

Level measurement

Guided wave radar **MOLOS_{wave}** **1**

Yo-Yo sensing systems **MOLOS_{bob}** **2**

Visualization **MOLOS_{visu}** **3**

Rotation **MOLOS_{roto}** **4**

Membrane **MOLOS_{membran}** **5**

Level indicator

Vibration **MOLOS_{vibro}** **6**

Microwave barrier **MOLOS_{barrier}** **7**

Pendulum **MOLOS_{pendu}** **8**

Coding **MOLOS_{code}** **9**

Hose couplings

Limit switch **MOLOS_{switch}** **10**

Swivelling lever **MOLOS_{swing}** **11**

Lockable couplings **MOLOS_{lock}** **12**

Overload protection **MOLOS_{safe}** **13**

Silo filling device **MOLOS_{safe}** **14**

Bulk solids handling

Pressure device **MOLOS_{pressdec}** **15**

Microwave flow sensor **MOLOS_{flow}** **16**

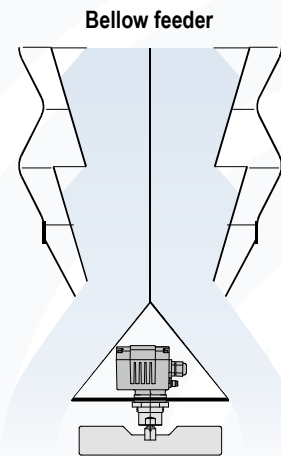
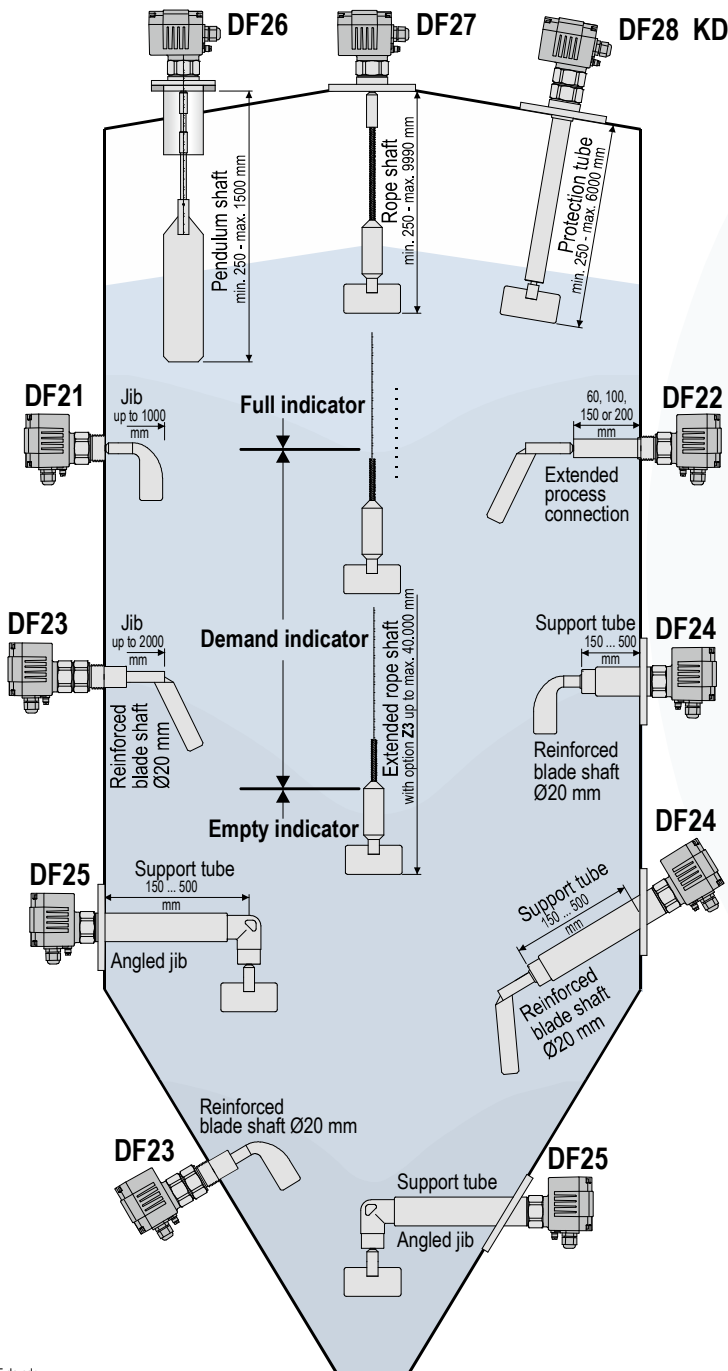
Pinch valves **MOLOS_{valve}** **17**



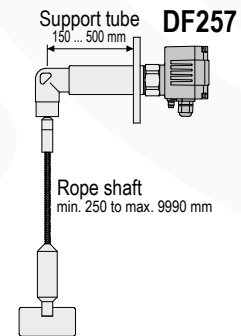
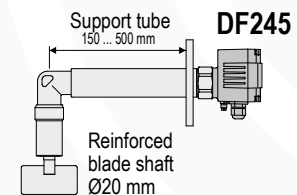
Advantages of rotary blade level indicators:

- insensitive against dust, caking and conductivity of bulk goods
- use in potentially explosive gas and dust atmospheres
- versatile applicable also at high temperatures and pressures
- very good price-performance-ratio
- high reliability
- easy installation and maintenance-free operation

4



Special level indicator with angled jib




Design depending on bulk goods and applications, prices on request.

Selection list



Level indicator for bulk solids.

Content	Page
DF11 for simple applications, inexpensive version with aluminium housing	4
DF21 for a wide range of applications	6
DF22 with lengthened process connection, otherwise as DF21	8
DF23 with reinforced blade shaft to be given preference as demand and empty indicator	10
DF24 with reinforced blade shaft and long support tube otherwise as DF23	12
DF25 with angled jib, suitable as full, demand and empty indicator	14
DF26 with pendulum shaft and anti-buckling protection, up to 1.500 mm in length	16
DF27 with rope shaft and tensioning weight, up to 10.000 mm in length height adjustable with DF-HVP	18
DF28 with protecting tube, up to 6.000 mm length, mounting as required with built-in bearing KD	20
DF30 for bellow feeders	22
DF accessories, spare parts and special devices	24-39

ATEX option
Dust  B1 II 1/2D Ex ta/tb IIIC T80°C
B2 II 1D Ex ta IIIC T70°C
B3 II 1/3D Ex ta/tc IIIB T80°C

ATEX option
Gas+ 
Dust
hybride mixtures

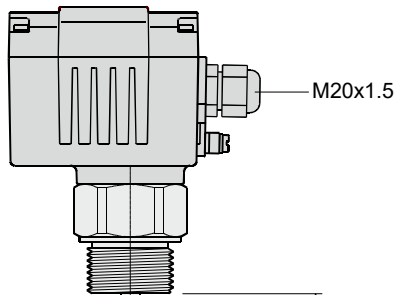
A3/A4 II 2G Ex db eb IIC T6
B1 II 1/2D Ex ta/tb IIIC T80°C
A3/A4 II 1G c /2G Ex db eb IIC T6
B1 II 1/2D Ex ta/tb IIIC T80°C

Full, empty and demand indicator for simple applications

Materials	Housing	Aluminium pressure casting, RAL 7001 coated
	Process connection	Aluminium
	Shafts, rope	Stainless steel 1.4301 / 304
	Tensioning weight	Atainless steel 1.4301 / 304
	Blade TK	Plastic PP
	Blade TD	Stainless steel 1.4301 / 304
Signal contact		2 A / 250V AC potential-free
Type of protection		IP66 in accordance with DIN EN 60529
Ambient temperature		T _a -20 °C ... +70 °C
Bulk goods temperature		T(Process) -25 °C ... +80 °C
Pressure range		p(Process) -0.5 bar ... 1 bar
Maintenance		none

Compact aluminium housing

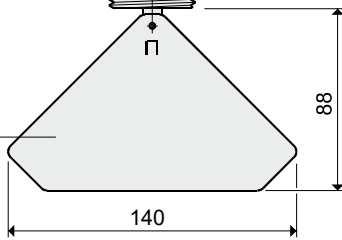
Order code
DF11A1CnG2ATD



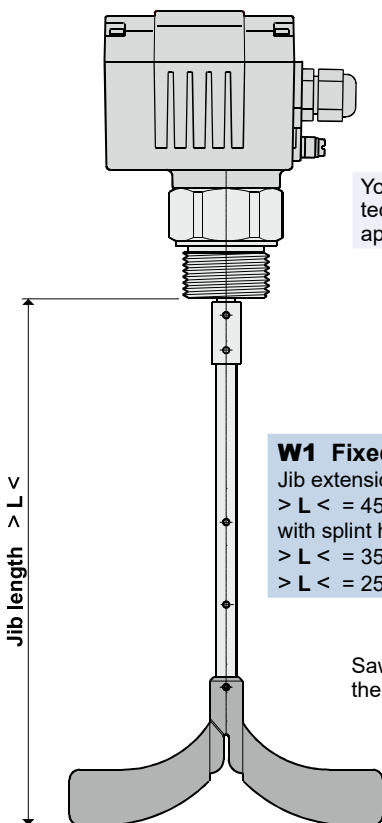
To be used with preference as full indicator!

Measuring blade TD

001-0101



Jib length > L < 13 mm longer by measuring blade TD

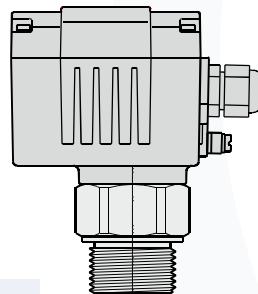


W1 Fixed shaft

Jib extension
> L < = 450 mm
with splint hole for
> L < = 350 and
> L < = 250 mm

Saw off shaft 10 mm behind the used splint hole.

001-0102



Buckling protector

W3 Pendulum shaft

Jib extension
> L < = 500 mm
with splint hole for
> L < = 400 and
> L < = 300 mm

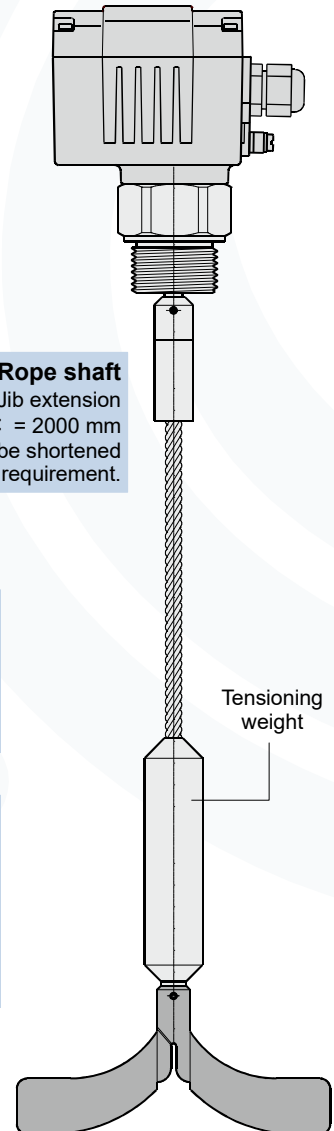
001-0103

W4 Pendulum shaft

Jib extension
> L < = 1000 mm
with splint hole for
> L < = 900,
> L < = 800,
> L < = 700 and
> L < = 600 mm

W6 Rope shaft

Jib extension
> L < = 2000 mm
The rope can be shortened depending on requirement.

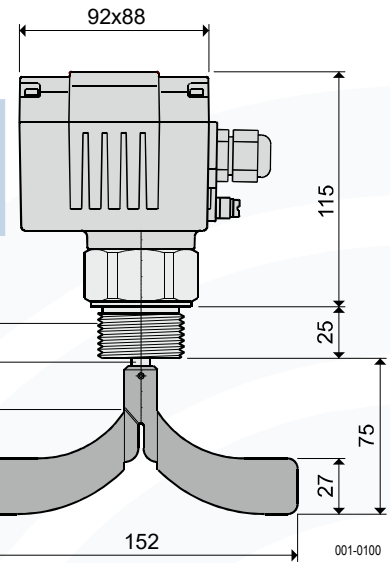


Tensioning weight

001-0104

Compact aluminium housing

Order code
DF11A1CnG2ATK



Process connection

Blade shaft

Blade can be sawn off here

Measuring blade TK

001-0100

We recommend sawing off the plastic blade on one side, when using as empty indicator.

Ex -Info

The measuring blade TK150 is not for use in containers being filled by a pneumatic conveyor.

Choice of options with

Certifications, certificates, approvals

- B0** Standard = CE conform and IP66
- B1** ATEX Ⓜ II 1/2D Ex ta/tb IIIC T80°C **Dust**
- B3** ATEX Ⓜ II 1/3D Ex ta/tc IIIB T80°C **Dust**
- B9** Further approvals on request

Supply voltage / Supply

- C1** 220...240V AC (50...60Hz)
- C2** 110...120V AC (50...60Hz)
- C3** 48V AC (50...60Hz)
- C4** 24V AC (50...60Hz)
- C5** 24V DC

Signal lamps

- Standard** = without function LEDs
- H5** with function LEDs
- H6** Functions LEDs with collar ¹⁾

Process connection in aluminium

- G1A** Thread G1 DIN/ISO 228
- G2A** Thread G1¼ DIN/ISO 228
- G3A** Thread G1½ DIN/ISO 228
- G5A** Thread M30x1.5
- G6A** Thread M32x1.5

Measuring blade

M0 without measuring blade

>>> inexpensive in plastic

- TK** Blade TK150 150x27
- TK3** 3 blades TK150 150x120

>>> inexpensive in stainless steel

- TD** Blade TD140 140x85
- S1** Socket blade 100x30 inclined ²⁾

>in stainless steel,
dimensions please see DF-GI-26

- X1** Blade X50 98x50
- X2** Blade X100 98x100
- X3** Blade X200 180x100

Jib extension

- W0** Standard = without extension
- W1** Fixed shaft 450mm ..
- W3** Pendulum shaft 500mm ..
- W4** Pendulum shaft 1000mm ..
- W6** Rope shaft 2000mm

DF11A1 ← Order code

Accessories

- SH** Weather protection hood in PVC, RAL 7001
- Certificated only for zone 22 and in non-hazardous areas

Hexagonal nuts in aluminium

- SM1A** Hexagonal nut G1
- SM2A** Hexagonal nut G1¼
- SM3A** Hexagonal nut G1½
- SM5A** Hexagonal nut M30x1,5
- SM6A** Hexagonal nut M32x1,5

- KV1** 2. Standard cable gland
- KV2** 2. Ex cable gland

- MG2** Mounting flange for textile silos with G1¼

Delivery from Stock

ordered until 12°° - dispatched at 16°°

- 1) **not** available together with B1
- 2) **not** available together with W6

€ Prices on request

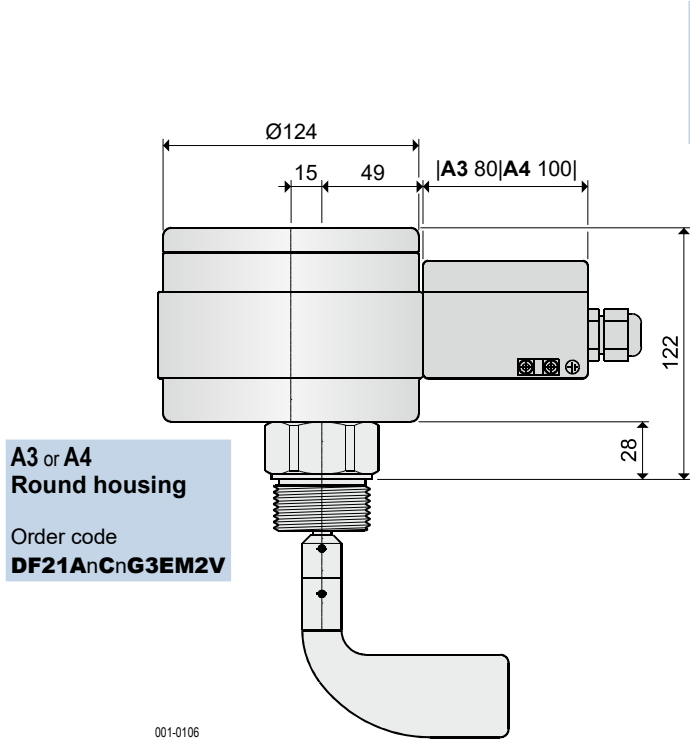


B0, H9, M0 and W0 are **not needed** for order code.

