



## Level Sensors

reed contact chain



measuring  
•  
monitoring  
•  
analysing

MM



- Measuring length: max. 6000 mm
- Measuring accuracy:  
0.5% for »L« = 2000 mm
- Pressure: max. 30 bar
- Temperature max.: 130 °C
- Connection: G 3/8 ... G 2, 3/8" ... 2" NPT  
flange: DN 40 ... DN 125, ANSI 1 1/2" ... 4"
- Material: stainless steel, PVC, PP, PVDF
- Connection heads:  
aluminium, PA, PP, ABS, stainless steel
- Constant level indication regardless of  
conductivity, pressure and temperature
- Interface level measurement (option)
- ATEX-Certificate: Ex ia, Ex d



N2

KOBOLD companies worldwide:

AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHINA, CZECHIA, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, RUSSIA, SPAIN, SWITZERLAND, THAILAND, TUNISIA, TURKEY, USA, VIETNAM

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**Description**

KOBOLD level sensors/transmitters are used for continuous level indication and monitoring of all types of liquids. It is based on the float principle with magnetic transmission in a 3-wire potentiometer circuit.

Its simple design with only one moving part, the float, makes the transmitter particularly reliable.

A range of sensors in different materials and designs, and with different connections, are available for measured-value acquisition.

**Specific designs are available.**

**Function principle**

A float with a magnetic system switch small reed contacts through the guide tube.

The reed switches with resistances form a measuring chain that generates a voltage proportional to the height of the level. This sensing technique is similar to the operation of a sliding contact on a resistance potentiometer.

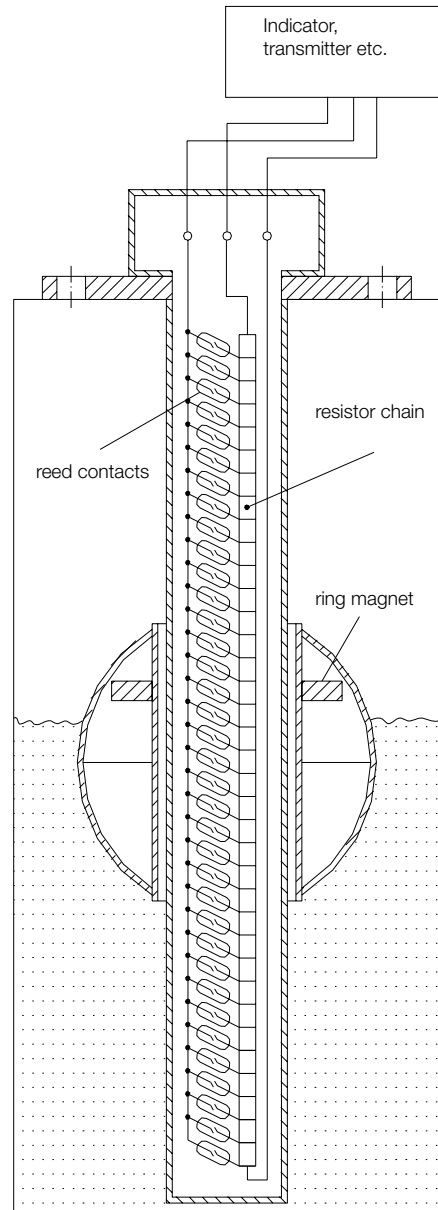
The voltage sampled from the chain is transferred to a transmitter (option) which output a current signal proportional to the liquid level or, depending on the design, also allows limit values to be monitored.

The transmitter can be mounted in the terminal box or as an external instrument. Local analogue or digital indication can also be provided.

**Applications**

- Waste water and clarification plants
- Feed and batching tanks
- Chemical tanks
- Manufacturing industry
- Power plants
- Pharmaceutical industry
- Beverage and food industry

**Design of sensor**



### Float designs

Type	Form	Materials	Float outside Ø [mm]	Height [mm]	Bore hole Ø [mm]	Min. liquid density [kg/dm³]	Temperature range	Nominal pressure at 20 °C
M05	Cylinder hollow	PP	42	40	14	>0.6	-10 ... +80°C	3 bar
M07	Cylinder hollow	PVC-U	42	40	14	>0.9	0 ... +60°C	3 bar
M08	Cylinder hollow	Stainless steel 1.4404	38	52	15	>0.55	-20 ... +130°C	20 bar
M10	Ball hollow	Stainless steel 1.4404	52	52	15	>0.6	-20 ... +130°C	30 bar
M13	Cylinder hollow	PVDF	38	60	18	>0.6	-10 ... +125°C	2 bar
M15	Cylinder hollow	PP	60	60	18	>0.4	-10 ... +80°C	6 bar
M16	Cylinder hollow	PVC-U	60	60	18	>0.6	0 ... +60°C	3 bar
M20	Ball hollow	Stainless steel 1.4404	95	95	20.8	>0.5	-20 ... +130°C	15 bar

