



## Level Meters with Diaphragm for Liquids



measuring  
•  
monitoring  
•  
analysing

NPF



- Measuring range:  
0 - 600 ... 0 - 10000 mm w. c.
- Option: calibration on medium density
- Accuracy:  $\pm 1.6$  % of full scale
- Overpressure:  
max. 1.3 fold x full scale
- Temperature: max. 80 °C
- Connection: G 1/2 AG, 1/2 NPT  
flange DN 50 ... DN 100  
ANSI 2" ... 4" (others on request)
- Material: stainless steel
- Insensitive to impact and vibrations
- Option: 20 fold  
excess pressure safe  
(max. 40 bar/400 m)
- Option: contacts, housing filling,  
zero point correction (if unfilled)



KOBOLD companies worldwide:

ARGENTINA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLUMBIA, CZECHIA, DOMINICAN REPUBLIC, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, ROMANIA, SINGAPORE, SOUTH KOREA, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, USA, VIETNAM

KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
Head Office:  
+49(0)6192 299-0  
+49(0)6192 23398  
info.de@kobold.com  
www.kobold.com



### Description

Due to their design and the materials used, KOBOLD level meters of model NPF with diaphragm satisfy the tough service demands in the chemical and petrochemical industry.

They are used for level measuring of low-viscosity, nonsticking media in open, unpressurized vessels. The specific weight of the medium should be taken into account.

The fixed annular diaphragm is quite insensitive to vibrations. Diaphragm pressure gauges have a relatively high actuating force.

Their stainless steel construction render the instruments resistant to aggressive environmental conditions.

### Applications

- Chemical industry
- Petrochemical industry
- Plant engineering
- Equipment manufacturing

### Technical Details

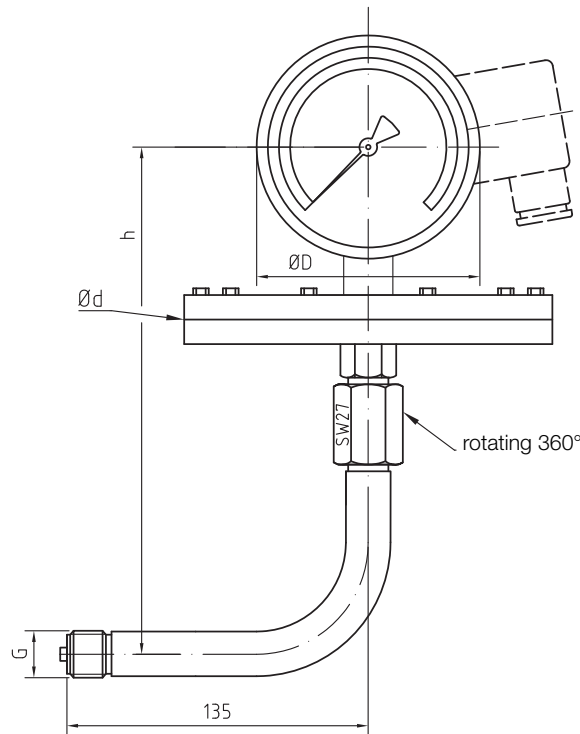
Housing:	Ø 100 mm, stainless steel 1.4301
Flansch:	Ø 155 mm, stainless steel (100 mm for measuring range 0 - 4000 mm)
Process connection:	Tube bend stainless steel 1.4571 G ½ male, ½ NPT flange DIN 2501 DN50 ... DN 100, PN 10 ... 40 ANSI B 16,5; 2" ... 4" 150 lbs, 300 lbs, 600 lbs others on request (DIN 11851, Clamp, SMS...)
Ring:	stainless steel 1.4301
Window:	safety glass
Dial face:	aluminium white
Pointer:	aluminium black
Measuring mechanism:	stainless steel
Measuring element:	Duratherm 600/1.4571
Allowed excess pressure:	short-time 1.3 fold x full scale
Option:	overpressure-safe compound-filled up to 40 bar (on request) Oil/Glycerin filling
Medium temperature:	max. 80 °C
Accuracy:	±1,6% of full scale
Ambient temperature:	max. 80 °C
Medium density:	1,0 kg/dm <sup>3</sup> (others on request)
Option:	vent hole
Protection:	IP 65 (IP 67 with filling)

### Contacts

Creep contact (from measuring range 1000 mm):	max. 250 V <sub>AC/DC</sub> 10 W/18VA/0,6A
Magnetic snap contact (from measuring range 4000 mm):	max. 250 V <sub>AC/DC</sub> 30 W/50VA/0,6A
Inductive contact (from measuring range 400 mm):	nominal voltage 8 V <sub>DC</sub> (R <sub>i</sub> = 1 kΩ)

Dimensions

NPF-1/-3



Model	Ø D	Ø d ≤ 2500 mm	Ø d ≤ 4000 mm	G (R4)	G (N4)	h
NPF-1	100 mm	155 mm	100 mm	G ½	½ NPT	230 mm
NPF-3	160 mm	155 mm	100 mm	G ½	½ NPT	262 mm

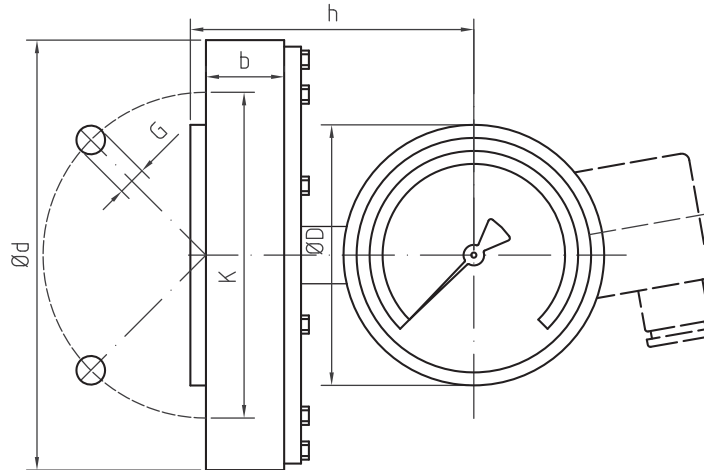
Weight: approx. 1.5 kg

Order Details; Thread connection (Example: NPF-1096 R4 B 0 00 0)