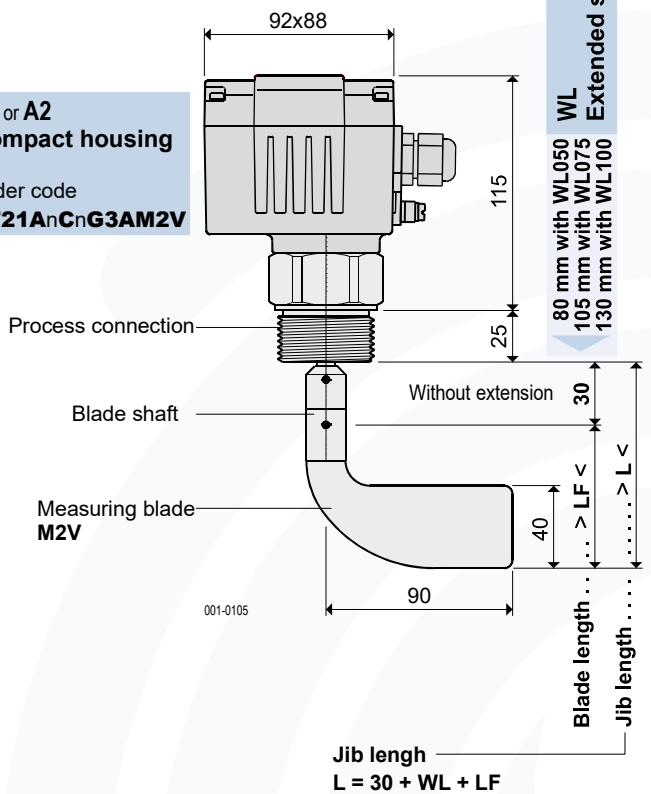
Full, empty and demand indicator for any mounting position, large range of applications

Signal contact 2 A / 250 V AC potential-free
 Type of protection IP66 in accordance with DIN EN 60529
 Maintenance none

4

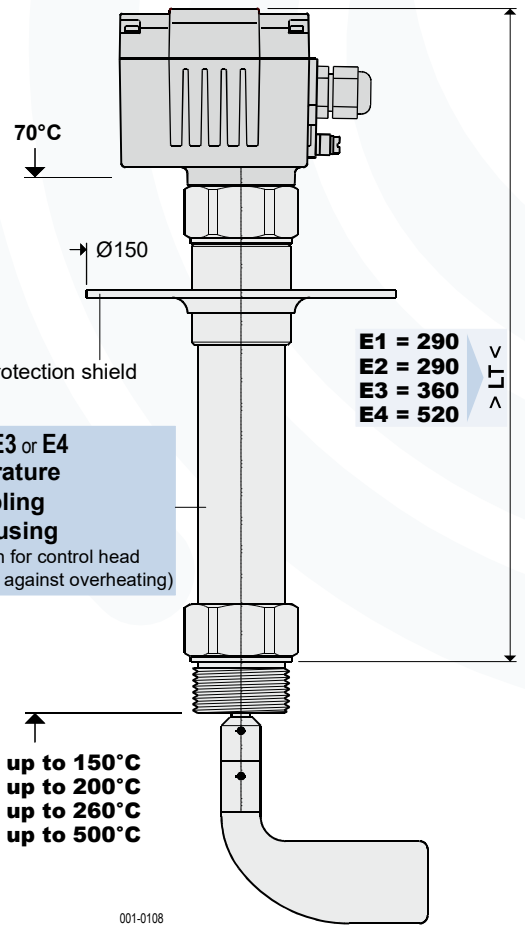
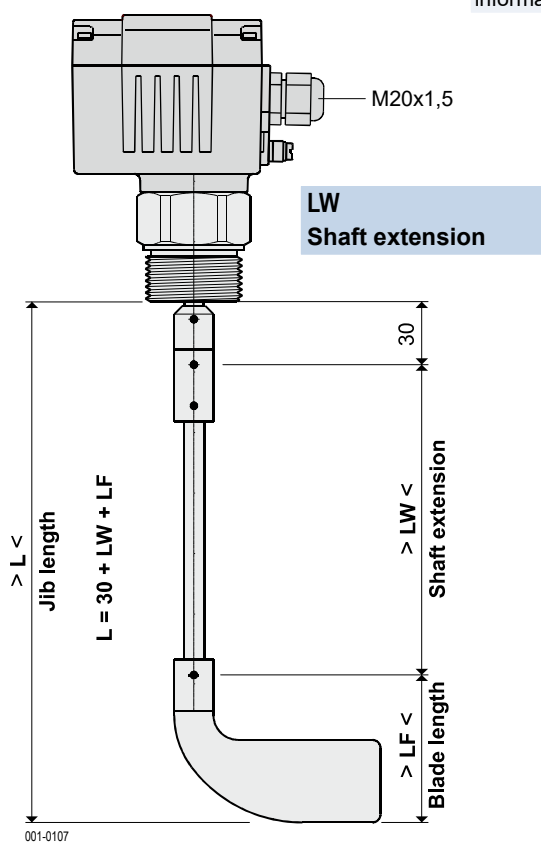


A1 or A2 Compact housing
 Order code **DF21AnCnG3AM2V**



Extended shaft
 WL
 80 mm with WL050
 105 mm with WL075
 130 mm with WL100

You will find further technical details under appliance information DF-GI-



E1 up to 150°C
 E2 up to 200°C
 E3 up to 260°C
 E4 up to 500°C

DF21 Selection list

4 housing versions to choice

- Choice of options with**
- Certifications, certificates, approvals
- B0 Standard** = CE conform and IP66
- B1 ATEX** Ⓔ II 1/2D Ex ta/tb IIC T80°C Dust
- B2 ATEX** Ⓔ II 1D Ex ta IIC T70°C Dust ^{D2)}
- B3 ATEX** Ⓔ II 1/3D Ex ta/tc IIB T80°C Dust
- B9** Further approvals on request

- Supply voltage / Supply**
- C1** 220...240V AC (50...60Hz)
- C2** 110...120V AC (50...60Hz)
- C3** 48V AC (50...60Hz)
- C4** 24V AC (50...60Hz)
- C5** 24V DC
- C6** 12V DC
- C7** 48V DC
- C9** Special voltages on request

- Self-monitoring**
- D0 Standard** = without monitoring
- D1** Function monitoring
- D2** Voltage monitoring

- Signal lamps¹⁾**
- H0 Standard** = with function LEDs
- H1** Collar for function LEDs
- H2** Signal lamp, LED green
- H8** Large signal lamp, LED green

- Bulk goods temperature/T_{process}**
- E0 Standard** = -25°C...+80°C ²⁾ ..
- E1** -40°C...+150°C only with R1
- E2** -25°C...+200°C only with R5
- E3** -25°C...+260°C only with R5
- E4** -25°C...+500°C only with R8
- E7** Device heating 2.5 Watt
- E9** ...+1000°C ¹⁾ on request

- Container pressure / p_{process}**
- P0 Standard** = -0.5...5 bar ³⁾
- P1** -0.5 bar...10 bar
- P2** -0.95 bar...25 bar ⁴⁾
- P6** -0.9 bar...10 bar
- P7** -0.9 bar...10 bar ⁵⁾

- Process connection**
- G1** Thread G1 DIN/ISO 228 X X
- G2** Thread G1¼ DIN/ISO 228 X X
- G3** Thread G1½ DIN/ISO 228 X X
- G5** Thread M30x1.5 X X
- G6** Thread M32x1.5 X X
- G9** Other threads on request
- F1** Flange F70 Ø110, 4xØ9/Ø90 X X
- F2** Flange F100 150x150, 4xØ18/Ø170 X X
- F5** Flange DN32 PN 10 X X
- F6** Flange DN100 PN 6 X X

- R0 Standard** with NBR seal ring, black suitable for the majority of bulk goods
- Options** only for special applications:
- R1** Seal ring in PTFE/MITON
- R2** Seal ring in NBR, white FDA
- R5** Seal ring in PTFE, white FDA
- R8** Seal ring in Graphit only with E4 ..
- Rn** add as suffix to selected connection e.g. G2ER2

- Material of process connection**
- A** Aluminium
- E** Stainless steel 1.4301 / 304
- X** Other materials on request

Z Bearing in stainless steel not with E4 add as suffix to selected connection e.g. G2EZ

- Measuring blade**
- M0 without measuring blade**
- S2** Socket blade 130x30 inclined .. X X
- M1** Socket blade 90x28
- M2** Socket blade 90x40
- T1** Blade T50 98x50 X X
- T2** Blade T100 98x100 X X
- T8** Rubber blade¹⁾ 250x100 X
- X1** Blade X50 98x50 X
- X2** Blade X100 98x100 X
- X3** Blade X200 180x100 X
- K1** Hinged blade T230 200x30 X
- M9** Other measuring blades ... on request

Measuring blade passes through tight hole of:

G2, G3, G4 and all flanges

G1

G3, G4 and all flanges

F2, F6, F7

F2, F6, F7

F2, F6, F7

F2, F6, F7

G2, G3, G4 and all flanges

- Blade reinforcement**
- without reinforcement
- V** with reinforcement

All larger dimensioned blades can not be inserted through the tight holes and must be mounted from the inside.

- Jib extension**
- Standard = without extension (LW000 or WL000 not applicable)
- WL** Extended shaft WL050, WL075 or WL100
- LW** Shaft extension

0 0 0 enter required length in mm, last digit always 0

- Housing selection**
- A1** Standard Compact aluminium housing ... CE conform and ATEX Dust
- A2** Stainless steel compact housing
- A3** Aluminium round housing
- A4** Stainless steel round housing

DF21 0 0 0 0 ← Order code

Accessories

- SH** Weather protection hood in PVC, RAL 7001 Certified only for zone 22 and in non-hazardous areas
- SM1** Hexagonal nut G1 X X
- SM2** Hexagonal nut G1¼ X X
- SM3** Hexagonal nut G1½ X X
- SM5** Hexagonal nut M30x1,5 X X
- SM6** Hexagonal nut M32x1,5 X X

- Material of nuts**
- A** Aluminium
- E** Stainless steel 1.4301 / 304

- KV1** 2. Standard cable gland
- KV2** 2. Ex cable gland

Delivery from Stock

ordered until 12⁰⁰ - dispatched at 16⁰⁰

- D2)** delivery only together with D2 or D1
- 1)** H1 and H2 with B0 or B3, H8 only with B0 deliverable
- 2)** max. bulk goods temperature at B2 = -20°C...+45°C
- 3)** container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)
- 4)** with area separating element DF-P2 (gas-tight and leakproof)
- 5)** with pressure decoupling bell housing DF-P7 (pressure separating)
- 5)** !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



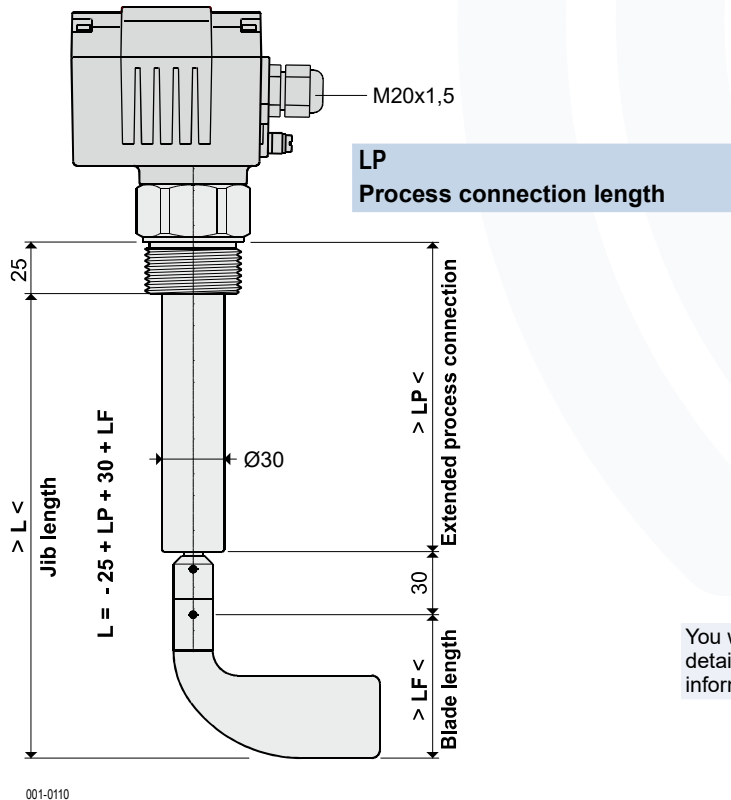
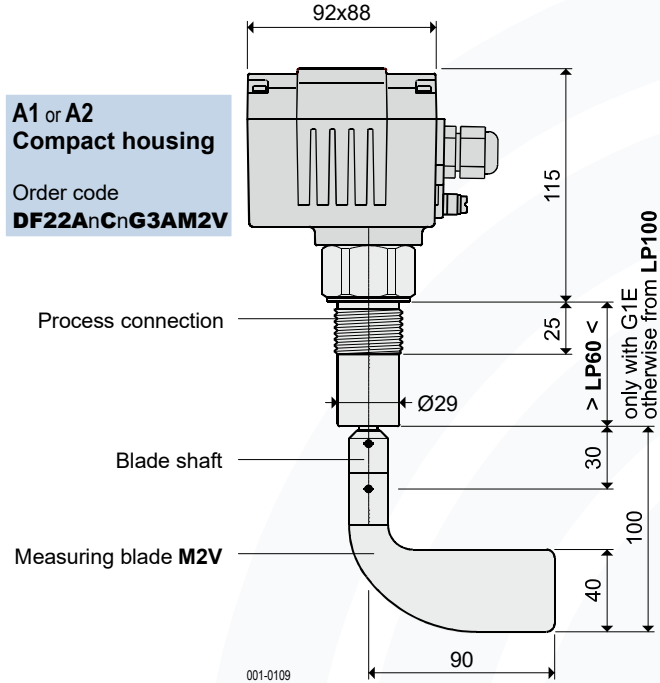
B0, D0, H0, E0, P0, R0 and M0 are **not needed** for order code

Full, empty and demand indicator for any mounting position with extended process connection

Signal contact 2 A / 250V AC potential-free
 Type of protection IP66 in accordance with DIN EN 60529
 Maintenance none

4

**A1 or A2
Compact housing**
 Order code
DF22AnCnG3AM2V



You will find further technical details under appliance information DF-GI-..

2 housing versions to choice

- Housing selection**
- A1 **Standard** compact aluminium housing ... CE conform and ATEX Ex Dust ...
 - A2 Stainless steel compact housing CE conform and ATEX Ex Dust ...

- Choice of options with**
- Certifications, certificates, approvals**
- B0 Standard** = CE conform and IP66
 - B1 ATEX** Ex II 1/2D Ex ta/tb IIIC T80°C Dust
 - B2 ATEX** Ex II 1D Ex ta IIIC T70°C Dust ^{D2)}
 - B3 ATEX** Ex II 1/3D Ex ta/tc IIIB T80°C Dust
 - B9** Further approvals on request

- Supply voltage / Supply**
- C1 220...240V AC (50...60Hz)
 - C2 110...120V AC (50...60Hz)
 - C3 48V AC (50...60Hz)
 - C4 24V AC (50...60Hz)
 - C5 24V DC
 - C6 12V DC
 - C7 48V DC
 - C9 Special voltages on request

- Self-monitoring**
- D0 Standard** = without monitoring
 - D1 Function monitoring
 - D2 Voltage monitoring

- Signal lamps¹⁾**
- H0 Standard** = with function LEDs
 - H1 Collar for function LEDs
 - H2 Signal lamp, LED green
 - H8 Large signal lamp, LED green

- Bulk goods temperature/ $T_{(process)}$**
- E0 Standard** = -25°C...+80°C²⁾
 - E7 Device heating 2.5 Watt

- Container pressure / $p_{(process)}$**
- P0 Standard** = -0.5...5 bar³⁾
 - P1 -0.5 bar...10 bar
 - P6 -0.9 bar...10 bar

- Process connection**
- | | | | |
|----|---------------------------------|---|---|
| G1 | Thread G1 DIN/ISO 228 | X | X |
| G2 | Thread G1¼ DIN/ISO 228 | X | X |
| G3 | Thread G1½ DIN/ISO 228 | X | X |
| G9 | Other threads on request | | |
| F1 | Flange F70 Ø110, 4xØ9/Ø90 | X | X |
| F2 | Flange F100 150x150, 4xØ18/Ø170 | X | X |
| F5 | Flange DN32 PN 10 | X | X |
| F6 | Flange DN100 PN 6 | X | X |
| F9 | Other flanges on request | | |

- Material of process connection**
- A Aluminium
 - E Stainless steel 1.4301 / 304
 - X Other materials on request

- Measuring blade**
- M0 without measuring blade**
 - S2 Socket blade 130x30 inclined X X
 - M1 Socket blade 90x28 X X
 - M2 Socket blade 90x40 X X
 - T1 Blade T50 98x50 X X
 - T2 Blade T100 98x100 X X
 - T8 Rubber blade¹⁾ 250x100 X X
 - X1 Blade X50 98x50 X X
 - X2 Blade X100 98x100 X X
 - X3 Blade X200 180x100 X X
 - K1 Hinged blade 200x30 X X
 - M9 Other measuring blades on request

- Blade reinforcement**
- without reinforcement
 - V with reinforcement**

- Jib length**
- LP Process connection length
- | | | |
|---|---|---|
| 0 | 6 | 0 |
| 1 | 0 | 0 |
| 1 | 5 | 0 |
| 2 | 0 | 0 |
- (only available with G1E)

DF22 | | | | | | | | | | | | | | | | | | | | | 0 ← Order code

- Accessories**
- SH Weather protection hood in PVC, RAL 7001
Certificated only for zone 22 and in non-hazardous areas
 - SM1 Hexagonal nut G1 X X
 - SM2 Hexagonal nut G1¼ X X
 - SM3 Hexagonal nut G1½ X X
 - SM5 Hexagonal nut M30x1,5 X X
 - SM6 Hexagonal nut M32x1,5 X X

- Material of nuts**
- A Aluminium
 - E Stainless steel 1.4301 / 304

- KV1 2. Standard cable gland
- KV2 2. Ex cable gland

Delivery from Stock

ordered until 12⁰⁰ - dispatched at 16⁰⁰

- ^{D2)} delivery only together with D2 or D1
- ¹⁾ H1 and H2 with B0 or B3, H8 only with B0 deliverable
 - ²⁾ max. bulk goods temperature at B2 = -20°C...+45°C
 - ³⁾ container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)



B0, D0, H0, E0, P0, R0 and M0 are **not needed** for order code

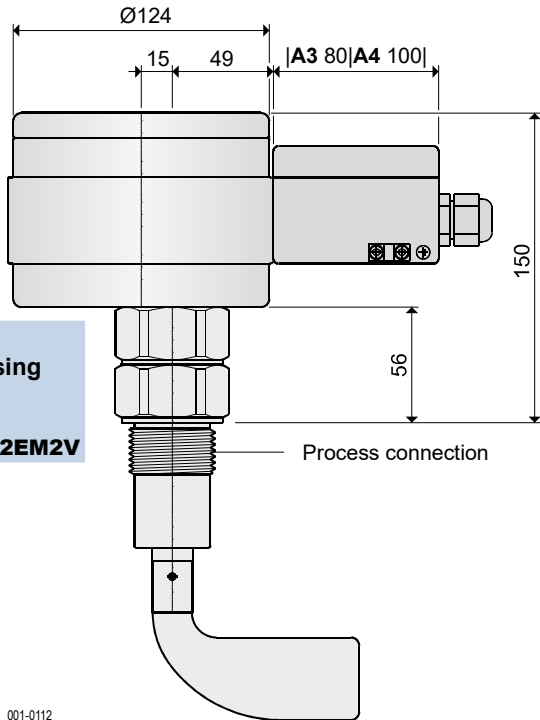
- R0 Standard** with NBR seal ring, black suitable for the majority of bulk goods
- Options** only for special applications:
- R1 Seal ring in PTFE/VITON
- R2 Seal ring in NBR, white FDA
- R5 Seal ring in PTFE, white FDA
- R9 Other seal rings on request
- Rn add as suffix to selected connection e.g. G2ER5

- Measuring blade passes through tight hole of:**
- G2, G3, G4 and all flanges
 - G1
 - G3, G4 and all flanges
 - F2, F6, F7
 - F2, F6, F7
 - F2, F6, F7
 - F2, F6, F7
 - F2, F6, F7
 - G2, G3, G4 and all flanges

All larger dimensioned blades can not be inserted through the tight holes and must be mounted from the inside.