### ATEX-Certificate:

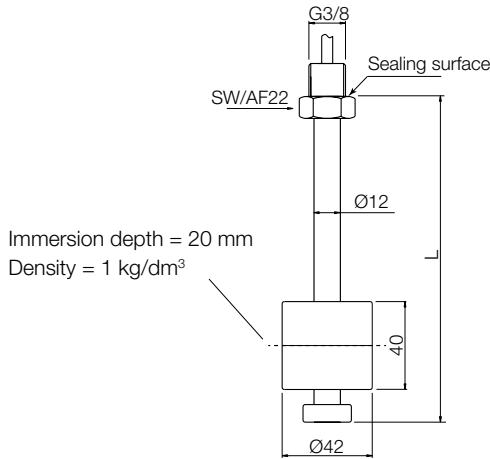
⊕ II 1 G Ex ia IIC T6 Ga (LOM 06ATEX2054X (supplement no. 3))  
-20 ≤ Ta ≤ +60 °C

⊕ II 1/2G Ex d II C T1 ... T6 Ga/Gb (LOM 14ATEX2075 X)  
II 2D Ex t IIIC T410 ... T85 °C Db

Possible options available (in case of cable electrical connection):

- PT100 (3-wire, category B)
- Temperature switch (N/C contact) at 65 °C, 80 °C or 105 °C (other switching outputs on request)
- Interface level measurement at density difference 150 g/l

**Design PP**



**Technical Details**

Min. length of guide tube: 300 mm  
 Max. length of guide tube: 2000 mm  
 Guide tube and screwed fitting: PP  
 Min. liquid density: >0.6 kg/dm<sup>3</sup>  
 Max. pressure (at 20°C): 3 bar  
 Temperature range: -10°C ... +80°C  
 Max. temperature PVC cable: 70°C  
 Max. temp. silicone cable: 80°C  
 Max. resistance of meas. chain: 36 Ω for each 10 mm, when total length <1900 mm  
 10 Ω for each 10 mm, when total length ≥1900 mm  
 Installation position: vertical ±30°  
 Cable length: 1000 mm  
 Protection: IP 65  
 Connection heads: see following pages

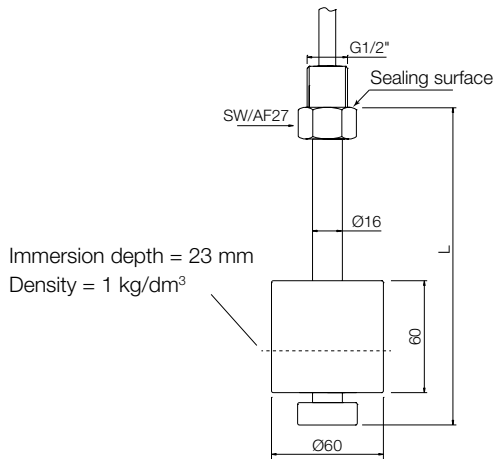
Model	Type	Process connection	Output	ATEX
MM-	M05	R10 = G 3/8 N10 = 3/8" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval option »0«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval option »0«, 5350B (ATEX) for approval option »E«

**Design PP**

for low densities



**Technical Details**

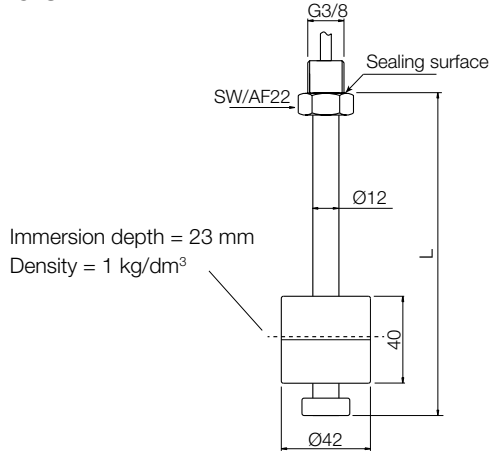
Min. length of guide tube: 300 mm  
 Max. length of guide tube: 5000 mm  
 Guide tube and screwed fitting: PP  
 Min. liquid density: >0.4 kg/dm<sup>3</sup>  
 Max. pressure (at 20°C): 6 bar  
 Temperature range: -10°C ... +80°C  
 Max. temperature PVC cable: 70°C  
 Max. temp. silicone cable: 80°C  
 Max. resistance of meas. chain: 36 Ω for each 10 mm, when total length <1900 mm  
 10 Ω for each 10 mm, when total length ≥1900 mm  
 Installation position: vertical ±30°  
 Cable length: 1000 mm  
 Protection: IP 65  
 Connection heads: see following pages

