

Level Transmitter

Construction

The GEMÜ 910 level transmitter has an immersion tube with reed contacts and a chain of resistors which are triggered by a float with an integrated permanent magnet. A threaded adapter and DIN/ANSI flanges for tank mounting are also available. The electrical connection is either via ready-made cable or connector.

Features

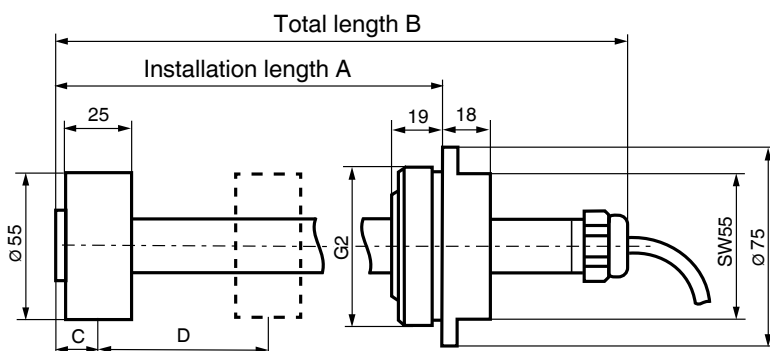
- Continuous linear measuring signal
- Direct reading of medium level
- High-resolution reed contact measuring chain
- Simple installation
- Compatible with the digital multifunction device GEMÜ 1276 for optical indication and signal evaluation, e.g. limit switches points
- Variable mounting positions

Advantages

- The device is used for monitoring liquid levels of inert and corrosive media
- For applications with open, closed and pressurized tanks
- Materials: Choice of PVC-U, PP, PVDF, stainless steel
- Weight-saving construction



Dimensions [mm]



Technical data

Output signal

Resistance depending on level*	$0V \leq U_{\text{signal}} \leq U_v$
2.4 k Ω per 230 mm measuring length	
Current loop	4-20 mA, 2-wire system
Series resistance	see diagram
Resolution	2.3 / 4.6 mm
Linearity	linear
* Evaluation as changeable resistance or voltage divider	

Auxiliary power

Chain of resistors	
2.4 k Ω per 230 mm measuring length	$U_v \leq 40 \text{ V DC}$
Max. perm. signal current	$I_s \leq 100 \text{ mA}$
2-wire current loop 4-20 mA	
	$U_{\text{min}} = 11 \text{ V} + 0.02 \text{ A} \times \text{series resistance}$
	$U_{\text{max}} = 40 \text{ V}$

Electrical connections

Cable connection

PG 13.5 with LIYY 3x0.38 mm² cable

Connection housing

1 piece 3-pole DIN EN 175301-803 Form A
Recommended cable diameter 8 - 10 mm

Materials

Medium wetted parts

Choice of PVC-U, PP, PVDF, stainless steel 1.4435

Cable connection

Cable gland PVDF / packing rubber PVC

Connection housing

Housing	ABS
Cover	PMMA
Protective cap for screws	PVDF
Adapter	ABS or st. st. 1.4435
Connector	PA 6
Plug screw	VQSt 36-2-4-8
Profile packing	Nitrile rubber
Fastening screw	1.4303

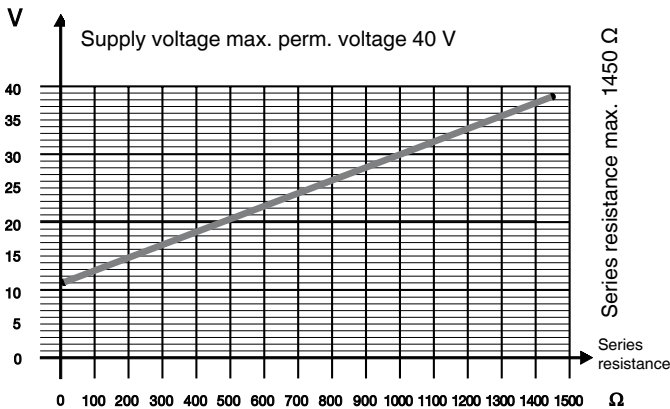
Mounting flange

DIN	PVC-U, PP, PVDF, st. st. 1.4571
ANSI	PVC-U, PP, PVDF, st. st. 1.4571
G 2"	PVC-U, PP, PVDF, st. st. 1.4571

Operating conditions

Permissible ambient temperature	-10...+60° C *
Permissible medium temperature	
Tube/float material PVC-U	+5...+60° C *
Tube/float material PP	-10...+80° C *
Tube/float material PVDF	-10...+80° C *
Tube/float material stainl. steel 1.4435	-10...+80° C *
Permissible operating pressure	
PVC-U, PP, PVDF, stainless steel	max. 6 bar *
* See pressure / temperature correlation	

Series resistance - Diagram 2



Mounting notes

Protection class	IP 65 in connection range
Mounting position	vertical
Mass PP for a 1 m length	0.3 kg
Mass PVC-U for a 1 m length	0.4 kg
Mass PVDF for a 1 m length	0.5 kg
Mass st. st. for a 1 m length	1.8 kg

Pressure / temperature correlation for plastic

Temperature in °C (plastic body)		-20	-10	±0	5	10	20	25	30	40	50	60	70	80	
Valve body material		permissible operating pressure in bar													
PVC-U	Code 1	-	-	-	6,0	6,0	6,0	6,0	4,8	3,6	2,1	0,9	-	-	
PP	Code 5	-	-	-	6,0	6,0	6,0	6,0	5,1	4,2	3,3	2,4	1,6	0,9	
PVDF	Code 20	6,0	6,0	6,0	6,0	6,0	6,0	6,0	5,4	4,8	4,3	3,8	3,2	2,8	