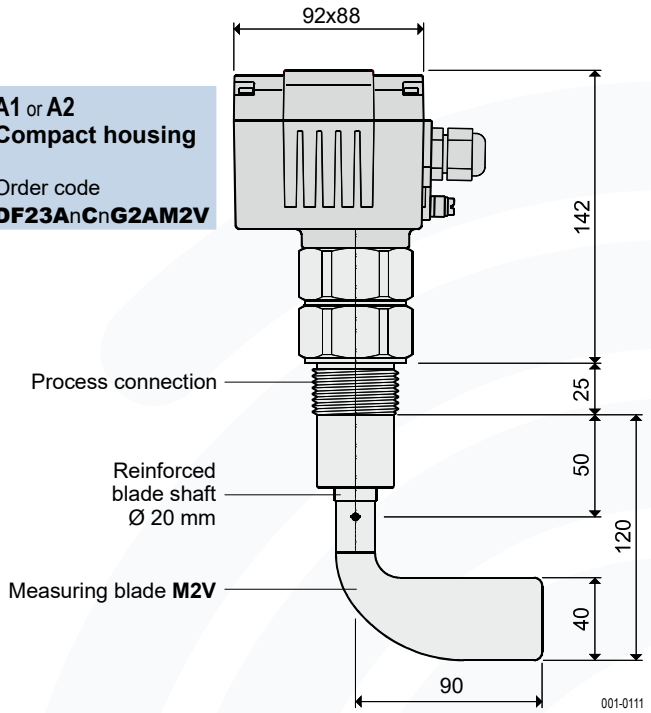
Full, empty and demand indicator for any mounting position with reinforced blade shaft

Signal contact 2 A / 250V AC potential-free
 Type of protection IP66 in accordance with DIN EN 60529
 Maintenance none

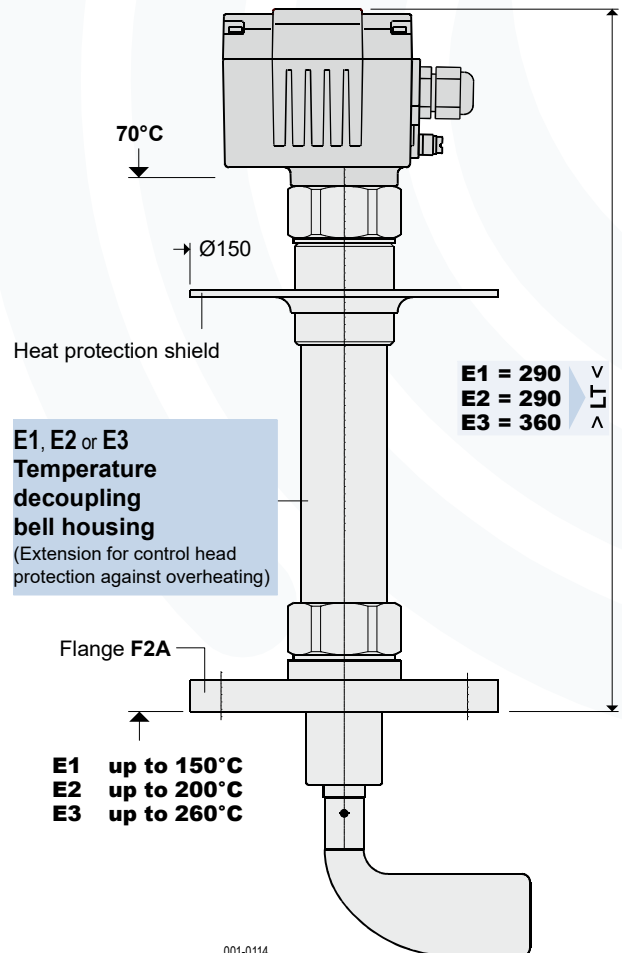
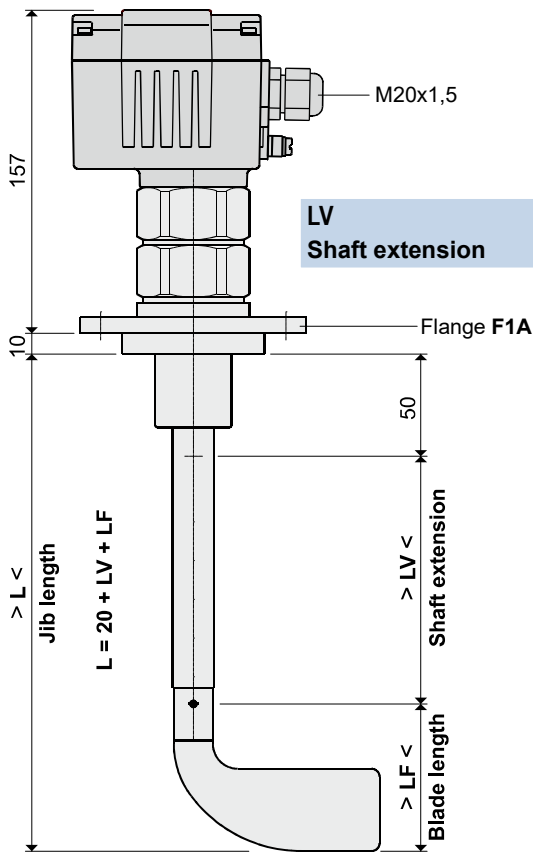


**A3 or A4
Round housing**
Order code
DF23AnCnG2EM2V

**A1 or A2
Compact housing**
Order code
DF23AnCnG2AM2V



You will find further technical details under appliance information DF-GI-..



4 housing versions to choice

Housing selection
A1 Standard Compact aluminium housing ... **CE** conform and **ATEX Dust**
A2 Stainless steel compact housing ... **CE** conform and **ATEX Dust**
A3 Aluminium round housing ... **ATEX** II 2G Ex db eb IIC T6 **CE** conform and **ATEX Dust**
A4 Stainless steel round housing ... **ATEX** II 2G Ex db eb IIC T6 **CE** conform and **ATEX Dust**

Choice of options with

- Certifications, certificates, approvals**
B0 Standard = **CE** conform and **IP66**
B1 ATEX II 1/2D Ex ta/tb IIC T80°C **Dust**
B2 ATEX II 1D Ex ta IIC T70°C **Dust** (D2)
B3 ATEX II 1/3D Ex ta/tc IIB T80°C **Dust**
B9 Further approvals on request

- Supply voltage / Supply**
C1 220...240V AC (50...60Hz)
C2 110...120V AC (50...60Hz)
C3 48V AC (50...60Hz)
C4 24V AC (50...60Hz)
C5 24V DC
C6 12V DC
C7 48V DC
C9 Special voltages on request

- Self-monitoring**
D0 Standard = without monitoring
D1 Function monitoring
D2 Voltage monitoring

- Signal lamps¹⁾**
H0 Standard = with function LEDs
H1 Collar for function LEDs
H2 Signal lamp, LED green
H8 Large signal lamp, LED green

- Bulk goods temperature/T_(process)**
E0 Standard = -25°C...+80°C²⁾
E1 -40°C...+150°C only with R7
E2 -25°C...+200°C only with R7
E3 -25°C...+260°C only with R7
E7 Device heating 2.5 Watt

- Container pressure / p_(process)**
P0 Standard = -0.5...5 bar³⁾
P1 -0.5 bar...10 bar
P2 -0.95 bar...25 bar⁴⁾
P6 -0.9 bar...10 bar
P7 -0.9 bar...10 bar⁵⁾

- Process connection**
G2 Thread **G1¼** DIN/ISO 228 X X
G3 Thread **G1½** DIN/ISO 228 X X
G4 Thread **G2** DIN/ISO 228 X X
F1 Flange **F70** Ø110, 4xØ9/Ø90 X X
F2 Flange **F100** 150x150, 4xØ18/Ø170 X X
F6 Flange **DN100** PN 6 X X
F9 Other flanges on request

- Material of process connection**
A Aluminium
E Stainless steel 1.4301 / 304 Z
X Other materials on request

- Measuring blade**
M0 without measuring blade X X
S2 Socket blade 130x30 inclined .. X X
SG Socket blade 120x8 X X
M2 Socket blade 90x40 X X
T1 Blade T50 98x50 X X
M9 Other measuring blades on request

- Blade reinforcement**
V with reinforcement

- Jib extension**
Standard = Shaft length (LV0000 not app!)
LV Shaft extension, reinforced shaft

0 0 0 0 enter required length, up to max. 2000 mm in 100 mm steps

- A1**
A2
A3
A4

DF23 0 0 0 0 ← Order code

Accessories

- SH** Weather protection hood in PVC, RAL 7001
 Certificated only for zone 22 and in non-hazardous areas
- | | | |
|---|---|---|
| SM2 Hexagonal nut G1¼ | X | X |
| SM3 Hexagonal nut G1½ | X | X |
| SM4 Hexagonal nut G2 | X | X |
- Material of nuts**
A Aluminium
E Stainless steel 1.4301 / 304
- KV1** 2. Standard cable gland
KV2 2. Ex cable gland

Delivery from Stock

ordered until 12⁰⁰ - dispatched at 16⁰⁰

- D2)** delivery only together with **D2** or **D1**
 1) **H1** and **H2** with **B0** or **B3**, **H8** only with **B0** deliverable
 2) max. bulk goods temperature at **B2** = -20°C...+45°C
 3) container pressure at **B1**, **B2** and **B3** = -0.08bar...+0.08bar (-80...+80mbar)
 4) with area separating element **DF-P2** (gas-tight and leakproof)
 5) with pressure decoupling bell housing **DF-P7** (pressure separating)
 5) !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



B0, **D0**, **H0**, **E0**, **P0** and **M0** are **not needed** for order code

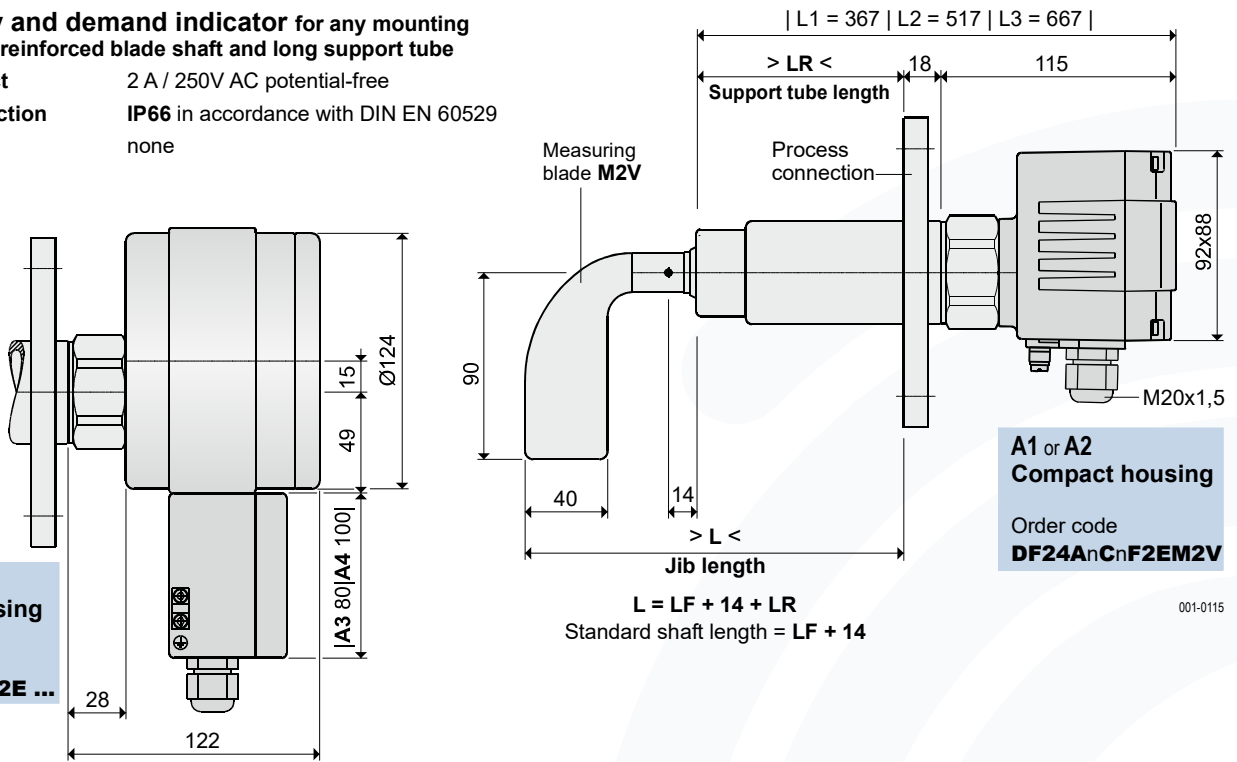
- **Standard** with
R6 Seal ring in NBR black suitable for the majority of bulk goods
Options only for special applications:
R7 Seal ring in PTFE, white FDA
R9 Other seal rings on request

Measuring blade passes through tight hole of:
G2, **G3**, **G4** and all flanges
G2, **G3**, **G4** and all flanges
G3, **G4** and all flanges
F2, **F6**, **F7**

All larger dimensioned blades **can not** be inserted through the tight holes and must be mounted from the inside.

Full, empty and demand indicator for any mounting position with reinforced blade shaft and long support tube

Signal contact 2 A / 250V AC potential-free
 Type of protection IP66 in accordance with DIN EN 60529
 Maintenance none



A3 or A4
Round housing

Order code
DF24AnCnF2E ...

A1 or A2
Compact housing

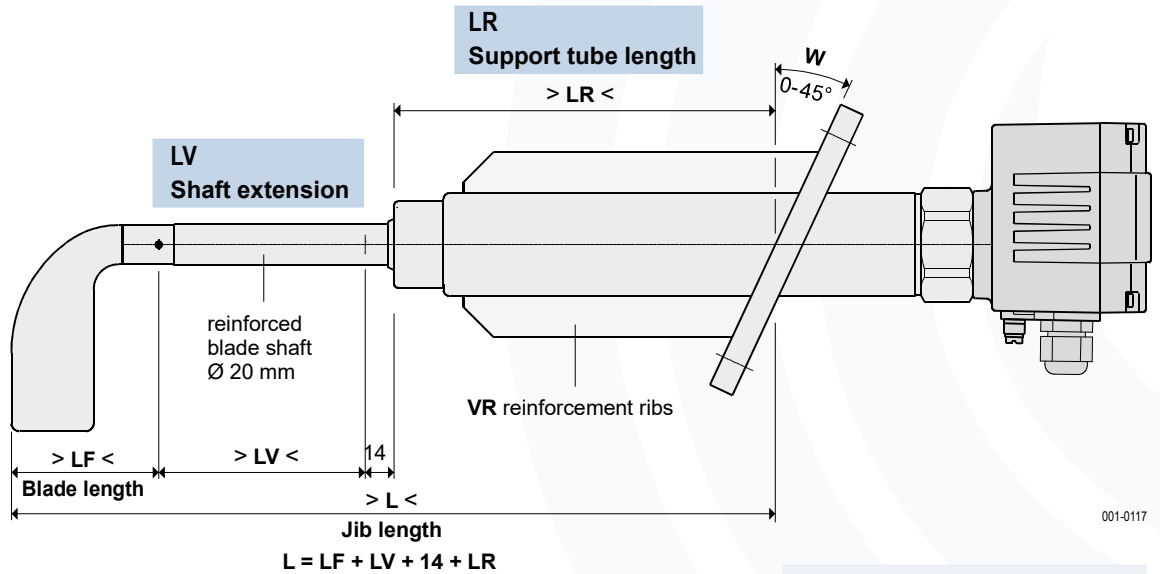
Order code
DF24AnCnF2EM2V

001-0115

001-0116

$$L = LF + 14 + LR$$

Standard shaft length = LF + 14



LV
Shaft extension

LR
Support tube length

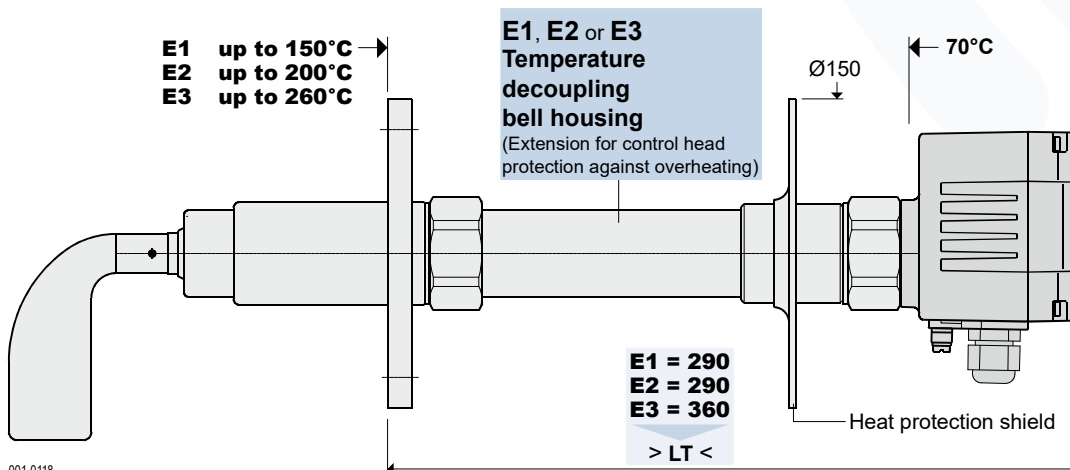
reinforced
blade shaft
Ø 20 mm

VR reinforcement ribs

$$L = LF + LV + 14 + LR$$

001-0117

You will find further technical details under appliance information **DF-GI..**



E1 up to 150°C
E2 up to 200°C
E3 up to 260°C

E1, E2 or E3
Temperature
decoupling
bell housing
(Extension for control head
protection against overheating)

E1 = 290
E2 = 290
E3 = 360

> LT <

Ø150
70°C

Heat protection shield

001-0118

4 housing versions to choice

Housing selection
A1 Standard Compact aluminium housing ... CE conform and ATEX Dust
A2 Stainless steel compact housing ... CE conform and ATEX Dust
A3 Aluminium round housing ... ATEX II 2G Ex db eb IIC T6
A4 Stainless steel round housing ... ATEX II 2G Ex db eb IIC T6