Measuring range	Housing diameter		Connection	Connection position	Protection	Limit contact	Options
	100 mm	160 mm					
0...250 mm	NPF-1096..	NPF-3096..	R4 = G ½ N4 = ½ NPT	B = below rotating 360°	0 = IP54 1 = IP65 2 = IP67 with filling	00 = without S1 <sup>1)</sup> = Creep contact (N/C) S2 <sup>1)</sup> = Creep contact (N/O) M1 <sup>2)</sup> = Magnetic snap contact (N/C) M2 <sup>2)</sup> = Magnetic snap contact(N/O) I1 <sup>3)</sup> = Inductive contact (N/C) I2 <sup>3)</sup> = Inductive contact (N/O)	0 = without
0...400 mm	NPF-1106..	NPF-3106..					
0...600 mm	NPF-1116..	NPF-3116..					
0...1000 mm	NPF-1126..	NPF-3126..					
0...1600 mm	NPF-1136..	NPF-3136..					
0...2500 mm	NPF-1146..	NPF-3146..					
0...4000 mm	NPF-1156..	NPF-3156..					
0...6000 mm	NPF-1015..	NPF-3015..					
0...10000 mm	NPF-1025..	NPF-3025..					

<sup>1)</sup> from 1000 mm; <sup>2)</sup> from 4000 mm; <sup>3)</sup> from 400 mm

Dimensions  
NPF-2/-4



	NPF-2/-4				NPF-2	NPF-4
	Ø d	k	g	b	h (Ø D=100)	h (Ø D=160)
DN50 PN10/40	165 mm	Ø 125	4 x M16	30 mm	106 mm	138 mm
DN65 PN10/40	185 mm	Ø 145	4 x M16	30 mm	106 mm	138 mm
DN80 PN10/40	200 mm	Ø 160	4 x M16	30 mm	106 mm	138 mm
DN100 PN10/16	220 mm	Ø 180	8 x M16/Ø18*	30 mm	106 mm	138 mm
DN100 PN25/40	235 mm	Ø 190	8 x M20/Ø22*	30 mm	106 mm	138 mm
ANSI 2" 150 lbs	152.4 mm	Ø 120.7	4 x 5/8 Zoll	30 mm	106 mm	138 mm
ANSI 2" 300/600 lbs	165.1 mm	Ø 127.0	8 x 5/8 Zoll	30 mm	106 mm	138 mm
ANSI 2½" 150 lbs	177.8 mm	Ø 139.7	4 x 5/8 Zoll	30 mm	106 mm	138 mm
ANSI 2½" 300/600 lbs	190.5 mm	Ø 149.4	8 x ¾ Zoll	30 mm	106 mm	138 mm
ANSI 3" 150 lbs	190.5 mm	Ø 152.4	4 x 5/8 Zoll/Ø19,1*	30 mm	106 mm	138 mm
ANSI 3" 300/600 lbs	209.5 mm	Ø 168.1	8 x ¾ Zoll/Ø22,4*	30 mm	106 mm	138 mm
ANSI 4" 150 lbs	228.6 mm	Ø 190.5	8 x 5/8 Zoll/Ø19,1*	30 mm	106 mm	138 mm
ANSI 4" 300 lbs	254.0 mm	Ø 200.2	8 x ¾ Zoll/Ø22,4*	30 mm	106 mm	138 mm
ANSI 4" 600 lbs	273.1 mm	Ø 215.9	4 x 7/8 Zoll/Ø25,4*	30 mm	106 mm	138 mm

\* ≥ 0,4 bar/4m > through holes

Order Details Flange connection (Example: NPF-2096 F4 B 0 00 0)

Measuring range	Housing diameter		Connection	Connection position	Protection	Limit contact	Options
	100 mm	160 mm					
0...250 mm	NPF-2096..	NPF-4096..	F9 = Flange DN50	B = below U = top L = left R = right	0 = IP54 1 = IP65 2 = IP67 with filling	00 = without S1 <sup>1)</sup> = Creep contact (N/C) S2 = Creep contact (N/O) M1 <sup>2)</sup> = Magnetic snap contact (N/C) M2 <sup>2)</sup> = Magnetic snap contact(N/O) I1 <sup>3)</sup> = Inductive contact (N/C) I2 <sup>3)</sup> = Inductive contact (N/O)	0 = without 2 = Medium density adapted (0.5...1.5 kg/L) 5 = flush boring
0...400 mm	NPF-2106..	NPF-4106..	F0 = Flange DN65				
0...600 mm	NPF-2116..	NPF-4116..	FB = Flange DN80				
0...1000 mm	NPF-2126..	NPF-4126..	FC = Flange DN100				
0...1600 mm	NPF-2136..	NPF-4136..	A9 = Flange ANSI 2"				
0...2500 mm	NPF-2146..	NPF-4146..	A0 = Flange ANSI 2½"				
0...4000 mm	NPF-2156..	NPF-4156..	AB = Flange ANSI 3"				
0...6000 mm	NPF-2015..	NPF-4015..	AC = Flange ANSI 4"				
0...10000 mm	NPF-2025..	NPF-4025..					

<sup>1)</sup> from 1000 mm; <sup>2)</sup> from 4000 mm; <sup>3)</sup> from 400 mm