30 x 44	NBR Ø30 x 44	1.4571 Ø45 x 47	1.4571 Ø52
Material connecting head	Material switching tube						



PC	1.4571	A	V	T	R	N	E
PC	MS 63	M	L	C	S	P	F
PC	PVC	K	D	I	U	—	—



G-AI Si 12	1.4571	A	V	T	R	N	E
G-AI Si 12	MS 63	M	L	C	S	P	F
G-AI Si 12	PVC	K	D	I	U	—	—



G-AI Si 12	1.4571	A	V	T	R	N	E
G-AI Si 12	MS 63	M	L	C	S	P	F
G-AI Si 12	PVC	K	D	I	U	—	—

5	6	7	8	9	10	11	12	13
General design	Number of switching points	Switching function		Switching capacity	Connecting head	Standard programme		Special features (see page 223)
7	□	□		□	□	S		□


		Number of switching points	Switching function	Switching capacity	Connecting head	
1.4571 Ø62	1.4571 Ø84	1 switching point 2 switching points 3 switching points	1 normally-closed contact 2 normally-open contact 3 changeover contact 4 mixed version (CO, NC, NO)	max. 0.5 A - 30VA - 250 V max. 1A - 60VA - 250 V	straight type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions.	bent type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions.
					ID letter connecting head	ID letter connecting head

B	G	1/2	1/2/3/4	K	L	TO		TW	
O	H	1/2	1/2/3/4	K	L	TO		TW	
—	—	1/2	1/2/3/4	K	L	TO		—	
B	G	1/2/3	1/2/3/4	K	L	S		B	
O	H	1/2/3	1/2/3/4	K	L	S		B	
—	—	1/2/3	1/2/3/4	K	L	S		B	
B	G	1/2/3	1/2/3/4	K	L	FL 120		WFL 120	
O	H	1/2/3	1/2/3/4	K	L	FL 120		WFL 120	
—	—	1/2/3	1/2/3/4	K	L	FL 120		WFL 120	

Standard float switches

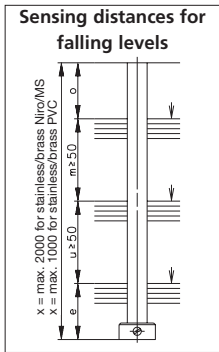
Type code

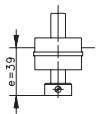
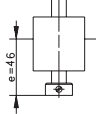
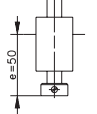
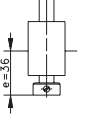
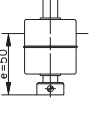
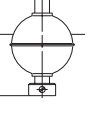
Ordering examples
s. page 222

Position	1	2	3	4
Version	Magnetic float switch	Output type reed contact	Combination switching tube/float	
Type	M	A		-

Min./max. dimensions

Combination switching tube/float



Material floats	POM Ø40 x 27	PVC Ø42 x 44	PP Ø30 x 44	NBR Ø30 x 44	1.4571 Ø45 x 47	1.4571 Ø52
Material connecting head						
Material switching tube	$e=39$	$e=16$	$e=50$	$e=36$	$e=50$	$e=50$



1.4571 / G-Al Si 12	1.4571	A	V	T	R	N	E
—	MS 63	—	—	—	—	—	—
PVC / G-Al Si 12	PVC	K	D	I	U	—	—



1.4571 / G-Al Si 12	1.4571	A	V	T	R	N	E
—	MS 63	—	—	—	—	—	—
PVC / G-Al Si 12	PVC	K	D	I	U	—	—



1.4571 / G-Al Si 12	1.4571	A	V	T	R	N	E
—	MS 63	—	—	—	—	—	—
PVC / Polyester	PVC	K	D	I	U	—	—

5	6	7	8	9	10	11	12	13
General design	Number of switching points	Switching function		Switching capacity	Connecting head	Standard programme		Special features (see page 223)
7	□	□		□	□	S		□