Choice of options with

- Certifications, certificates, approvals**
B0 Standard = CE conform and IP66
B1 ATEX II 1/2D Ex ta/tb IIC T80°C Dust
B2 ATEX II 1D Ex ta IIC T70°C Dust^{D2)}
B3 ATEX II 1/3D Ex ta/tc IIB T80°C Dust
B9 Further approvals on request

- Supply voltage / Supply**
C1 220...240V AC (50...60Hz)
C2 110...120V AC (50...60Hz)
C3 48V AC (50...60Hz)
C4 24V AC (50...60Hz)
C5 24V DC
C6 12V DC
C7 48V DC
C9 Special voltages on request

- Self-monitoring**
D0 Standard = without monitoring
D1 Function monitoring
D2 Voltage monitoring

- Signal lamps¹⁾**
H0 Standard = with function LEDs
H1 Collar for function LEDs
H2 Signal lamp, LED green
H8 Large signal lamp, LED green

- Bulk goods temperature/T_(process)**
E0 Standard = -25°C...+80°C²⁾
E1 -40°C...+150°C only with R7
E2 -25°C...+200°C only with R7
E3 -25°C...+260°C only with R7
E7 Device heating 2.5 Watt

- Container pressure / p_(process)**
P0 Standard = -0.5...5 bar³⁾
P1 -0.5 bar...10 bar
P2 -0.95 bar...25 bar⁴⁾
P6 -0.9 bar...10 bar
P7 -0.9 bar...10 bar⁵⁾

- Process connection**
F2 Flange F100 150x150, 4xØ18/Ø170
F6 Flange DN100 PN 6
F9 Other flanges on request

- Material of process connection**
E Stainless steel 1.4301 / 304
X Other materials on request

- Measuring blade**
M0 without measuring blade
S2 Socket blade 130x30 inclined
M2 Socket blade 90x40
T1 Blade T50 98x50
SG Blade SG 126x8
M9 Other measuring blades on request

- Blade reinforcement**
V with reinforcement

- Jib length**
LR Support tube length, in stainless steel
- | | | | | |
|---|---|---|----|----------|
| 1 | 5 | 0 | mm | Standard |
| 2 | 0 | 0 | mm | |
| 2 | 5 | 0 | mm | |
| 3 | 0 | 0 | mm | |
| 4 | 0 | 0 | mm | |
| 5 | 0 | 0 | mm | |

Standard shaft length (LV000 not appli...)
LV Shaft extension, reinforced

0 0 0 enter required length up to max. 1000 mm in 100 mm steps

Standard angle **W** = 0° for flange/support tube
W Welding flange to jib
 0 0 enter required angle up to max. 45°

Reinforcement ribs
VR Welding reinforcement ribs

DF24 0 0 0

Order code

Accessories

- SH** Weather protection hood in PVC, RAL 7001
 Certificated only for zone 22 and in non-hazardous areas
KV1 2. Standard cable gland
KV2 2. Ex cable gland

Delivery time appr. 8 Working Days

- D2)** delivery only together with D2 or D1
 1) H1 and H2 with B0 or B3, H8 only with B0 deliverable
 2) max. bulk goods temperature at B2 = -20°C...+45°C
 3) container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)
 4) with area separating element DF-P2 (gas-tight and leakproof)
 5) with pressure decoupling bell housing DF-P7 (pressure separating)
 5) !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



B0, D0, H0, E0, P0 and M0 are **not needed** for order code

Standard with
R6 Seal ring in NBR, black suitable for the majority of bulk goods

Options only for special applications:
R7 Seal ring in PTFE, white FDA
R9 Other seal rings on request

Z Bearing in stainless steel
 add as suffix to selected connection e.g. F2EZ

Measuring blade passes through tight hole of:
F2, F6, F7
F2, F6, F7
F2, F6, F7
F2, F6, F7

All larger dimensioned blades **can not** be inserted through the tight holes and must be mounted from the inside.

Full, empty and demand indicator for horizontal mounting with angled jib

Signal contact

2 A / 250V AC potential-free

Type of protection

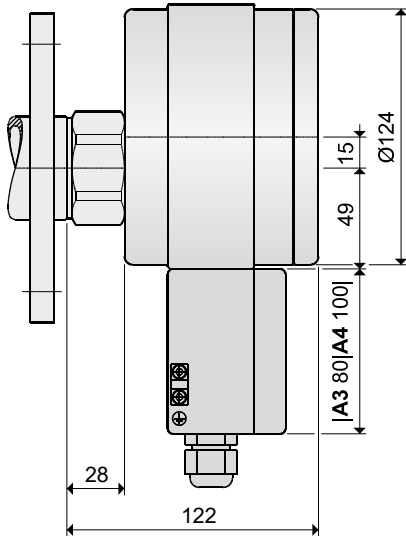
IP66 in accordance with DIN EN 60529

Maintenance

none

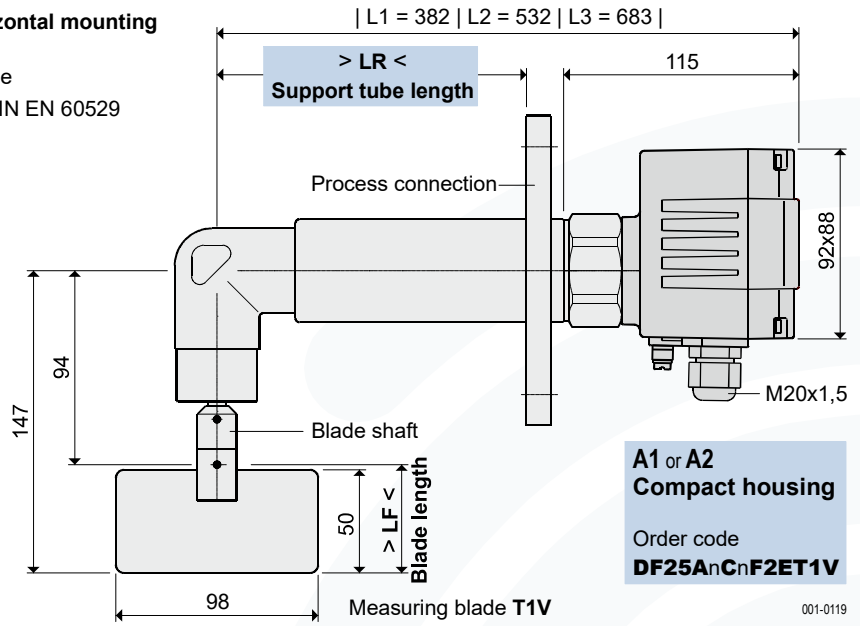
A3 or A4
Round housing

Order code
DF25AnCnF2E ...



001-0116

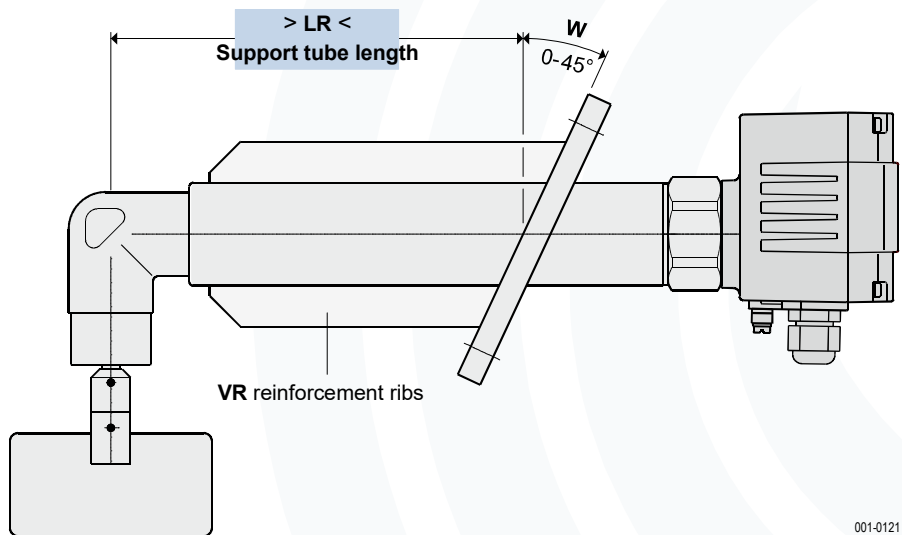
You will find further technical details under appliance information **DF-GI-..**



A1 or A2
Compact housing

Order code
DF25AnCnF2ET1V

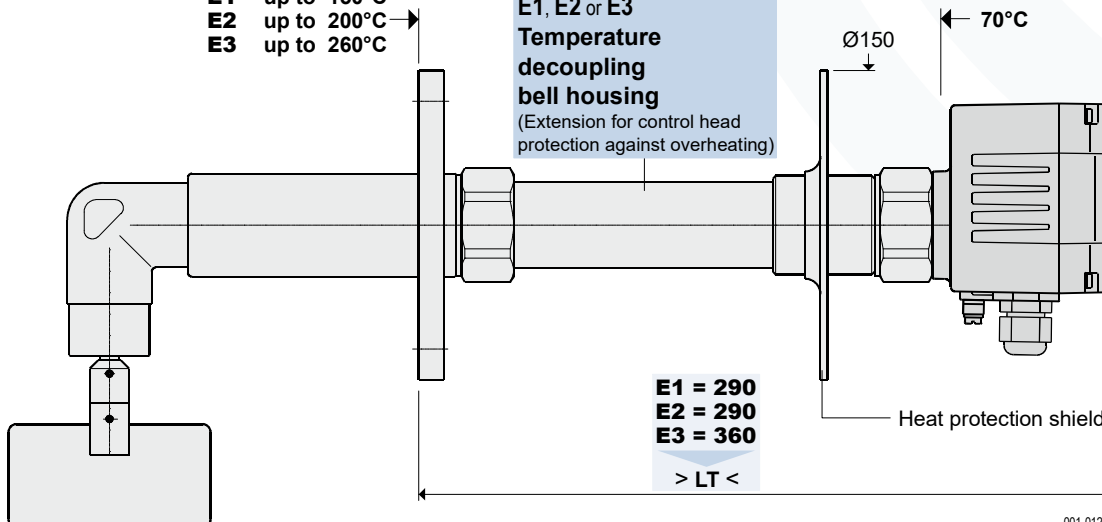
001-0119



001-0121

- E1** up to 150°C
- E2** up to 200°C
- E3** up to 260°C

E1, E2 or E3
Temperature decoupling bell housing
(Extension for control head protection against overheating)



001-0122

4 housing versions to choice

- Housing selection**
- A1 **Standard** Compact aluminium housing ... CE conform and ATEX Dust
 - A2 Stainless steel compact housing ... CE conform and ATEX Dust
 - A3 Aluminium round housing ... ATEX II 2G Ex db eb IIC T6 CE CE +Dust
 - A4 Stainless steel round housing ... ATEX II 2G Ex db eb IIC T6 CE CE +Dust

Choice of options with

- Certifications, certificates, approvals**
- B0 **Standard** = CE conform and IP66
 - B1 ATEX II 1/2D Ex ta/tb IIC T80°C Dust
 - B2 ATEX II 1D Ex ta IIC T70°C Dust ^{D2)}
 - B3 ATEX II 1/3D Ex ta/tc IIB T80°C Dust
 - B9 Further approvals on request

- Supply voltage / Supply**
- C1 220...240V AC (50...60Hz)
 - C2 110...120V AC (50...60Hz)
 - C3 48V AC (50...60Hz)
 - C4 24V AC (50...60Hz)
 - C5 24V DC
 - C6 12V DC
 - C7 48V DC
 - C9 Special voltages on request

- Self-monitoring**
- D0 **Standard** = without monitoring
 - D1 Function monitoring
 - D2 Voltage monitoring

- Signal lamps¹⁾**
- H0 **Standard** = with function LEDs
 - H1 Collar for function LEDs
 - H2 Signal lamp, LED green
 - H8 Large signal lamp, LED green

- Bulk goods temperature/T_(process)**
- E0 **Standard** = -25°C...+80°C ²⁾
 - E1 -40°C...+150°C only with R1
 - E2 -25°C...+200°C only with R5
 - E3 -25°C...+260°C only with R5
 - E7 Device heating 2.5 Watt
 - E9 High temperature on request

- Container pressure / p_(process)**
- P0 **Standard** = -0.5...5 bar ³⁾
 - P1 -0.5 bar...10 bar
 - P2 -0.95 bar...25 bar ⁴⁾
 - P6 -0.9 bar...10 bar
 - P7 -0.9 bar...10 bar ⁵⁾

- Process connection**
- F2 Flange F100 150x150, 4xØ18/Ø170
 - F6 Flange DN100 PN 6
 - F9 Other flanges on request

- Material of process connection**
- E Stainless steel 1.4301 / 304
 - Z Bearing in stainless steel add as suffix to selected connection e.g. F2ERZ

- Measuring blade**
- M0 **without measuring blade**
 - T1 Blade T50 98x50
 - T2 Blade T100 98x100
 - X1 Blade X50 98x50
 - X2 Blade X100 98x100
 - M9 Other measuring blades on request

- Blade reinforcement**
- without reinforcement
 - V with reinforcement

- Jib length**
- LR Support tube length, in stainless steel
- | | | | |
|---|---|---|----|
| 1 | 5 | 0 | mm |
| 2 | 0 | 0 | mm |
| 2 | 5 | 0 | mm |
| 3 | 0 | 0 | mm |
| 4 | 0 | 0 | mm |
| 5 | 0 | 0 | mm |

Standard angle W = 0° for flange/support tube (W00 not applicable)

W Welding flange to jib

0 0 enter required angle up to max. 45°

- Reinforcement ribs**
- VR Welding reinforcement ribs

Accessories

- SH Weather protection hood in PVC, RAL 7001 Certified only for zone 22 and in non-hazardous areas
- KV1 2. Standard cable gland
- KV2 2. Ex cable gland

Delivery time appr. 8 Working Days

- D2) delivery only together with D2 or D1
- 1) H1 and H2 with B0 or B3, H8 only with B0 deliverable
- 2) max. bulk goods temperature at B2 = -20°C...+45°C
- 3) container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)
- 4) with area separating element DF-P2 (gas-tight and leakproof)
- 5) with pressure decoupling bell housing DF-P7 (pressure separating)
- 5) !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



B0, D0, H0, E0, P0, R0 and M0 are **not needed** for order code

- R0 **Standard** with Seal ring in NBR, black suitable for the majority of bulk goods
- Options** only for special applications:
 - R1 Seal ring in PTFE/VITON
 - R2 Seal ring in NBR, white FDA
 - R5 Seal ring in PTFE, white FDA
 - Rn add as suffix to selected connection e.g. F2ER2

- Measuring blade passes through tight hole of:**
- F2, F6, F7
 - F2, F6, F7
 - F2, F6, F7
 - F2, F6, F7

All larger dimensioned blades **can not** be inserted through the tight holes and must be mounted from the inside.

DF25 0 Order code

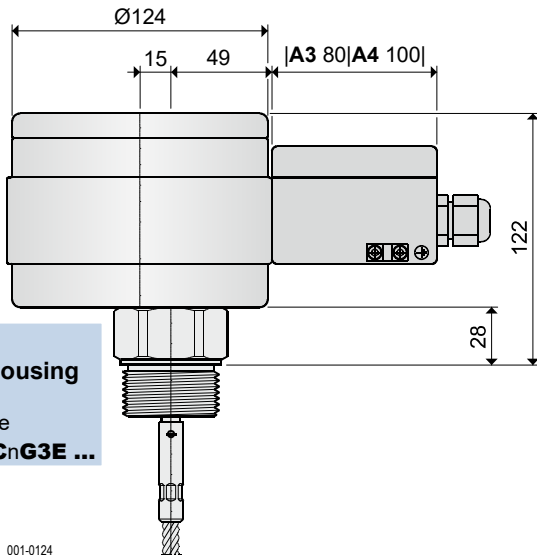
Full, empty and demand indicator for vertical mounting with pendulum shaft

Signal contact 2 A / 250V AC potential-free

Type of protection IP66 in accordance with DIN EN 60529

Maintenance none

4



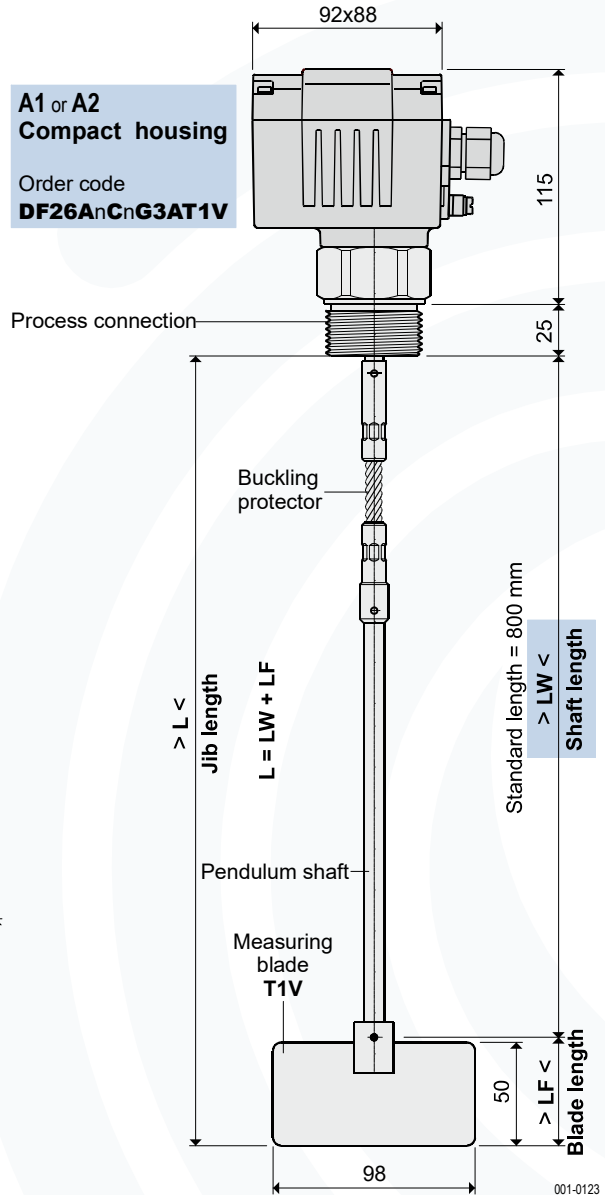
A3 or A4 Round housing

Order code **DF26AnCnG3E ...**

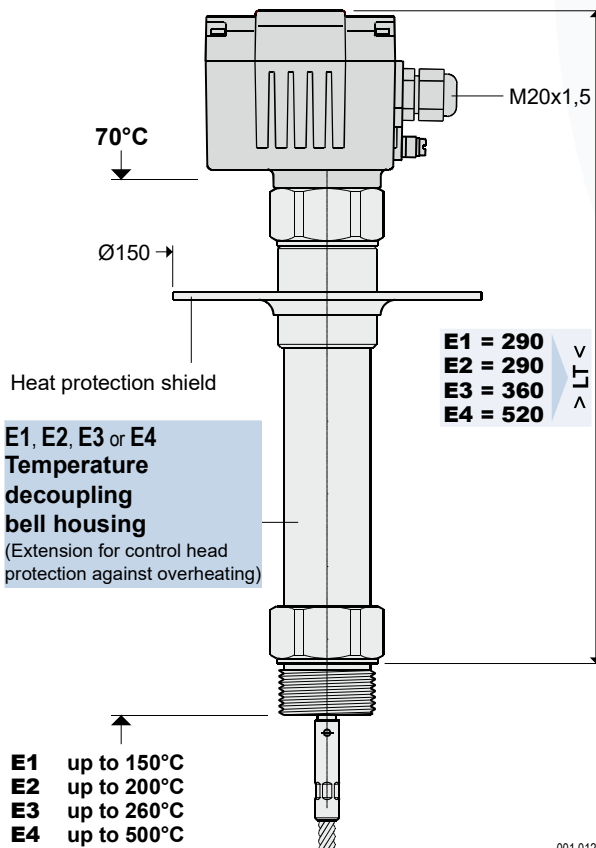
001-0124

A1 or A2 Compact housing

Order code **DF26AnCnG3AT1V**



001-0123



E1, E2, E3 or E4 Temperature decoupling bell housing
(Extension for control head protection against overheating)