Model	Type	Process connection	Output	ATEX
MM-	M15	R15 = G 1/2 N15 = 1/2" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval option »0«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval option »0«, 5350B (ATEX) for approval option »E«

**Design PVC-U**



**Technical Details**

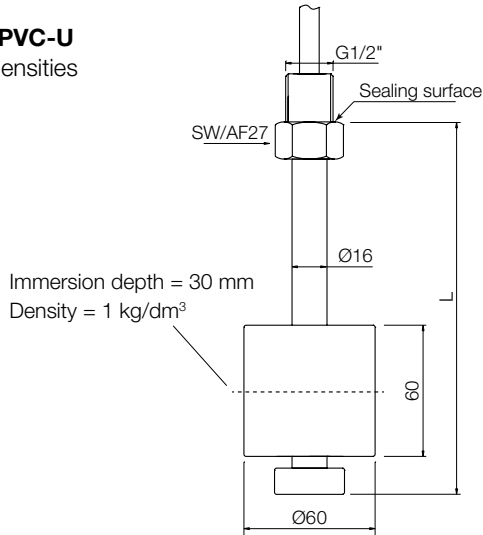
- Min. length of guide tube: 300 mm
- Max. length of guide tube: 2000 mm
- Guide tube and screwed fitting: PVC-U
- Min. liquid density: >0.9 kg/dm<sup>3</sup>
- Max. pressure (at 20°C): 3 bar
- Temperature range: 0°C... +60°C
- Max. temperature PVC cable: 60°C
- Max. temp. silicone cable: 60°C
- Max. resistance of meas. chain: 36 Ω for each 10 mm when total length <1900 mm  
10 Ω for each 10 mm when total length ≥1900 mm
- Installation position: vertical ±30°
- Cable length: 1000 mm
- Protection: IP 65
- Connection heads: see following pages

Model	Type	Process connection	Output	ATEX
MM-	M07	R10 = G 3/8 N10 = 3/8" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4-20 mA 2-wire (5333D) H = transmitter 4-20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval option »0«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval option »0«, 5350B (ATEX) for approval option »E«

**Design PVC-U**  
for low densities



**Technical Details**

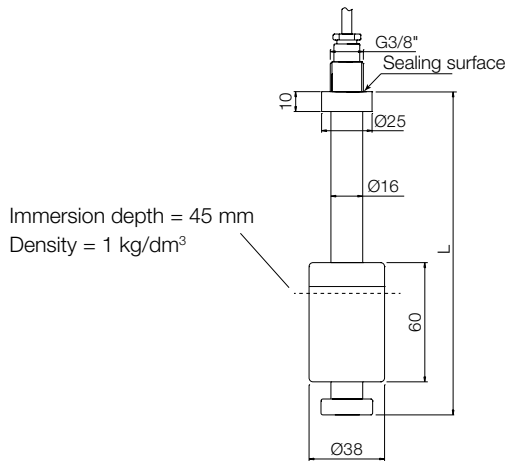
- Min. length of guide tube: 300 mm
- Max. length of guide tube: 5000 mm
- Guide tube and screwed fitting: PVC-U
- Min. liquid density: >0.6 kg/dm<sup>3</sup>
- Max. pressure (at 20°C): 3 bar
- Temperature range: 0°C... +60°C
- Max. temperature PVC cable: 60°C
- Max. temp. silicone cable: 60°C
- Max. resistance of meas. chain: 36 Ω for each 10 mm when total length <1900 mm  
10 Ω for each 10 mm when total length ≥1900 mm
- Installation position: vertical ±30°
- Cable length: 1000 mm
- Protection: IP 65
- Connection heads: see following pages

Model	Type	Process connection	Output	ATEX
MM-	M16	R15 = G 1/2 N15 = 1/2" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4-20 mA 2-wire (5333D) H = transmitter 4-20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval option »0«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval option »0«, 5350B (ATEX) for approval option »E«

