

magnetic float transmitters

Functional description:

The magnetic float level transmitter device serves as a reading recorder for the electrical, continuous remote indication of the filling level.

The operation of the measuring devices is based on the float principle.

Through the wall of a guide tube the magnetic field, which is contained in the spherical or cylindrical float, triggers reed contacts, which uninterruptedly pick up the measuring voltage given at a resistance measuring chain.

The measuring voltage is proportional to the height of the filling level (3-wire potentiometer circuit).

The size of the reed contacts is made up in different accuracy's.

In connection with a control unit the resistance value can be converted into a standardised analogue value, e.g. 4 ... 20 mA.

Application area:

Magnetic float level transmitter are exclusively meant for the monitoring of the filling level of liquid media and may be installed into vessels and tanks which meet the technical requirements, i.e. which are designed for the according operating parameters.

All materials which will come in touch with the liquid medium have to be invariable, accordingly.

Design limits:

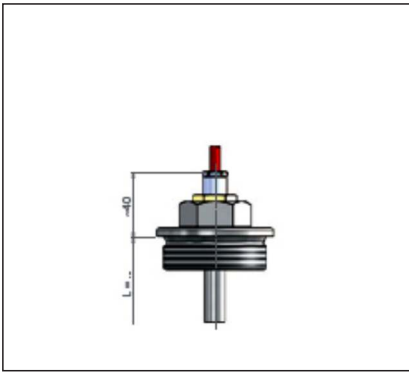
Specific gravity: $\geq 400 \text{ kg/m}^3$

Design pressure: -1 bar ... 150 bar

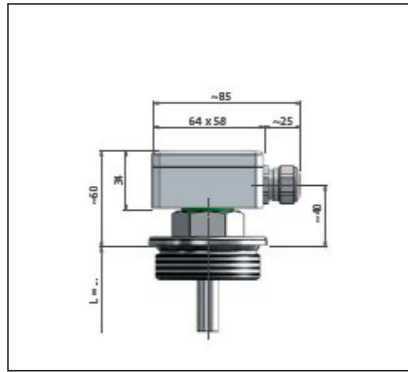
Design temperature: -50°C ... 250°C



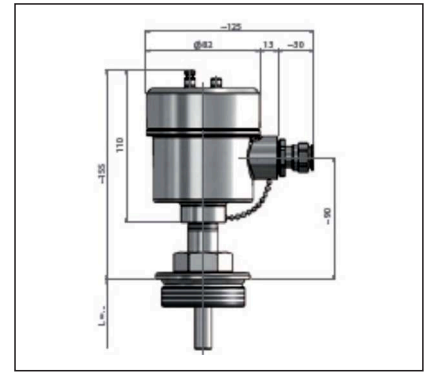
Electrical connection:



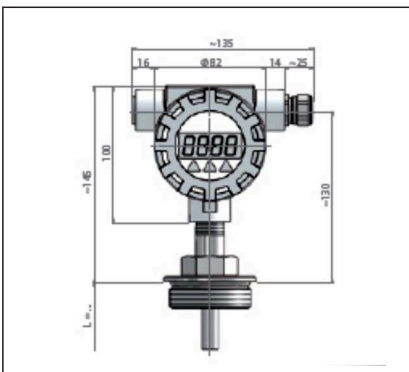
Connection type: K
 Material quality: according as cable type
 Cable entry: PG or metric
 Ingress protection class: IP 55 (optional IP 68)
 Ambient temperature: -40°C ... 200°C



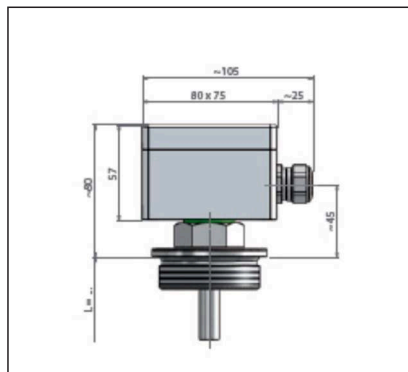
Connection type: ALE
 Material quality: aluminium coated RAL 7001
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65
 Ambient temperature: -40°C ... 100°C



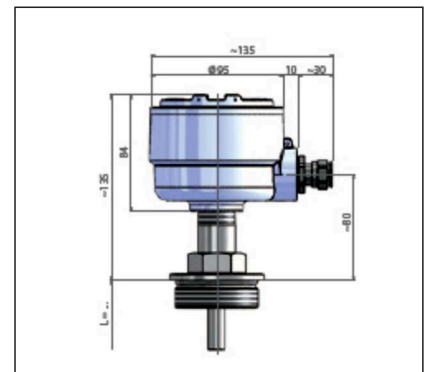
Connection type: AVA / AVDA (Exd)
 Material quality: stainless steel A4 (S.S. 316)
 Cable entry: M20 x 1.5
 Ingress protection class: IP 67 (Exd IP 68)
 Ambient temperature: -40°C ... 85°C