E1 = 290
E2 = 290
E3 = 360
E4 = 520

E1 up to 150°C
E2 up to 200°C
E3 up to 260°C
E4 up to 500°C

001-0125

You will find further technical details under appliance information **DF-GI-..**

4 housing versions to choice

- Housing selection**
- A1 **Standard** Compact aluminium housing ... CE conform and ATEX Dust
 - A2 Stainless steel compact housing ... CE conform and ATEX Dust
 - A3 Aluminium round housing ... ATEX II 2G Ex db eb IIC T6
 - A4 Stainless steel round housing ... ATEX II 2G Ex db eb IIC T6

- Choice of options with**
- Certifications, certificates, approvals**
- B0 **Standard** = CE conform and IP66
 - B1 ATEX II 1/2D Ex ta/tb IIC T80°C Dust
 - B2 ATEX II 1D Ex ta IIC T70°C Dust
 - B3 ATEX II 1/3D Ex ta/tc IIB T80°C Dust
 - B9 Further approvals on request

- Supply voltage / Supply**
- C1 220...240V AC (50...60Hz)
 - C2 110...120V AC (50...60Hz)
 - C3 48V AC (50...60Hz)
 - C4 24V AC (50...60Hz)
 - C5 24V DC
 - C6 12V DC
 - C7 48V DC
 - C9 Special voltages on request

- Self-monitoring**
- D0 **Standard** = without monitoring
 - D1 Function monitoring
 - D2 Voltage monitoring

- Signal lamps¹⁾**
- H0 **Standard** = with function LEDs
 - H1 Collar for function LEDs
 - H2 Signal lamp, LED green
 - H8 Large signal lamp, LED green

- Bulk goods temperature / T_(process)**
- E0 **Standard** = -25°C...+80°C
 - E1 -40°C...+150°C with R1 or R5
 - E2 -25°C...+200°C with R1 or R5
 - E3 -25°C...+260°C with R1 or R5
 - E4 -25°C...+500°C with R1 or R5
 - E7 Device heating 2.5 Watt
 - E9 +1000°C¹⁾ on request

- Container pressure / p_(process)**
- P0 **Standard** = -0.5...5 bar³⁾
 - P1 -0.5 bar...10 bar
 - P2 -0.95 bar...25 bar⁴⁾
 - P6 -0.9 bar...10 bar
 - P7 -0.9 bar...10 bar⁵⁾

- Process connection**
- G2 Thread G1¼ DIN/ISO 228
 - G3 Thread G1½ DIN/ISO 228
 - G9 Other threads on request
 - F1 Flange F70 Ø110, 4xØ9/Ø90
 - F2 Flange F100 150x150, 4xØ18/Ø170
 - F5 Flange DN32 PN 10
 - F6 Flange DN100 PN 6
 - F9 Other flanges on request

- Material of process connection**
- A Aluminium
 - E Stainless steel 1.4301 / 304
 - X Other materials on request

- Measuring blade**
- M0 without measuring blade
 - T0 Blade T220 68x220
 - T1 Blade T50 98x50
 - T2 Blade T100 98x100
 - T5 Blade T250 250x100
 - T8 Rubber blade¹⁾ 250x100
 - X1 Blade X50 98x50
 - X2 Blade X100 98x100
 - X3 Blade X200 180x100
 - K1 Hinged blade T230 200x30
 - M9 Other measuring blades on request

- Blade reinforcement**
- without reinforcement
 - V with reinforcement

- Jib length**
- LW Shaft length

0 0 0 0 enter required length in mm, last digit always 0 min. 250 mm, max. 1500 mm

Accessories

SH	Weather protection hood in PVC, RAL 7001 Certificated only for zone 22 and in non-hazardous areas		
SM2	Hexagonal nut G1¼	X	X
SM3	Hexagonal nut G1½	X	X
Material of nuts			
A	Aluminium		
E	Stainless steel 1.4301 / 304		
KV1	2. Standard cable gland		
KV2	2. Ex cable gland		

Delivery from Stock

ordered until 12⁰⁰ - dispatched at 16⁰⁰

- D2) delivery only together with D2 or D1
- 1) H1 and H2 with B0 or B3, H8 only with B0 deliverable
 - 2) max. bulk goods temperature at B2 = -20°C...+45°C
 - 3) container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)
 - 4) with area separating element DF-P2 (gas-tight and leakproof)
 - 5) with pressure decoupling bell housing DF-P7 (pressure separating)
- 5) !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



B0, D0, H0, E0, P0, R0 and M0 are **not needed** for order code

- R0 **Standard** with NBR seal ring, black suitable for the majority of bulk goods
- Options** only for special applications
- R1 Seal ring in PTFE/VITON
 - R2 Seal ring in NBR, white FDA
 - R5 Seal ring in PTFE, white FDA
 - R9 Other seal rings on request
 - Rn add as suffix to selected connection e.g. G2ER2

- Z Bearing in stainless steel add as suffix to selected connection e.g. G3EZ

Measuring blade passes through tight hole of:
F1, F2, F6, F7 only for vertical mounting
F2, F6, F7
F2, F6, F7

F2, F6, F7
F2, F6, F7

G2, G3 and all other flanges

All larger dimensioned blades **can not** be inserted through the tight holes and must be mounted from the inside.

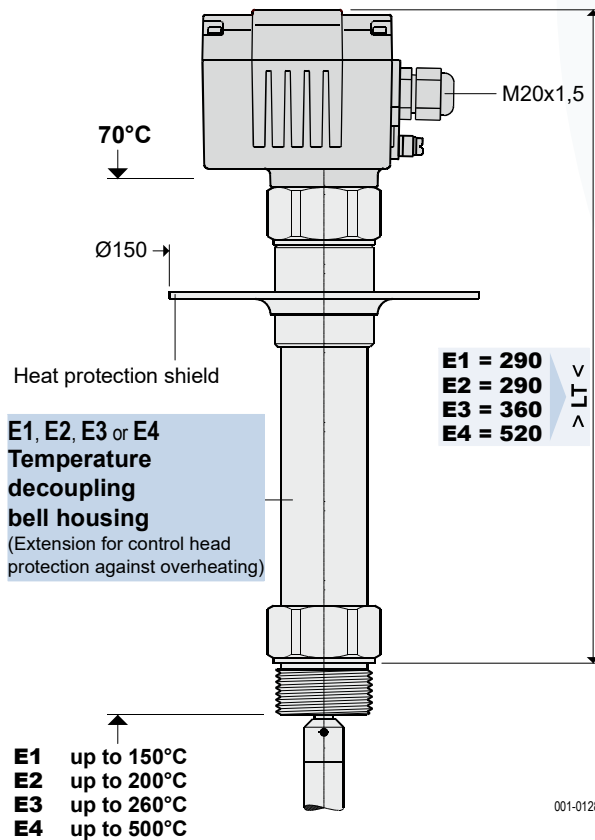
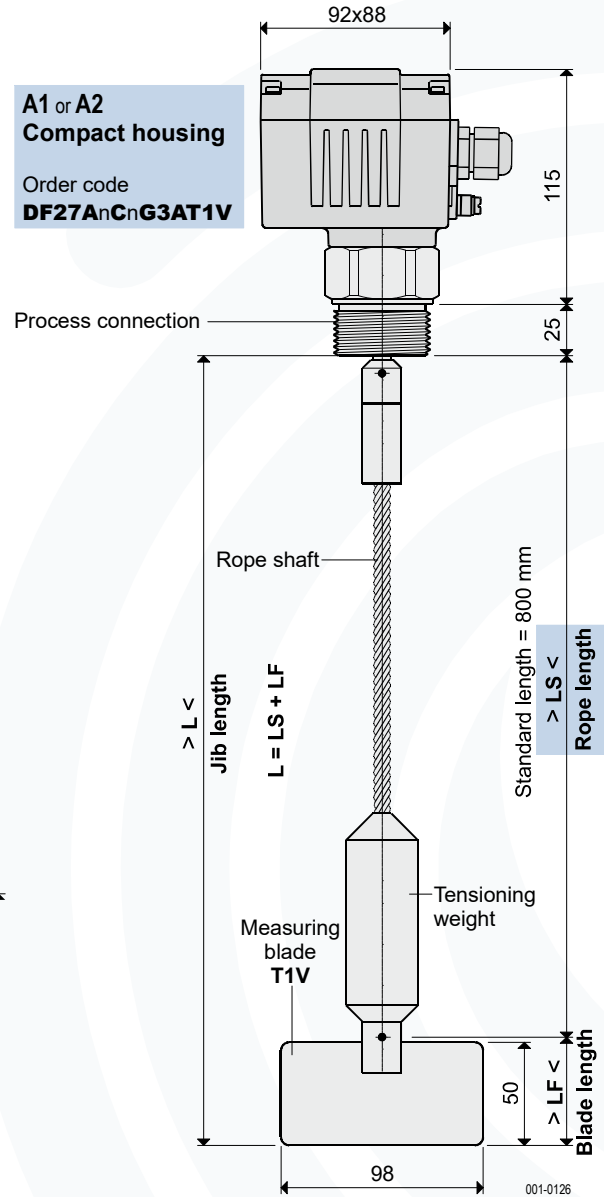
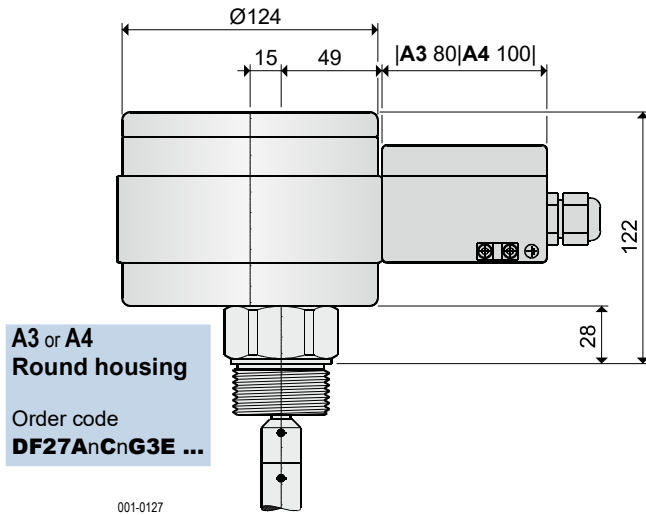
DF26 0

Order code

Full, empty and demand indicator for vertical mounting with rope shaft

Signal contact 2 A / 250V AC potential-free
Type of protection IP66 in accordance with DIN EN 60529
Maintenance none

4



You will find further technical details under appliance information DF-GI-..

Full, empty and demand indicator with protecting tube for vertical mounting

With KD (bearing and seal ring at the end of the tube) for any mounting position

Signal contact 2 A / 250V AC potential-free

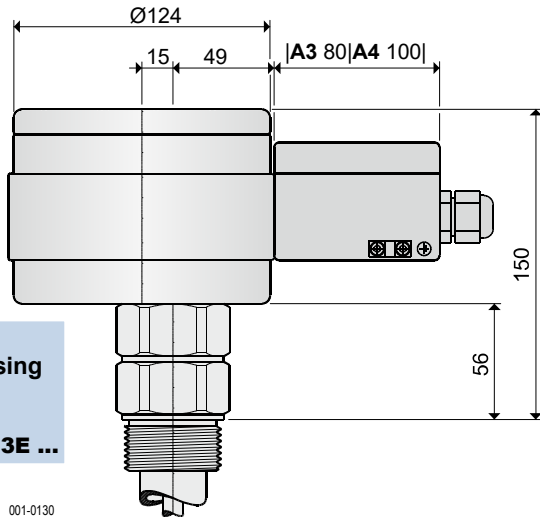
Type of protection IP66 in accordance with DIN EN 60529

Maintenance none

4

A3 or A4
Round housing

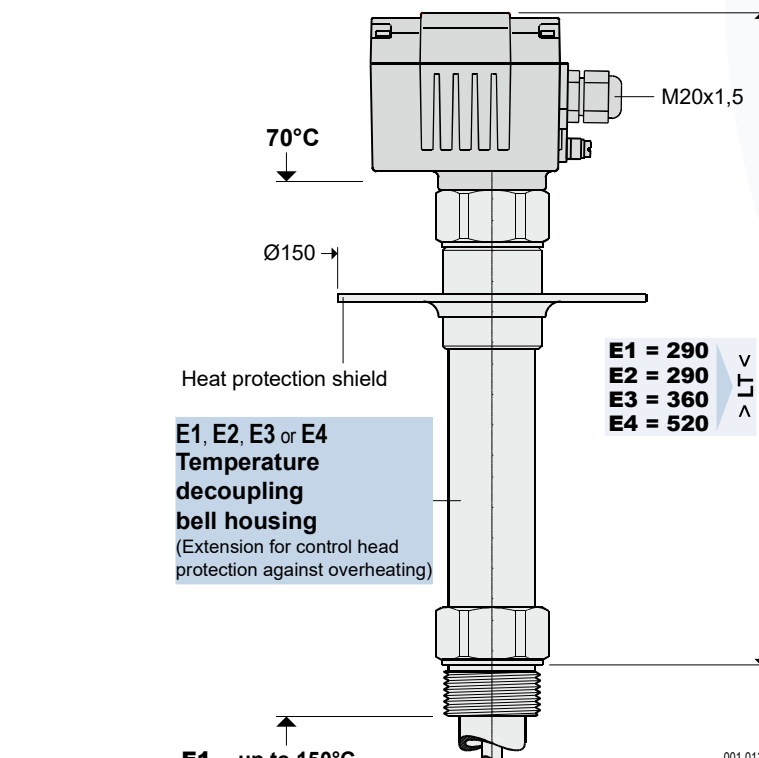
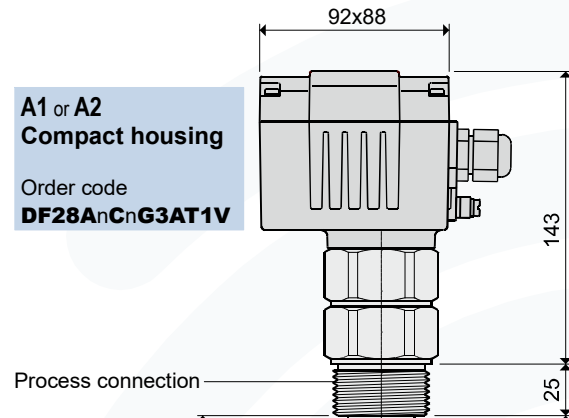
Order code
DF28AnCnG3E ...



001-0130

A1 or A2
Compact housing

Order code
DF28AnCnG3AT1V

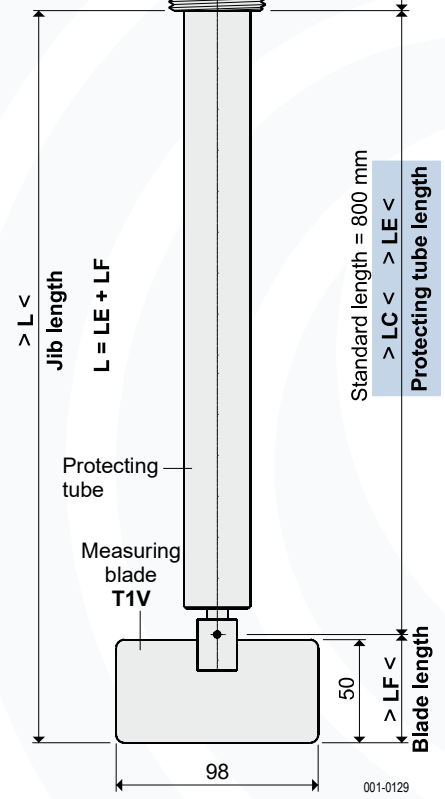


E1, E2, E3 or E4
Temperature decoupling bell housing
(Extension for control head protection against overheating)

- E1 = 290
- E2 = 290
- E3 = 360
- E4 = 520

- E1 up to 150°C
- E2 up to 200°C
- E3 up to 260°C
- E4 up to 500°C

001-0131



You will find further technical details under appliance information DF-GI-..