**Design PVDF**



**Technical Details**

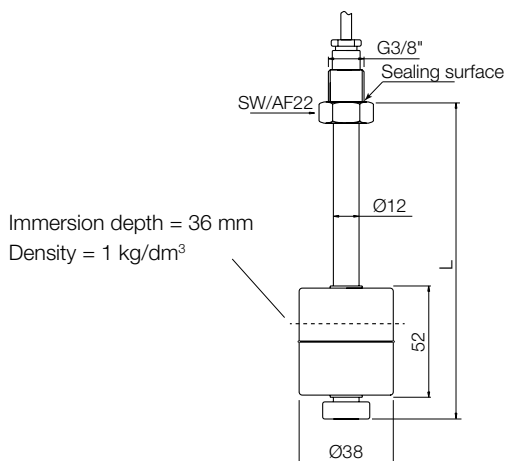
Min. length of guide tube: 300 mm  
 Max. length of guide tube: 5000 mm  
 Guide tube and screwed fitting: PVDF  
 Min. liquid density: >0.6 kg/dm<sup>3</sup>  
 Max. pressure (at 20°C): 2 bar  
 Temperature range: -10°C ... +125°C  
 Max. temperature PVC cable: 70°C  
 Max. temp. silicone cable: 125°C  
 Max. resistance of meas. chain: 36 Ω for each 10 mm, when total length <1900 mm  
 10 Ω for each 10 mm, when total length ≥1900 mm  
 Installation position: vertical ± 30°  
 Cable length: 1000 mm  
 Protection: IP 65  
 Connection heads: see following pages

Model	Type	Process connection	Output	ATEX
MM-	M13	R10 = G 3/8 N10 = 3/8" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	O = without E = Ex ia

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval option »O«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval option »O«, 5350B (ATEX) for approval option »E«

**Design stainless steel 1.4404**



**Technical Details**

Min. length of guide tube: 300 mm  
 Max. length of guide tube: 6000 mm  
 Guide tube and screwed fitting: stainless steel 1.4404  
 Min. liquid density: >0.55 kg/dm<sup>3</sup>  
 Max. pressure (at 20°C): 20 bar  
 Temperature range: -20°C ... +130°C  
 Max. temperature PVC cable: 70°C  
 Max. temp. silicone cable: 130°C  
 Max. resistance of meas. chain: 36 Ω for each 10 mm, when total length <1900 mm  
 10 Ω for each 10 mm, when total length ≥1900 mm  
 Installation position: vertical ± 30°  
 Cable length: 1000 mm  
 Protection: IP 65  
 Connection heads: see following pages

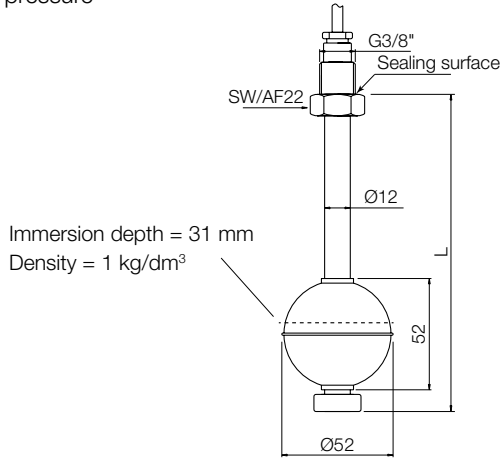
Model	Type	Process connection	Output	ATEX
MM-	M08	R10 = G 3/8 N10 = 3/8" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	O = without E = Ex ia F <sup>4)</sup> = Ex d

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval options »O« and »F«, 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval options »O« and »F«, 5350B (ATEX) for approval option »E«  
<sup>4)</sup> Only available for head models: L, C, E.