Connection type: DAALA
 Material quality: aluminium
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65
 Ambient temperature: -40°C ... 60°C



Connection type: ALF
 Material quality: aluminium coated RAL 7001
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65
 Ambient temperature: -40°C ... 100°C



Connection type: ALDA (Exd)
 Material quality: aluminium coated RAL 9006
 Cable entry: M20 x 1.5
 Ingress protection class: IP 68
 Ambient temperature: -40°C ... 100°C

Approvals / Certificates:



ATEX*

II 1/2G Ex ia c IIC T6 - T3	II 1/2G	Ex ia c IIC T6 - T3 oppure Ex d ia c IIC T6 - T4	II 2G Ex d c IIC T6 - T4
II 1/2G Ex d c IIC T6 - T4	II 2D	Ext DA21 c IP6* T80°C - T190°C bzw. T125	

Liquid temperature Ex ia max. 180°C / Ex d max. 120°C

Type of protection intrinsic safety Ex ia IIC switch bzw. temperature switch	li ≤ 100 mA		
Type of protection intrinsic safety Ex ia IIC temperature probe	Ui ≤ 28 V	li ≤ 100 mA	Pi ≤ 700 mW
Type of protection intrinsic safety Ex ia IIC with option/N (NAMUR EN 60947)	Ui ≤ 15 VDC	li ≤ 60 mA	
Type of protection "moulding"	UN ≤ 250 VDC/AC	PSN ≤ 50 W/VA	PFN ≤ 700 mW
Type of protection "moulding" with option/N (NAMUR EN 60947)	UN ≤ 15 VDC	IN ≤ 60 mA	
Type of protection "moulding" with option/R22 (resistor)	UN ≤ 250 VDC/AC	IN ≤ 100 mA	

* = The approval is dependent on the equipment combination

MAGNETIC FLOAT TRANSMITTERS

Type:	ALE/V/R-1½ -V/K...-L .../12-SVK44/15/V	ALE/V/R-2-V/K...-L .../12-SV52/15/V
Material:	316L / 316Ti (optional other materials)	316L / 316Ti (optional other materials)
Electrical connection:	ALE aluminium terminal box	ALE aluminium terminal box
Process connection:	G 1" ½ (optional flanged)	G 2" (optional flanged)
Guide tube:	Ø 12 mm (accuracy type K5 ... Ø 14 mm)	Ø 12 mm (accuracy type K5 ... Ø 14 mm)
Length of instrument:	≤ 5000 mm*	≤ 5000 mm*
Float:	SVK44/15/V Ø 44mm	SVK52/15/A Ø 52 mm
Specific gravity:	≥ 800 kg/m ³	≥ 700 kg/m ³
Design pressure:	-1 bar ... 25 bar (depending on temperature)	-1 bar ... 40 bar (depending on temperature)
Design temperature:	See accuracy	See accuracy
Ingress protection class:	IP 65	IP 65
Mounting position:	Vertical +/-30°	Vertical +/-30°
Accuracy:		
Type K ... (-30°C ... 130°C)	Accuracy: 5 / 10 / 12.7 / 15 mm	Accuracy: 5 / 10 / 12.7 / 15 mm
Type K ... HTF (-30°C ... 200°C)	Accuracy: 5 / 10 / 15 mm	Accuracy: 5 / 10 / 15 mm
Type K ... HT (-40°C ... 250°C)	Accuracy: 5 / 10 / 15 mm	Accuracy: 5 / 10 / 15 mm
Control unit:	- Programmable - Hart-programmable - Profibus PA - Foundation Fieldbus	- Programmable - Hart-programmable - Profibus PA - Foundation Fieldbus

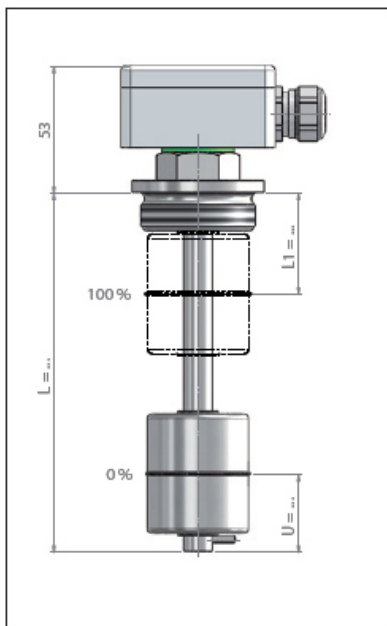
* ATEX design = if length of instrument ≥ 4000 mm please choose different material quality for guide tube and float

Minimum measures

ALE/V/R-1½ -V/K...-L .../12-SVK44/15/V
L1: ≥ 50 mm
U: 45

Approvals / Certificates

ATEX / PED / GOST / GL / BV / ABS / WHG



Minimum measures

ALE/V/R-2-V/K...-L .../12-SV52/15/V
L1: ≥ 55 mm
U: 45

Approvals / Certificates

ATEX / PED / GOST / GL / BV / ABS / WHG