4 housing versions to choice

Housing selection

A1 Standard Compact aluminium housing ... conform and ATEX Dust
 A2 Stainless steel compact housing ... conform and ATEX Dust
 A3 Aluminium round housing ... II 2G Ex db eb IIC T6 Dust
 A4 Stainless steel round housing ... II 2G Ex db eb IIC T6 Dust

Choice of options with

- Certifications, certificates, approvals**
- B0** Standard = conform and IP66
 - B1** ATEX II 1/2D Ex ta/tb IIC T80°C Dust
 - B2** ATEX II 1D Ex ta IIC T70°C Dust D2)
 - B3** ATEX II 1/3D Ex ta/tc IIB T80°C Dust
 - B9** Further approvals on request

- Supply voltage / Supply**
- C1** 220...240V AC (50...60Hz)
 - C2** 110...120V AC (50...60Hz)
 - C3** 48V AC (50...60Hz)
 - C4** 24V AC (50...60Hz)
 - C5** 24V DC
 - C6** 12V DC
 - C7** 48V DC
 - C9** Special voltages on request

- Self-monitoring**
- D0** Standard = without monitoring
 - D1** Function monitoring
 - D2** Voltage monitoring

- Signal lamps¹⁾**
- H0** Standard = with function LEDs
 - H1** Collar for function LEDs
 - H2** Signal lamp, LED green
 - H8** Large signal lamp, LED green

- Bulk goods temperature/ $T_{(process)}$**
- E0** Standard = -25°C...+80°C²⁾
 - E1** -40°C...+150°C with R1 or R5
 - E2** -25°C...+200°C with R1 or R5
 - E3** -25°C...+260°C with R1 or R5
 - E4** -25°C...+500°C with R1 or R5
 - E7** Device heating 2.5 Watt
 - E9** ...+1000°C¹⁾ on request

- Container pressure / $p_{(process)}$**
- P0** Standard = -0.5...5 bar³⁾
 - P1** -0.5 bar...10 bar
 - P2** -0.95 bar...25 bar⁴⁾
 - P6** -0.9 bar...10 bar
 - P7** -0.9 bar...10 bar⁵⁾

Process connection

G2	Thread G1¼ DIN/ISO 228	X	X
G3	Thread G1½ DIN/ISO 228	X	X
G9	Other threads on request		
F1	Flange F70 Ø110, 4xØ9/Ø90	X	X
F2	Flange F100 150x150, 4xØ18/Ø170	X	X
F5	Flange DN32 PN 10	X	X
F6	Flange DN100 PN 6	X	X

Material of process connection

A	Aluminium	
E	Stainless steel 1.4301 / 304	
X	Other materials on request	

Measuring blade

M0	without measuring blade		
S2	Socket blade 130x30 inclined	X	X
M2	Socket blade 90x40		X
T0	Blade T220 68x220	X	
T1	Blade T50 98x50	X	X
T2	Blade T100 98x100	X	X
T5	Blade T250 250x100	X	
TG	Blade GT 98x8		X
T8	Rubber blade ¹⁾ 250x98	X	
X1	Blade X50 98x50	X	
X2	Blade X100 98x100	X	
X3	Blade X200 180x100	X	
K1	Hinged blade T230 200x30	X	
M9	Other measuring blades on request		

Blade reinforcement

	without reinforcement	
V	with reinforcement	

Jib length and material

LE	Protecting tube in stainless	
0 0 0 0	enter required length in mm, last digit always 0	
	min. 250 mm, max. 6000 mm	

KD with bearing and seal ring at the end of the protecting tube
 KD-Seal ring options: E2 and E3 = R5, at E4 protecting tube 1¼ with R8 and G3E

Accessories

SH	Weather protection hood in PVC, RAL 7001 Certificated only for zone 22 and in non-hazardous areas		
SM2	Hexagonal nut G1¼	X	X
SM3	Hexagonal nut G1½	X	X
Material of nuts			
A	Aluminium		
E	Stainless steel 1.4301 / 304		
KV1	2. Standard cable gland		
KV2	2. Ex cable gland		

Delivery from Stock

ordered until 12^o - dispatched at 16^o

- D2) delivery only together with D2 or D1
- 1) H1 and H2 with B0 or B3, H8 only with B0 deliverable
 - 2) max. bulk goods temperature at B2 = -20°C...+45°C
 - 3) container pressure at B1, B2 and B3 = -0.08bar...+0.08bar (-80...+80mbar)
 - 4) with area separating element DF-P2 (gas-tight and leakproof)
 - 5) with pressure decoupling bell housing DF-P7 (pressure separating)
- 5) !!! usage for differences in pressure within ATEX areas !!!

€ Prices on request



B0, D0, H0, E0, P0, R0 and M0 are **not needed** for order code

- **R0** Standard with NBR seal ring, black suitable for the majority of bulk goods
- Options** only for special applications:
- R1** Seal ring in PTFE/VITON
- R2** Seal ring in NBR, white FDA
- R5** Seal ring in PTFE, white FDA
- R8** Seal ring in Graphit only with E4 ..
- Rn** add as suffix to selected connection e.g. G3ER2

Measuring blade passes through tight hole of:

G2, G3 and all other flanges
 G3 and all other flanges
 F1, F2, F6, F7 only for vertical mounting
 F2, F6, F7
 F2, F6, F7
 F2, F6, F7
 G2, G3 and all other flanges

All larger dimensioned blades **can not** be inserted through the tight holes and must be mounted from the inside.

DF28 | | | | | | | | | | | | | | | | | | | | 0

Order code

Full, empty and demand indicator for vertical mounting
with short process connection for reduced installation height
for installation in the discharge taper of bellow feeders

Signal contact	2 A / 250V AC potential-free
Ambient temperature	70 °C at the housing
Type of protection	IP66 in accordance with DIN EN 60529
Maintenance	none

The compact
DF30 fits in every
discharge taper !

We deliver any form of
measuring blade
as per your
request.

Rotation speed
of measuring blade 5 rpm
(short response times)

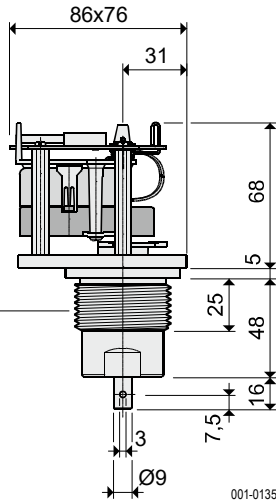
4

without housing
(on mounting plate)

Order code
DF30CnG3A

Process connection G1½

without measuring blade



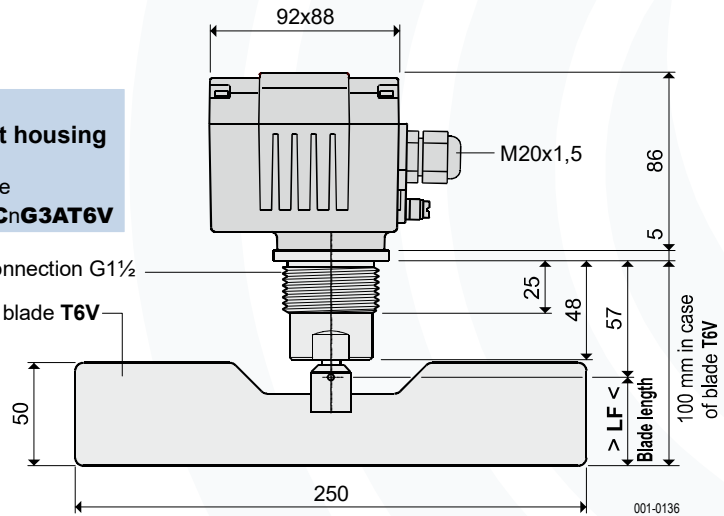
001-0135

A1 or A2
Compact housing

Order code
DF30AnCnG3AT6V

Process connection G1½

Measuring blade T6V



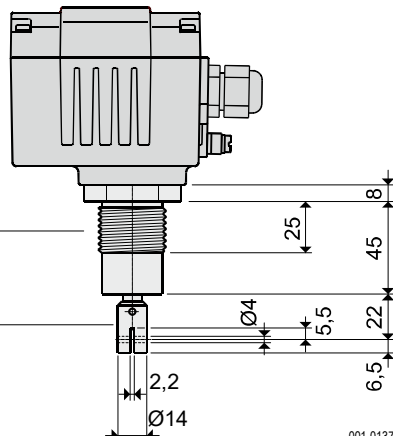
001-0136

A1 or A2
Compact housing

Order code
DF30AnCnG1EM7

Process connection G1E

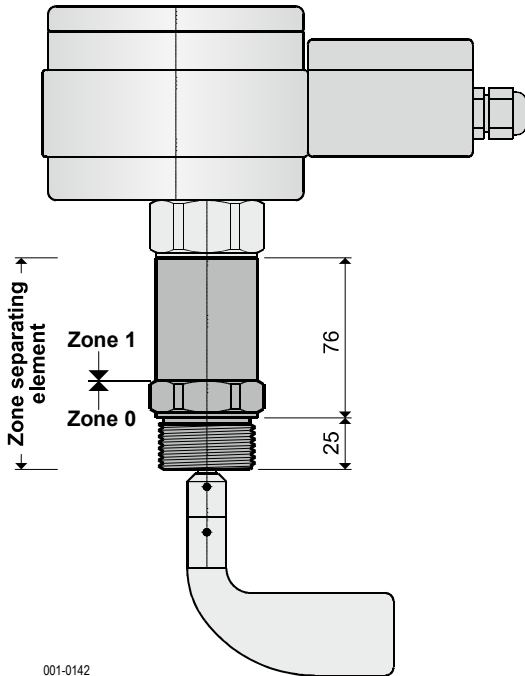
Measuring blade adapter M7



001-0137

You will find further technical details
under appliance information **DF-GI-..**

Zone separating element



001-0142

The Technical Data presented here are to be considered as maximum values, relating only to the equipment described herein. Depending on the selection of options and instruments used, these data must be considered or reduced correspondingly.

Basic device

Selection

Process connection / Material

- G2E Thread G1¼ DIN/ISO 228 / 316 Ti
- G3E Thread G1½ DIN/ISO 228 / 316 Ti

DF-ZTP7

Order code

Type of protection: II 1GD/- c IIB TX

DF-ZTCP7

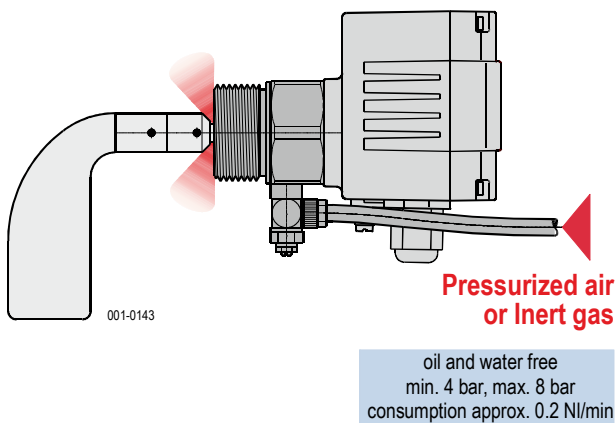
Order code

Type of protection: II 1GD/- c IIC TX
with Seal ring R1, R5, R6 and R7



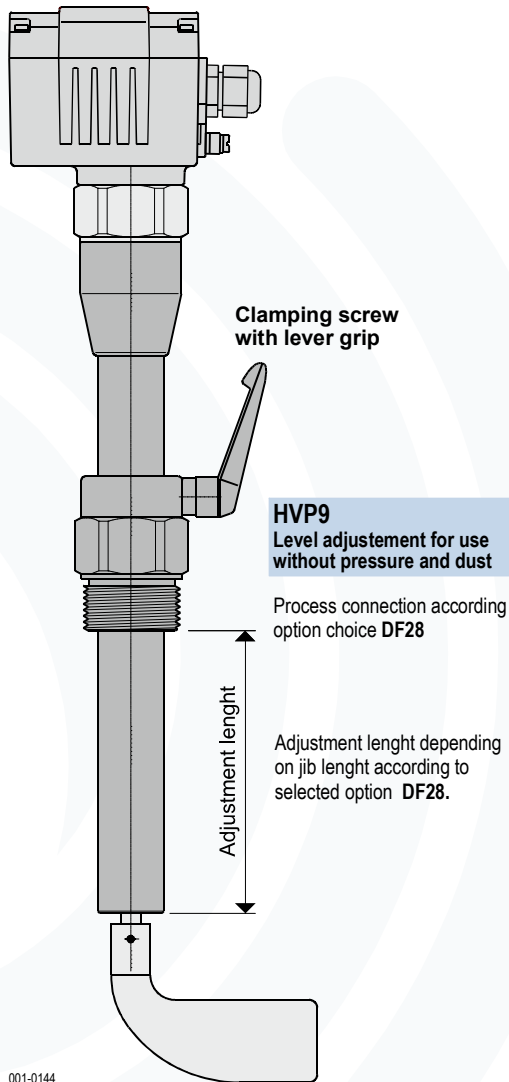
Housing material	1.4571 / 316 Ti
Process connection	G1¼ (G2I) or G1½ (G3I) and all Flanges
Bulk goods temperature	-25 °C ... +180 °C
Pressure in the vessel	-0.95 bar ... 10 bar
Response delay	U1 (Standard) approx. 3.00 sec. U5 approx. 0.60 sec

Annular gap flushing and overpressure enclosing



- R1DS for all DF but not for DF23 and DF24
- R5DS white FDA for all DF but not for DF23 and DF24
- R7DS white FDA for DF23 and DF24
- R8DS for E4 (High temperature)

Level adjustment for level indicator DF28

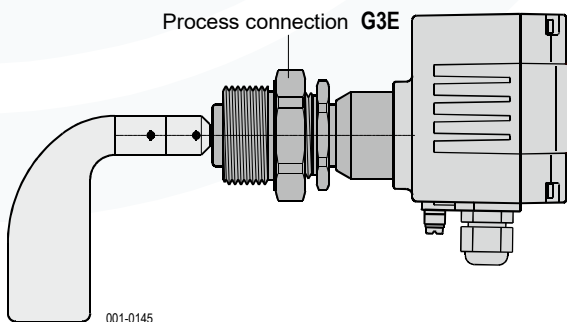


- HVP8** Level adjustment for pressure-tight and dust-proof use in stainless steel and threat G1½ (high overpressure and vacuum on request)
- HVP9** Level adjustment for use without pressure and dust (Process Connection and material according to option choice DF28)

Inclined or horizontal mounting only with option **KD** and only up to 1000 mm jib length.

Ex -Info
The level adjustment is certified for use in hazardous locations

Vibration dampening for level indicator DF22 / DF28

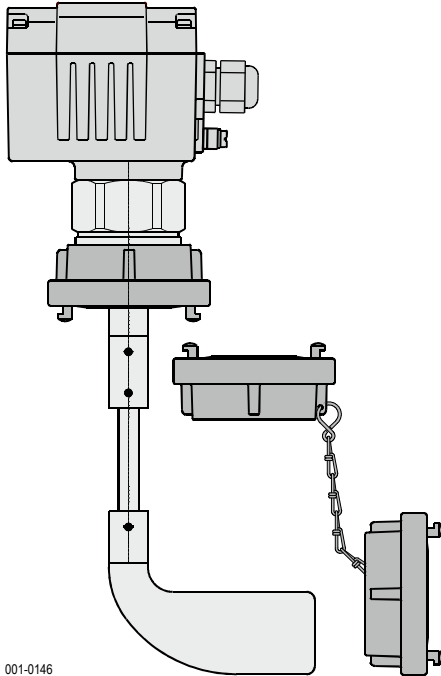


- VDN** Vibration dampening in 1.4301 / 304 with seal in NBR for **bulk goods temperature E0** -25 °C ... +80 °C
- VDE** Vibration dampening in 1.4301 / 304 with seal in silicon for **bulk goods temperature E1** -40 °C ... +150 °C higher temperatures on request
made of 1.4571 / 316 Ti on request

Option to choice for DF22 and DF28 up to 500 mm length
Vessel pressure max. -0.5 bar ... 2 bar (higher pressures on request)

Quick couplings system Storz

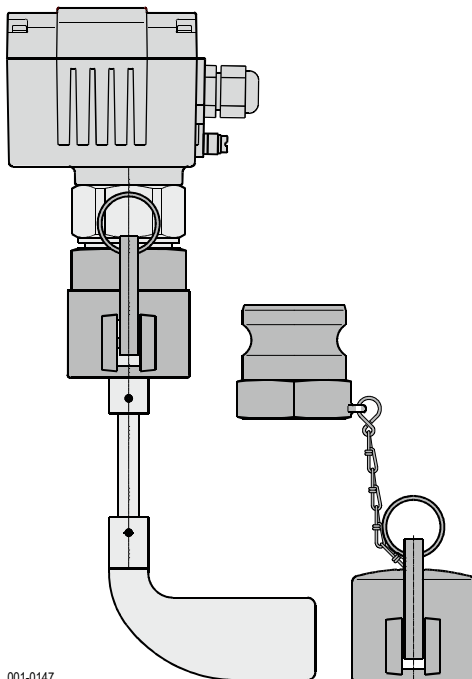
4



- DF-SZ50** Quick coupling (Storz) with bayonet
- K-FSZ052IG2 AL** Coupling with internal thread for the vessel
- K-BSZ052-00-AL** Blank cap

Material AIMgSi1 (Stainless steel on request)
Seal ring NBR, white FDA
Vessel pressure -0.9 bar ... 10 bar
Bulk goods temperature -25 °C ... +80 °C

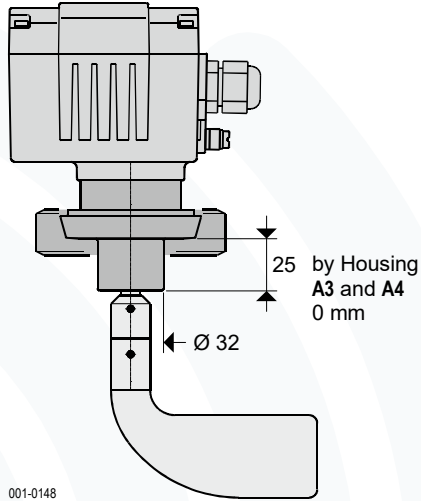
KAMLOK couplings



- DF-AK50** Mother coupling (KAMLOK) with lever arm
- K-AVKI 050 VA** Coupling with internal thread for the vessel
- K-AMB 050 VA** Female blank cap

Material 1.4401 / 316
Seal ring VITON
Vessel pressure -0.9 bar ... 10 bar
Bulk goods temperature -25 °C ... +150 °C

Dairy couplings



F42 Process connection - Dairy coupling DN50 / 2
delivery incl. grooved nut in 1.4404 / 313 L