**Design stainless steel 1.4404**

for high pressure



**Technical Details**

- Min. length of guide tube: 300 mm
- Max. length of guide tube: 6000 mm
- Guide tube and screwed fitting: stainless steel 1.4404
- Min. liquid density: >0.6 kg/dm<sup>3</sup>
- Max. pressure (at 20 °C): 30 bar
- Temperature range: -20 °C ... +130 °C
- Max. temperature PVC cable: 70 °C
- Max. temp. silicone cable: 130 °C
- Max. resistance of meas. chain: 36 Ω for each 10 mm when total length <1900 mm  
10 Ω for each 10 mm when total length ≥1900 mm
- Installation position: vertical ± 30°
- Cable length: 1000 mm
- Protection: IP 65
- Connection heads: see following pages

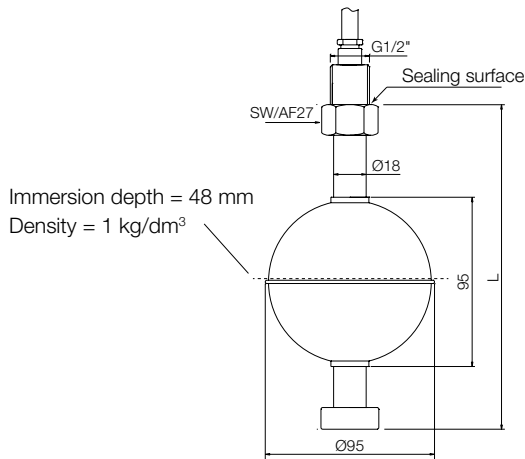
Model	Type	Process connection	Output	ATEX
MM-	M10	R10 = G 3/8 N10 = 3/8" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia F <sup>4)</sup> = Ex d

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval options »0« and "F", 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval options »0« and "F", 5350B (ATEX) for approval option »E«  
<sup>4)</sup> Only available for head models: L, C, E.

**Design stainless steel 1.4404**

for low densities



**Technical Details**

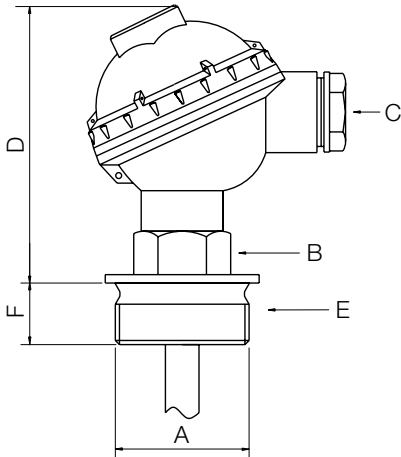
- Min. length of guide tube: 300 mm
- Max. length of guide tube: 6000 mm
- Guide tube and screwed fitting: stainless steel 1.4404
- Min. liquid density: >0.5 kg/dm<sup>3</sup>
- Max. pressure (at 20 °C): 15 bar
- Temperature range: -20 °C ... +130 °C
- Max. temperature PVC cable: 70 °C
- Max. temp. silicone cable: 130 °C
- Max. resistance of meas. chain: 36 Ω for each 10 mm when total length <1900 mm  
10 Ω for each 10 mm when total length ≥1900 mm
- Installation position: vertical ± 30°
- Cable length: 1000 mm
- Protection: IP 65
- Connection heads: see following pages

Model	Type	Process connection	Output	ATEX
MM-	M20	R15 = G 1/2 N15 = 1/2" NPT XXX = see page 8 - 11	P = resistance output, 1 m PVC cable S = resistance output, 1 m silicone cable Y <sup>1)</sup> = resistance output, special cable 2 = resistance output, no cable M = transmitter 4 - 20 mA 2-wire (5333D) H = transmitter 4 - 20 mA HART® (5337) <sup>2)</sup> F = transmitter Profibus®/Fieldbus® (5350) <sup>3)</sup>	0 = without E = Ex ia F <sup>4)</sup> = Ex d

**Note:** Please specify the length »L« in writing.

<sup>1)</sup> Please specify in writing length and type of cable  
<sup>2)</sup> 5337A for approval options »0« and "F", 5337D (ATEX) for approval option »E«  
<sup>3)</sup> 5350A for approval options »0« and "F", 5350B (ATEX) for approval option »E«  
<sup>4)</sup> Only available for head models: L, C, E.

**Model 1**



**PP screwed cover housing**

**Dimensions and materials**

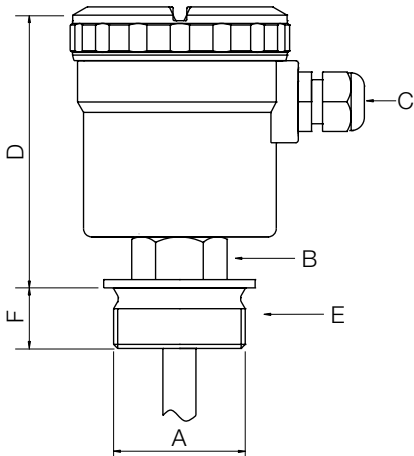
Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
1	R8 = G 1½	30 AF	PG16	100 mm	PP	22 mm	90°C <sup>2)</sup>
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Size of process connection must be according with float size