		Number of switching points	Switching function	Switching capacity	Connecting head	
1.4571 Ø62	1.4571 Ø84	1 switching point 2 switching points 3 switching points	1 normally-closed contact 2 normally-open contact 3 changeover contact 4 mixed version (CO, NC, NO)	max. 0.5 A - 30VA - 250 V max. 1A - 60VA - 250 V	straight type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions.	bent type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions.
		↓	↓	↓	↓	↓
		□	□	□	□	□

B	G	1/2/3	1/2/3/4	K	L	DN 50		WDN 50	
—	—	—	—	—	—	—		—	
—	—	1/2/3	1/2/3/4	K	L	DN 50		WDN 50	
B	G	1/2/3	1/2/3/4	K	L	DN 65		WDN 65	
—	—	—	—	—	—	—		—	
—	—	1/2/3	1/2/3/4	K	L	DN 65		WDN 65	
B	G	1/2/3	1/2/3/4	K	L	R 1.5		—	—
—	—	—	—	—	—	—		—	
—	—	1/2/3	1/2/3/4	K	L	R 1.5		—	—

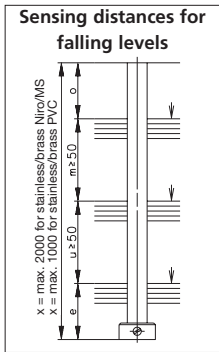
Standard float switches

Type code

Position	1	2	3	4
Version	Magnetic float switch	Output type reed contact	Combination switching tube/float	
Type	M	A	Ⓚ	-

Min./max. dimensions

Combination switching tube/float



Material floats	POM Ø40 x 27	PVC Ø42 x 44	PP Ø30 x 44	NBR Ø30 x 44	1.4571 Ø45 x 47	1.4571 Ø52
Material connecting head						
Material switching tube						

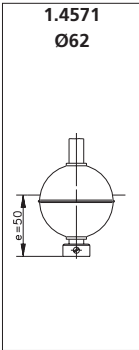
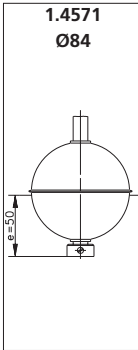


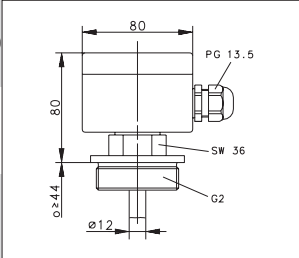
1.4571 / G-Al Si 12	1.4571	A	V	T	R	N	E
—	MS 63	—	—	—	—	—	—
PVC / Polyester	PVC	Ⓚ	D	I	U	—	—

Ordering examples Ⓚ MAK-721 KR2S

with specification o=_____ ; u=_____ (see order form page 238)

5	6	7	8	9	10	11	12	13
General design	Number of switching points	Switching function		Switching capacity	Connecting head	Standard programme		Special features (s. below)
7	②	①		Ⓚ	Ⓜ	S		

		Number of switching points	Switching function	Switching capacity	Connecting head	
		↓ 1 switching point 2 switching points 3 switching points	↓ 1 normally-closed contact 2 normally-open contact 3 changeover contact 4 mixed version (CO, NC, NO)	↓ max. 0.5 A - 30VA - 250 V max. 1A - 60VA - 250 V	↓ straight type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions. ID letter connecting head	↓ bent type type in illustration in 1.4571 material. Slight variations may occur for PVC and MS (brass) versions. ID letter connecting head

B	G	1 / ② / 3	① / 2 / 3 / 4	Ⓚ	L	Ⓜ	
—	—	—	—	—	—	—	
—	—	1/2/3	1/2/3/4	K	L	R2	

Special features

- Temperature monitoring
PT 100 (P1) / PT 1000 (P10)
- Bi-metal switch

We can produce tailor-made designs for specific applications to suit individual customer requirements.