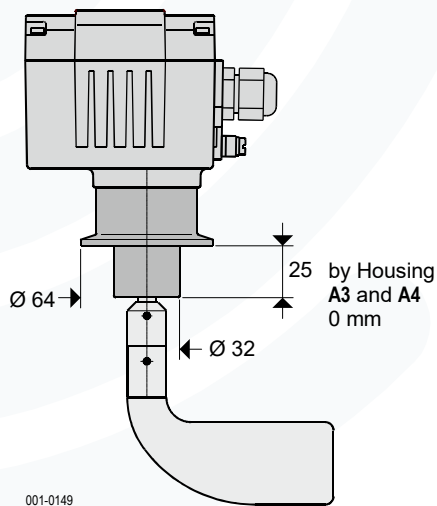
Material Conical standpipe 1.4571 / 316 Ti
Grooved nut 1.4404 / 313 L

Connection size Dairy coupling DN50 / 2

Vessel pressure -0.9 bar ... 10 bar

4

Clamp coupling

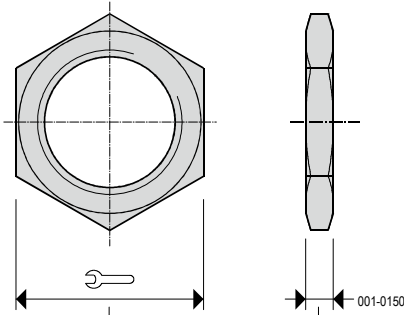


F46 Process connection - Clamp coupling DN50 / 2

Material 1.4571 / 316 Ti

Vessel pressure -0.9 bar ... 10 bar

Hexagonal nuts



SM1	G1	41	6	G1
SM2	G1¼	50	8	G2
SM3	G1½	55	8	G3
SM4	G2	70	10	G4
SM5	M30x1,5	41	6	G5
SM6	M32x1,5	41	6	G6



Selector

Hexagonal nuts

1	Hexagonal nut,thread G1	X	X
2	Hexagonal nut,thread G1¼	X	X
3	Hexagonal nut,thread G1½	X	X
4	Hexagonal nut,thread G2	X	X
5	Hexagonal nut,thread M30x1.5	X	X
6	Hexagonal nut,thread M32x1.5	X	X

Material

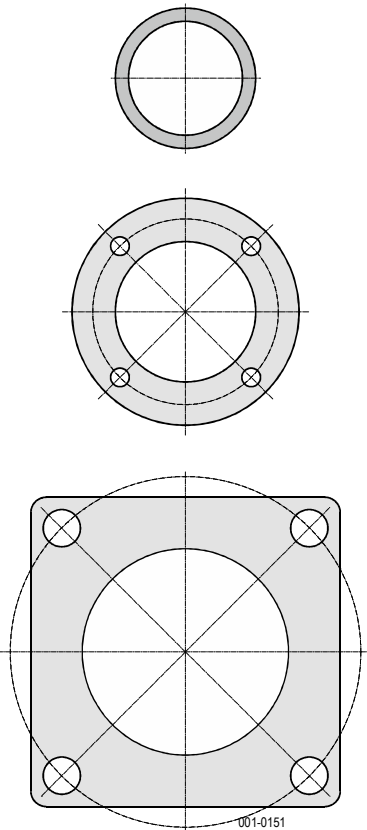
A	Aluminium
E	Stainless steel 1.4301 / 304
X	other materialson Request

SM ← Order code

Spanner wrench for process connection and nuts

Art.-No.		Material	Steel, galvanized
GS41	41		
GS46	46		
GS50	50		
GS55	55		

Seals for process connections



Selection

Process connection

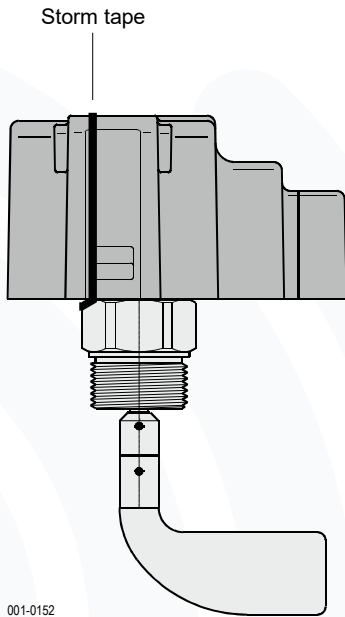
G1	Thread G1	DIN/ISO 228
G2	Thread G1¼	DIN/ISO 228
G3	Thread G1½	DIN/ISO 228
G4	Thread G2	DIN/ISO 228
G5	Thread M30x1.5	
G6	Thread M32x1.5	
F1	Flange F70	Ø110, 4xØ9, Lk90
F2	Flange F100	150x150, 4xØ18, Lk170
F5	Flange DN32	PN 6
F6	Flange DN100	PN 6
F7	Flange DN100	PN 16

Temperature / Seal compounds

E0	Standard	= ...+80°C / NBR, white FDA
E2		...+200°C / VITON, black
E4		...+350°C / Klingersil, green
E7		...+1000°C / Stainless Steel only for G2 and G3
E9		High temperature on request

DR ← Order code

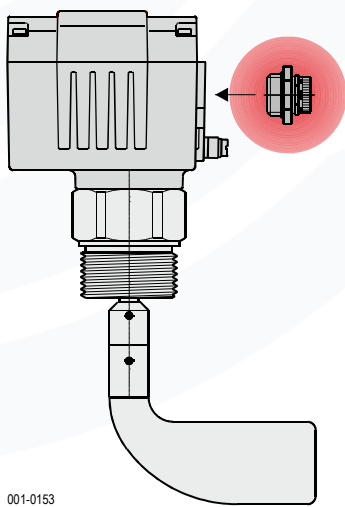
Weather protection hood for outdoor use



SH Weather protection hood with storm tape
Material PVC, RAL 7001

4

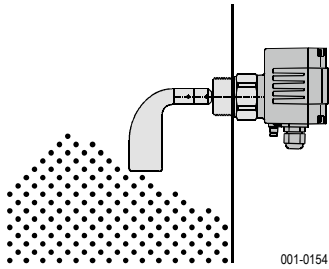
Protection of condensation with special blocking foil



SDK Condensation protection
SDE Condensation protection, stainless steel
RST-DAE-SSM12Ex Condensation protection, stainless steel, ATE

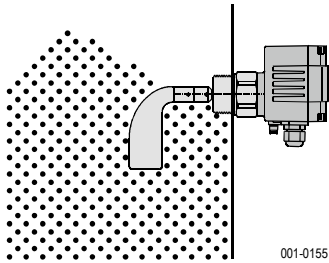
-Info
Protection of
Condensation
is certified
for use in
zone 22

Signal delay - empty indication



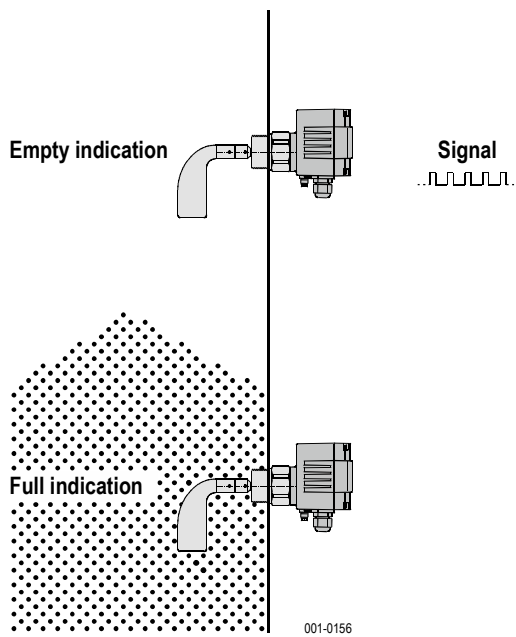
D3 Signal delay - empty indication

Signal delay - full indication



D4 Signal delay - full indication

Function control with pulsating signal

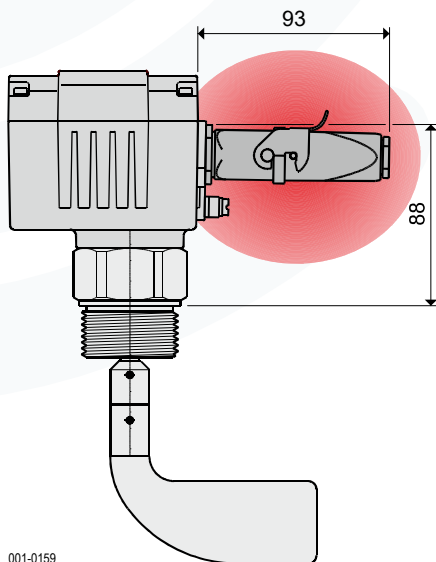
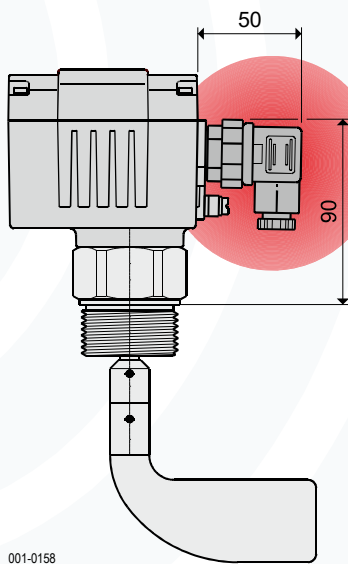
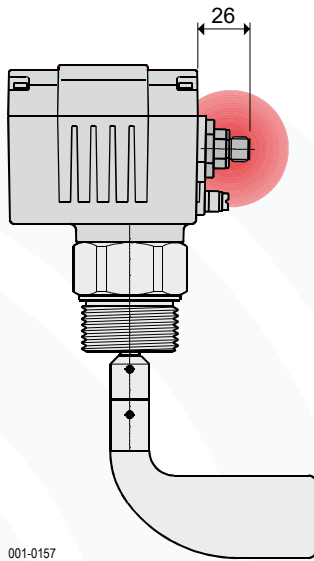


D9 Function control with pulsating signal

Error alarm



Connection plugs



ST1 Connector RSFM 4, 3-pin + PE
(Sensor plug M12x1)
Housing material Brass, nickel plated
Type of protection **IP68** according to DIN EN 60529
Wiring according to circuit diagram 3-pin+PE
Voltages up to 240 V AC

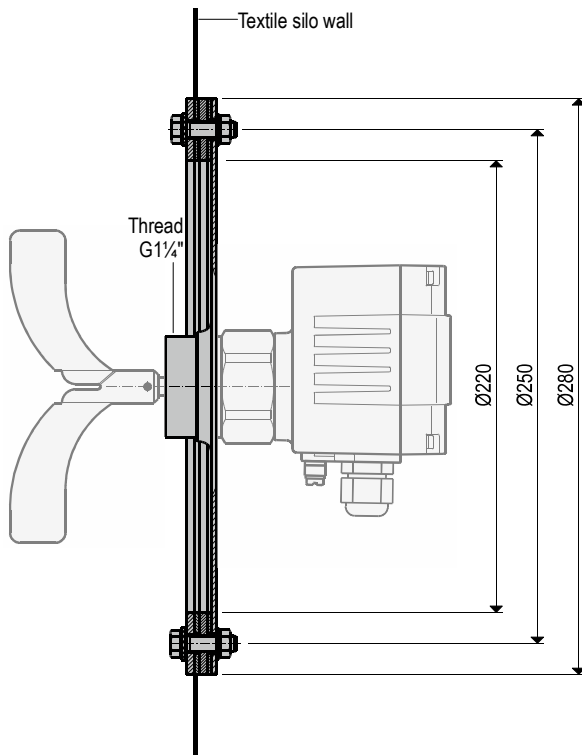
ST2 Connector RSFM 5, 4-pin + PE
(Sensor plug M12x1)
Housing material Brass, nickel plated
Type of protection **IP68** according to DIN EN 60529
Wiring according to circuit diagram 4-pin+PE
Voltages max. 240 V AC

ST3 Connector GDM, 3-pin + PE
with socket connector and seal
Housing material Plastic, black
Type of protection **IP66** according to DIN EN 60529
Wiring according to circuit diagram 3-pin+PE

Ex -Info
The connector **DF-ST3** is certified for use in **zone 22**
B3

ST5 Connector HTS, 5-pin + PE
with socket connector and seal
Housing material Aluminium, hammer-effect varnish
Type of protection **IP66** according to DIN EN 60529
Wiring according to circuit diagram 5-pin+PE

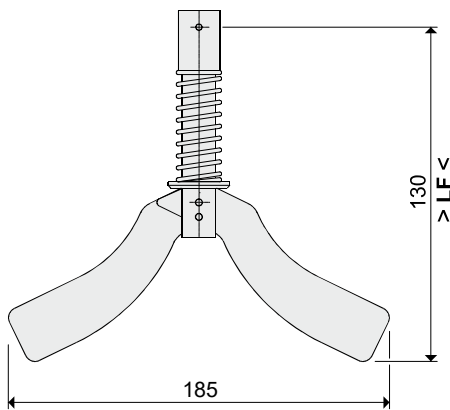
Mounting flange, for flexible textile silos



MG2 Mounting flange for bag silos
Material Steel, coated
 Stainless steel on request

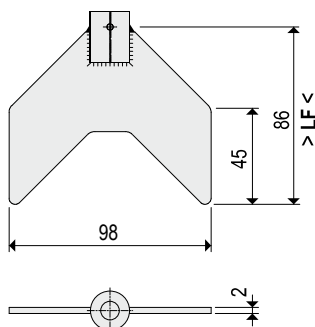
4

Hinged blade, reinforced



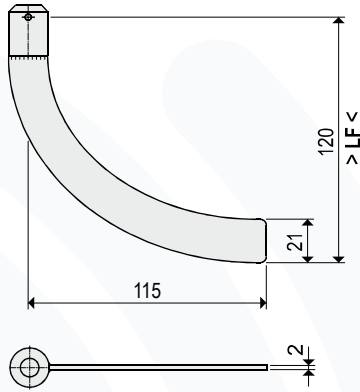
K3V Hinged blade Y183 180x28
Material 1.4301 / 304

Measuring blade, reinforced for small round bins



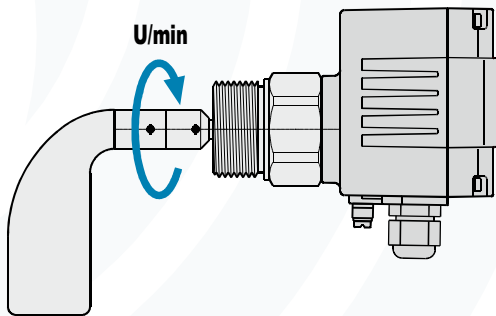
Y3V Measuring blade 98x45
Material 1.4301 / 304

Socket blade, reinforced for very small process connections



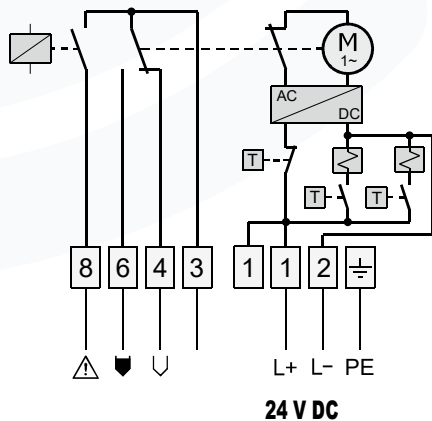
M8V Socket blade 115x21
Material 1.4301 / 304

Blade speed, increased

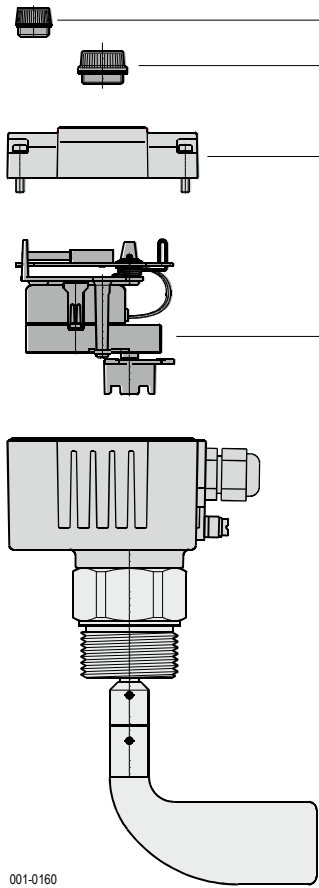


U5 Blade speed 5 rpm
(all configurations with exception of R5 and R7)

Heating for device, 3.5 Watt for temperatures up to -40 °C



E74 Heating for device 3.5 Watt



Collars and housing covers

- DF-KL1 Collar with seal ring for function LEDs
- DF-KL2 Collar with seal ring for signal lamp
- DF-GD0 Housing cover
- DF-GD1 Housing cover for function LEDs
- DF-GD2 Housing cover for signal lamp
- DF-GD3 Housing cover for function LEDs and signal lamp
- DF-GD8 Housing cover for large signal lamp

Printed circuit boards with motor

Selection of options

- Supply voltage**
- C1 220...240V AC (50...60Hz)
 - C2 110...120V AC (50...60Hz)
 - C3 48V AC (50...60Hz)
 - C4 24V AC (50...60Hz)
 - C5 24V DC
 - C6 12V DC
 - C7 48V DC
 - C9 Special volatges on request

Self-monitoring

- Standard** without monitoring
- D1 Function monitoring
 - D2 Voltage monitoring
 - D3 Signal delay - Empty indication
 - D4 Signal delay - Full indication
 - D9 Function monitoring with pulsating signal

Signal lamps

- H0 with functions LEDs (**H5 to be selected with DF11**) ..
- H2 Signal lamp LED, green
- H7 Signal lamp LED, yellow/green (**only for DF11**)
- H8 Connection for large signal lamp
- H9 without function LEDs (**Standard with DF11**)

Heating system

- Standard** without heating
- E7 Appliance heating 2.5 Watt
 - E74 Appliance heating 3.5 Watt

Measuring blade speed

- U1 **Standard** = 1 rpm
- U5 5 rpm

DFPM [] [] - [] [] ← Order code

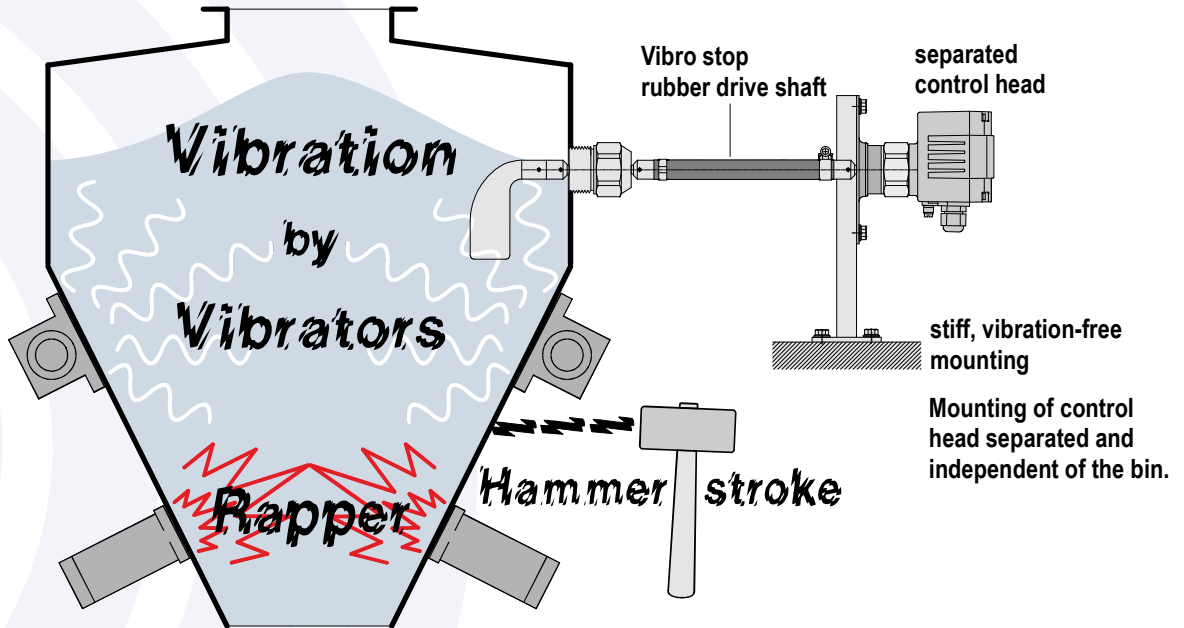
We provide deliveries, services and offers exclusively on the basis of our General Terms and Conditions that are available for viewing and download at www.mollet-level.com.