<sup>2)</sup> Max. temperature 85°C if transmitter output is selected

<sup>3)</sup> Length »L« includes thread length

**Model 3**



**PA screwed cover housing**

**Dimensions and materials**

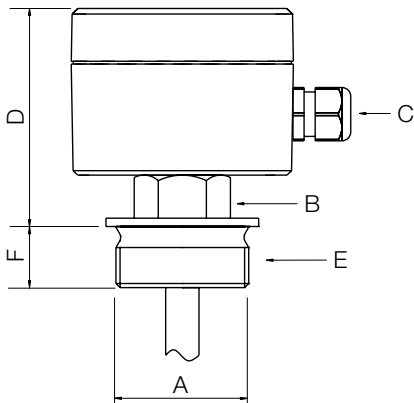
Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
3	R8 = G 1½	30 AF	M16x1.5	104 mm	1.4404	22 mm	90°C <sup>2)</sup>
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Size of process connection must be according with float size

<sup>2)</sup> Max. temperature 85°C if transmitter output is selected

<sup>3)</sup> Length »L« includes thread length

**Model 4**



**Aluminium housing**

**Dimensions and materials**

Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
4	R8 = G 1½	30 AF	M16x1.5	73 mm	1.4404	22 mm	90°C <sup>2)</sup>
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

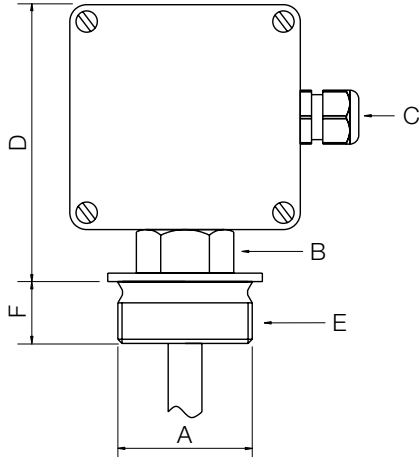
<sup>1)</sup> Size of process connection must be according with float size

<sup>2)</sup> Max. temperature 85°C if transmitter output is selected

<sup>3)</sup> Length »L« includes thread length



**Model 5**



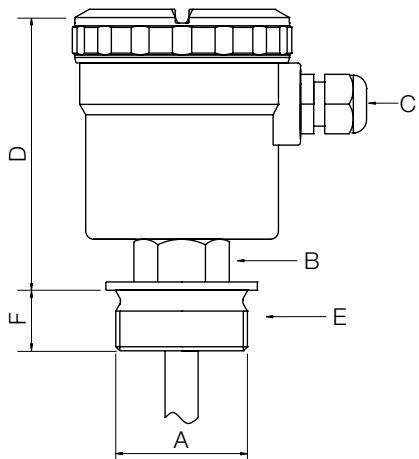
**ABS housing**

**Dimensions and materials**

Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>2)</sup> (F)	t <sub>max</sub>
5	R8 = G 1½	30 AF	M16x1.5	100 mm	PVC	22 mm	60°C
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Size of process connection must be according with float size  
<sup>2)</sup> Length »L« includes thread length

**Model 6**



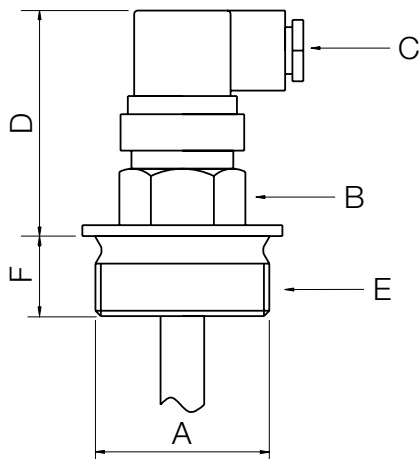
**PA screwed cover housing**

**Dimensions and materials**

Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
6	R8 = G 1½	30 AF	M16x1.5	104 mm	PVDF	22 mm	90°C <sup>2)</sup>
	N8 = 1½" NPT					25 mm	

<sup>1)</sup> Size of process connection must be according with float size  
<sup>2)</sup> Max. temperature 85°C if transmitter output is selected  
<sup>3)</sup> Length »L« includes thread length

**Model 7**



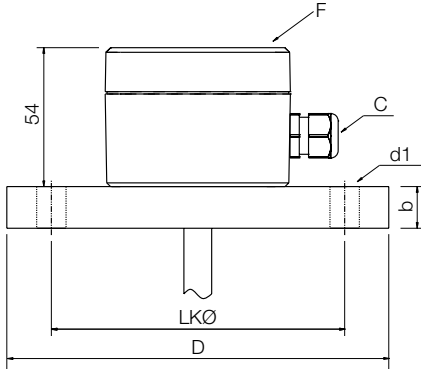
**Connector with connecting box**

**Dimensions and materials**

Model <sup>2)</sup>	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
7 (3-pin)	R8 = G 1½	30 AF	M16x1.5	65 mm	PP	22 mm	90°C
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Size of process connection must be according with float size  
<sup>2)</sup> To be chosen only with resistance output  
<sup>3)</sup> Length »L« includes thread length

**Model 9**



**Flange according to DIN EN 1092-1 PN16/ANSI B 16.5 150 lbs RF**

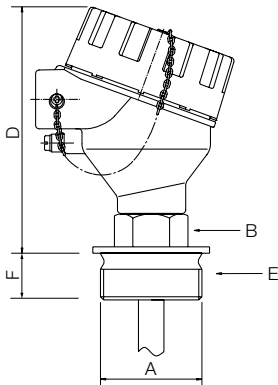
**Dimensions and materials**

Model	Flange size 1.4404 <sup>1)</sup>	D	b	LKØ	d1	Electrical connection (C)	Housing (F)	t <sub>max</sub>
9	F9 = DN50	165	18	125	4 x Ø18	M16 x 1.5	Al	90°C <sup>2)</sup>
	F0 = DN65	185	18	145	4 x Ø18			
	FB = DN80	200	20	160	4 x Ø18			
	FC = DN100	220	20	180	8 x Ø18			
	FD = DN125	250	22	210	8 x Ø18			
	A8 = 1½"	127	17.5	98.6	4 x Ø15.7			
	A9 = 2"	152.4	19.1	120.7	4 x Ø19.1			
	A0 = 2½"	177.8	22.4	139.7	4 x Ø19.1			
	AB = 3"	190.5	23.9	152.4	4 x Ø19.1			
AC = 4"	228.6	23.9	190.5	8 x Ø19.1				

<sup>1)</sup> Other materials on request (PP, PVDF, PVC-U)

<sup>2)</sup> Max. temperature 85°C if transmitter output is selected

**Model L**



**Aluminium housing, for application ATEX II GD Ex d IIC T1...T6**

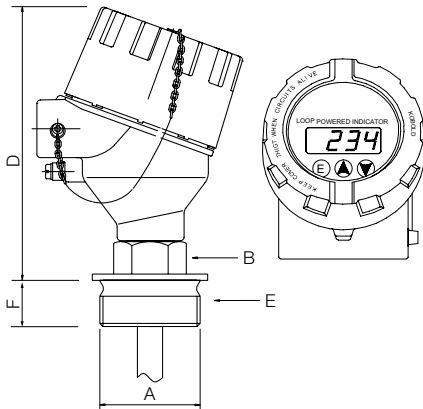
**Dimensions and materials**

Model	Process connection (A) <sup>1)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>2)</sup> (F)	t <sub>max</sub>
L	R8 = G 1½	30 AF	M20	145 mm	1.4404	22 mm	90°C
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Size of process connection must be according with float size

<sup>2)</sup> Length »L« includes thread length

**Model C/E**



**Aluminium housing with display for applications ATEX II GD Ex d IIC T1...T6**

**Dimensions and materials**

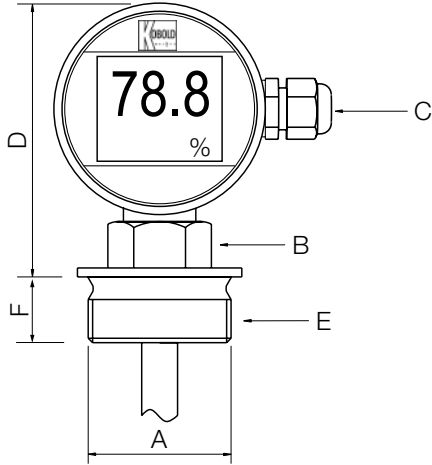
Model <sup>1)</sup>	Process connection (A) <sup>2)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>
C (LCD display)	R8 = G 1½	30 AF	M20	155 mm	1.4404	22 mm	70°C
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	
E (LED display)	R8 = G 1½	30 AF	M20	155 mm	1.4404	22 mm	80°C
	R9 = G 2	36 AF				24 mm	
	N8 = 1½" NPT	30 AF				25 mm	
	N9 = 2" NPT	36 AF				27 mm	