Technical alteration rights reserved.

Separated control head for protection against strong vibrations

The vibro-stop rubber drive shaft avoids transmission of vibrations to the separated control head.

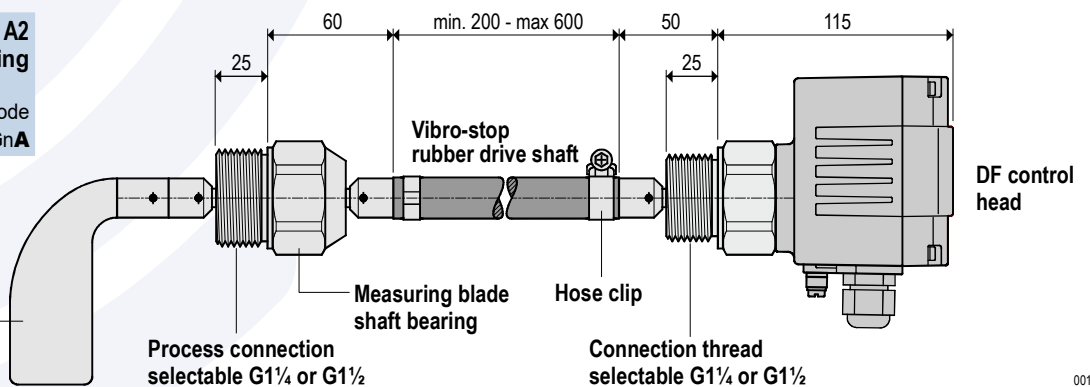
4



001-0802

A1 or A2 compact housing
Order code
DF21AnCnGnERn...ASGnA

Measuring blade M2V
other measuring blades
see selection list

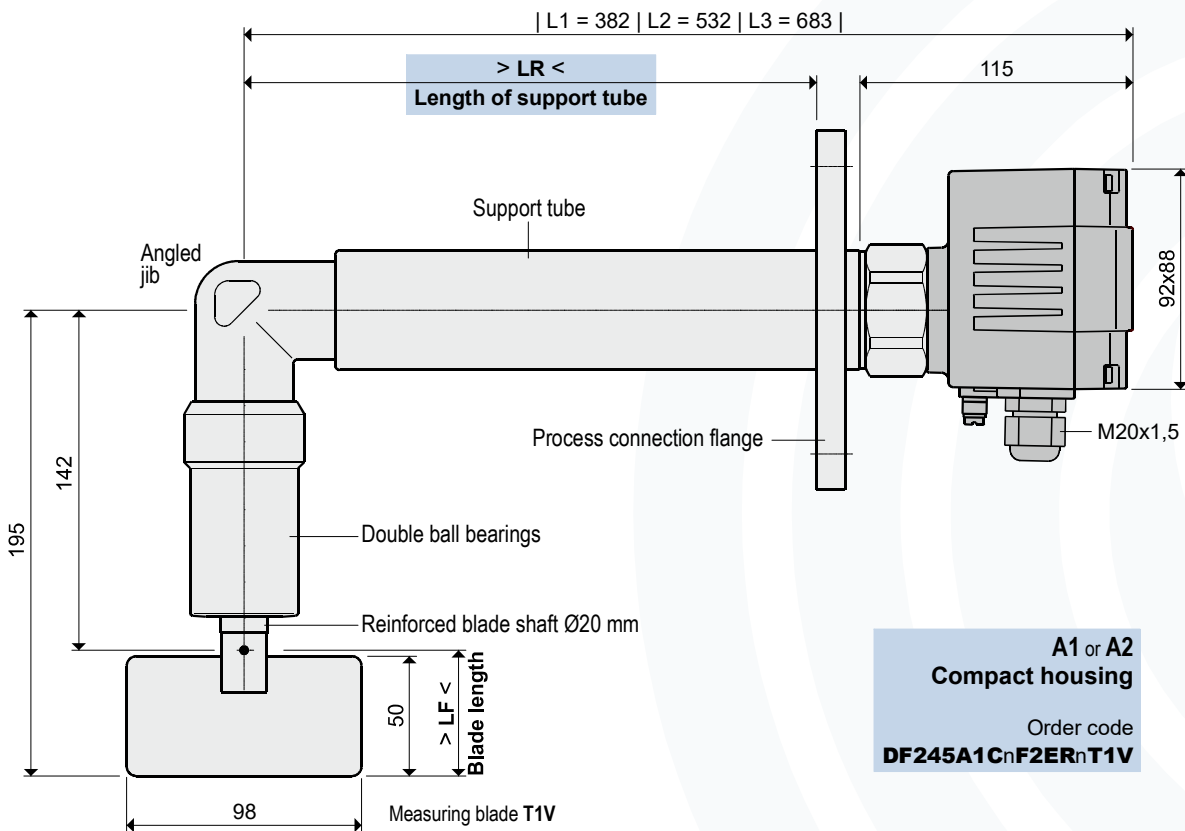


001-0801

Special level indicator with angled jib

The reinforced blade shaft $\varnothing 20$ mm with double bearings at the angled jib resist high lateral forces.

4



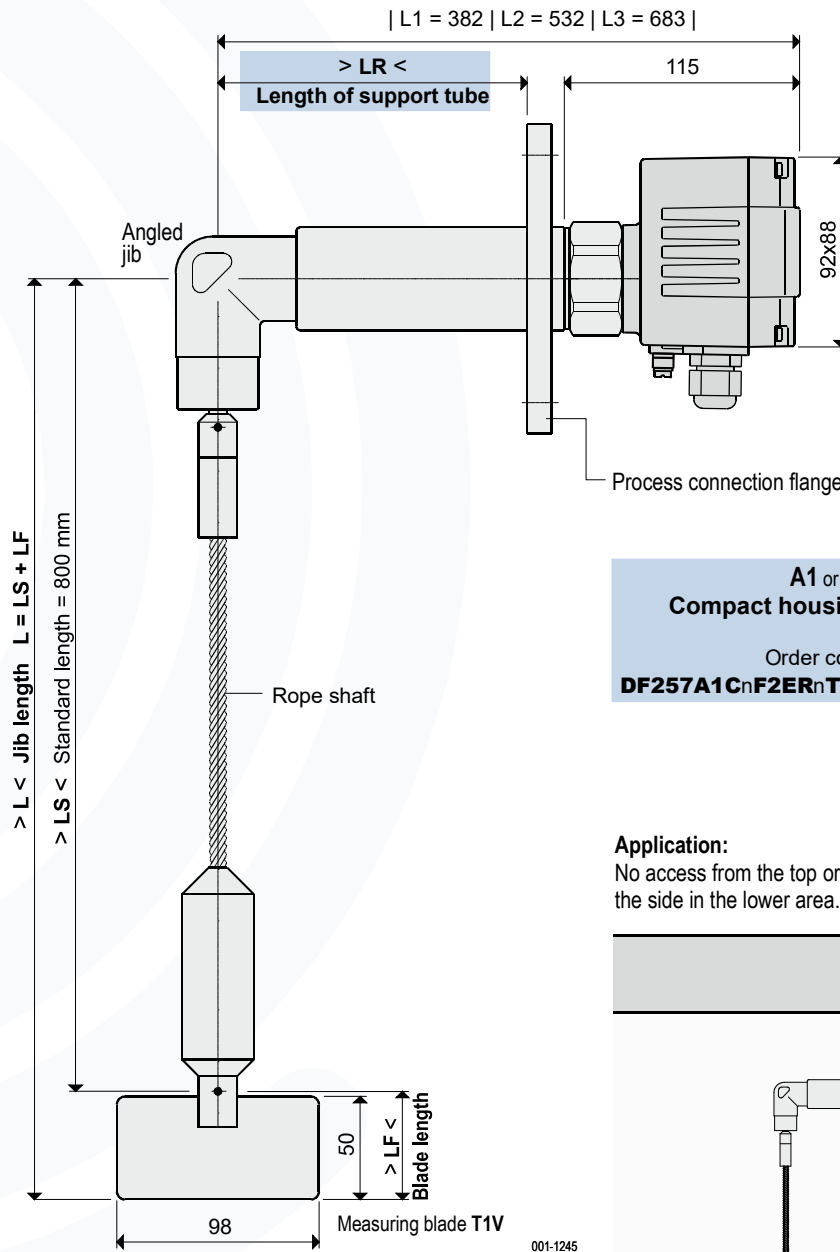
001-1245

Full-, empty- and demand indicator for horizontal mounting with angled jib and reinforced blade shaft

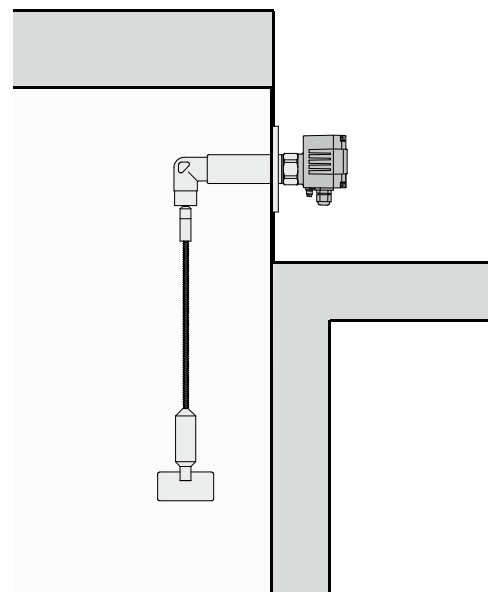
Signal contact	2 A / 250V AC potential-free
Ambient temperature	70 °C at the housing
Type of protection	IP66 according to DIN EN 60529
Maintenance	none

Special level indicator with angled jib

Angled jib with rope shaft and tensioning weight.



Application:
No access from the top or from the side in the lower area.

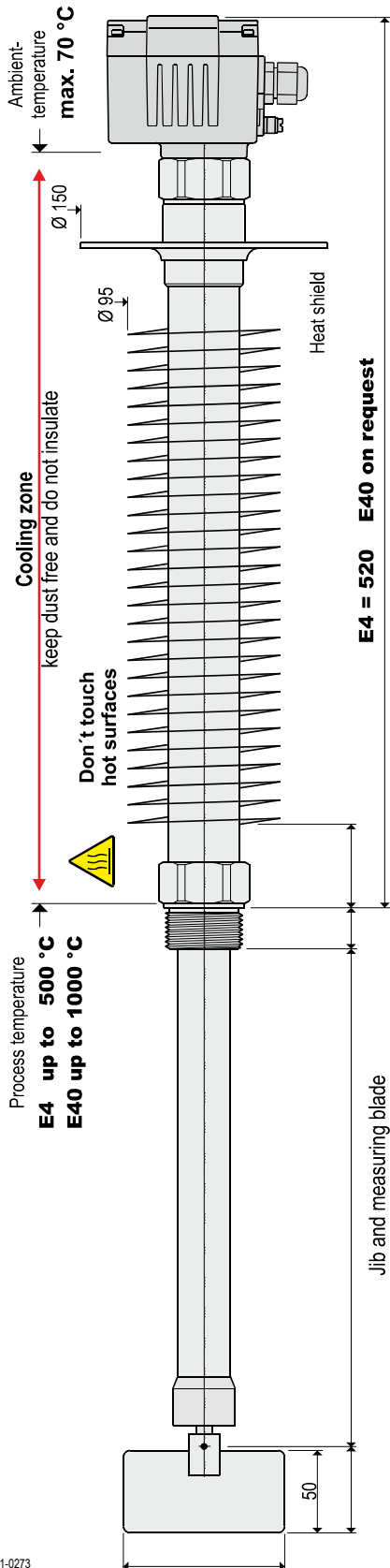


Full-, empty- and demand indicator for horizontal mounting with rope shaft and tensioning weight

Signal contact	2 A / 250V AC potential-free
Ambient temperature	70 °C at the housing
Type of protection	IP66 according to DIN EN 60529
Maintenance	none

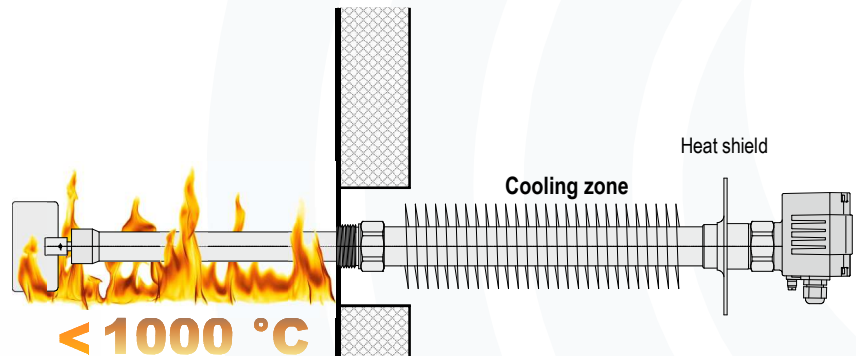
Special level indicator for high temperatures of bulk goods

4



Jib and blade made of heat-resistant steel plus a high temperature sealing enable filling level measurement up to 1.000 °C.

A1 or A2
Compact housing
Order code
DF28A1CnEnGnERnT1V



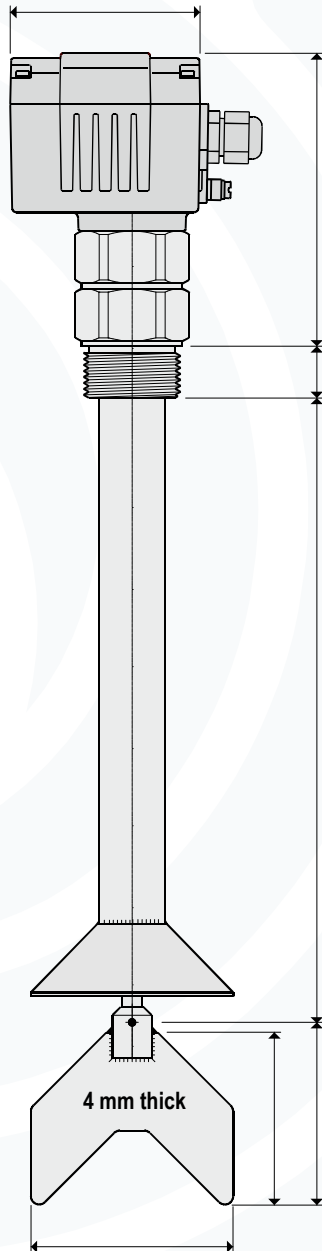
Full-, empty- and demand indicator for any mounting position with temperature decoupling bell housing

Signal contact	2 A / 250V AC potential-free
Ambient temperature	70 °C at the housing
Type of protection	IP66 according to DIN EN 60529
Maintenance	none

Special, reinforced level indicator for measuring within the filling stream

Protection tube and blade made of 4 mm thick stainless steel plus a protective roof enable filling level measurement within the filling stream of heavy bulk goods.

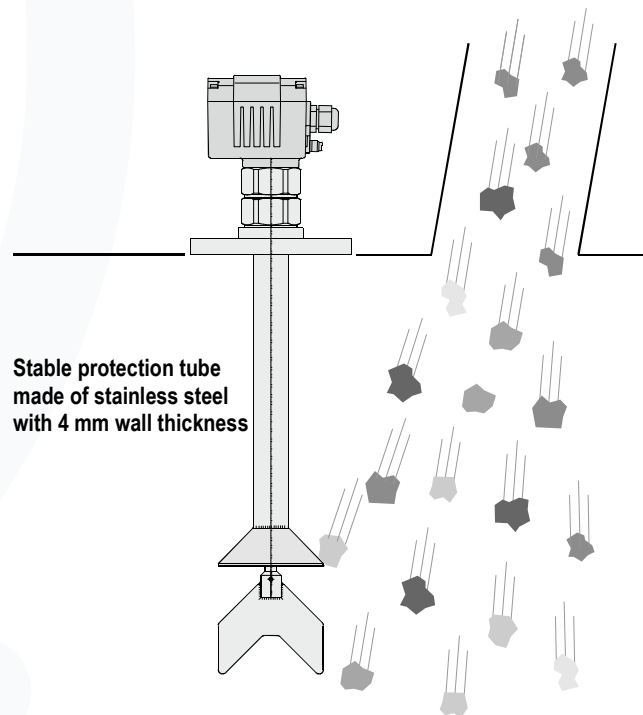
4



A1 or A2
Compact housing

Order code

DF28VA_nC_nG_nER_nY3V



Stable protection tube
made of stainless steel
with 4 mm wall thickness

Protection of the blade against impinging bulk solids

Full-, empty- and demand indicator for vertical mounting with protective roof plus reinforced blade and protection tube

Signal contact	2 A / 250V AC potential-free
Ambient temperature	70 °C at the housing
Type of protection	IP66 according to DIN EN 60529
Maintenance	none