<sup>1)</sup> Only with 4...20 mA transmitter. Loop powered display

<sup>2)</sup> Size of process connection must be according with float size

<sup>3)</sup> Length »L« includes thread length

**Model D/R**



**Stainless steel 1.4404 head with touch screen LCD display**

**Dimensions and materials**

Model <sup>1)</sup>	Process connection (A) <sup>2)</sup>	Width across flats (B)	Electrical connection (C)	Overall height (D)	Screwed fitting (E)	Thread length <sup>3)</sup> (F)	t <sub>max</sub>			
<b>D</b>	<b>R8</b> = G 1½	SW 30	M16x1,5	112 mm	1.4404	22 mm	80°C			
	<b>R9</b> = G 2	SW 36				24 mm				
	<b>N8</b> = 1½" NPT	SW 30				25 mm				
	<b>N9</b> = 2" NPT	SW 36				27 mm				
<b>R</b> (with 2 relay output)	<b>R8</b> = G 1½	SW 30								22 mm
	<b>R9</b> = G 2	SW 36								24 mm
	<b>N8</b> = 1½" NPT	SW 30								25 mm
	<b>N9</b> = 2" NPT	SW 36								27 mm

<sup>1)</sup> Only with 4...20 mA transmitter. Loop powered display

<sup>2)</sup> Size of process connection must be according with float size

<sup>3)</sup> Length »L« includes thread length



Heads selector for Magnetic level MM series. Direct connection

Heads	M05 Ø42 mm	M07 Ø40 mm	M08 Ø38 mm	M10 Ø52 mm	M13 Ø38 mm	M15 Ø60 mm	M16 Ø60 mm	M20 Ø95 mm
1R8	x	x	x		x			
1R9	x	x	x	x	x			
1N8	x	x	x		x			
1N9	x	x	x	x	x			
3R8	x	x	x		x			
3R9	x	x	x	x	x			
3N8	x	x	x		x			
3N9	x	x	x	x	x			
4R8	x	x	x		x			
4R9	x	x	x	x	x			
4N8	x	x	x		x			
4N9	x	x	x	x	x			
5R8	x	x	x		x			
5R9	x	x	x	x	x			
5N8	x	x	x		x			
5N9	x	x	x	x	x			
6R8	x	x	x		x			
6N8	x	x	x		x			
7R8	x	x	x		x			
7R9	x	x	x	x	x			
7N8	x	x	x		x			
7N9	x	x	x	x	x			
LR8	x	x	x		x			
LR9	x	x	x	x	x			
LN8	x	x	x		x			
LN9	x	x	x	x	x			
CR8	x	x	x		x			
CR9	x	x	x	x	x			
CN8	x	x	x		x			
CN9	x	x	x	x	x			
ER8	x	x	x		x			
ER9	x	x	x	x	x			
EN8	x	x	x		x			
EN9	x	x	x	x	x			
DR8	x	x	x		x			
DR9	x	x	x	x	x			
DN8	x	x	x		x			
DN9	x	x	x	x	x			
RR8	x	x	x		x			
RR9	x	x	x	x	x			
RN8	x	x	x		x			
RN9	x	x	x	x	x			



**Heads Selector for Magnetic Level MM Series. Direct connection (continued)**

Heads	M05 Ø42 mm	M07 Ø40 mm	M08 Ø38 mm	M10 Ø52 mm	M13 Ø38 mm	M15 Ø60 mm	M16 Ø60 mm	M20 Ø95 mm
For flanged connection, please ensure that float diameter is less than flange hole diameter!								
9F8			x		x			
9F9	x	x	x	x	x			
9F0	x	x	x	x	x	x	x	
9FB	x	x	x	x	x	x	x	
9FC	x	x	x	x	x	x	x	x
9FD	x	x	x	x	x	x	x	x
9A8	x	x	x	x	x			
9A9	x	x	x	x	x			
9A0	x	x	x	x	x	x	x	
9AB	x	x	x	x	x	x	x	
9AV	x	x	x	x	x	x	x	x
9AC	x	x	x	x	x	x	x	x

**Important note:** Float may be removed in all models of the MM series!