Order data

Mounting flange	Code
G 2 "	G2
Clamp sleeve G 2 " 1)	SH*
DIN flange	DF*
ANSI flange	AF*

* upon request;
¹⁾ height adjustable (only with cable gland connection)

Connection	Code
Cable gland, wire length 1m	K1
Cable gland, wire length 3m	K2
Cable gland, wire length 6m	K3
Connection housing, 1x connector DIN EN 175301-803 Form A	SB

Materials	Code
PVC-U	1
PP	5
PVDF	20
Stainless steel 1.4435	34

Output signal	Code
Chain of resistors	01
2-wire 4-20 mA	02

Installation lengths	Code
470 mm	0470
750 mm	0750
1000 mm	1000
1200 mm	1200
1400 mm	1400
1700 mm	1700
1900 mm	1900
2100 mm	2100

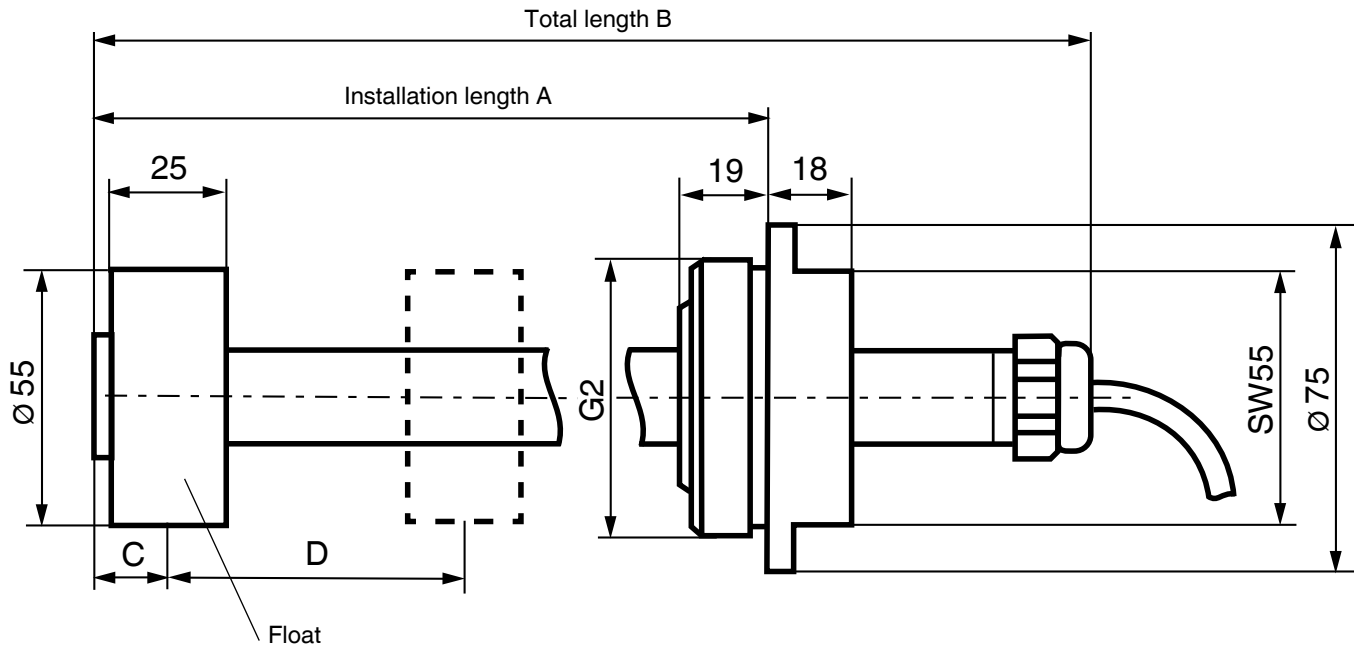
Materials see dimension table page 5

Measuring lengths	Code
230 mm Resolution 2,3 mm	A0230
420 mm Resolution 2,3 mm	A0420
690 mm Resolution 2,3 mm	A0690
930 mm Resolution 2,3 mm	A0930
1150 mm Resolution 2,3 mm	A1150
1350 mm Resolution 2,3 mm	A1350
1630 mm Resolution 2,3 mm	A1630
1850 mm Resolution 2,3 mm	A1850
2050 mm Resolution 2,3 mm	A2050
230 mm Resolution 4,6 mm	B0230
420 mm Resolution 4,6 mm	B0420
690 mm Resolution 4,6 mm	B0690
930 mm Resolution 4,6 mm	B0930
1150 mm Resolution 4,6 mm	B1150
1350 mm Resolution 4,6 mm	B1350
1630 mm Resolution 4,6 mm	B1630
1850 mm Resolution 4,6 mm	B1850
2050 mm Resolution 4,6 mm	B2050

**For coordination installation length
 - measuring length see table on page 4.**

Order data	910	G2	K3	05	01	1000	A0930
Type	910						
Mounting flange (Code)		G2					
Connection (Code)			K3				
Material (Code)				05			
Output signal (Code)					01		
Installation length (Code)						1000	
Measuring length (Code)							A0930

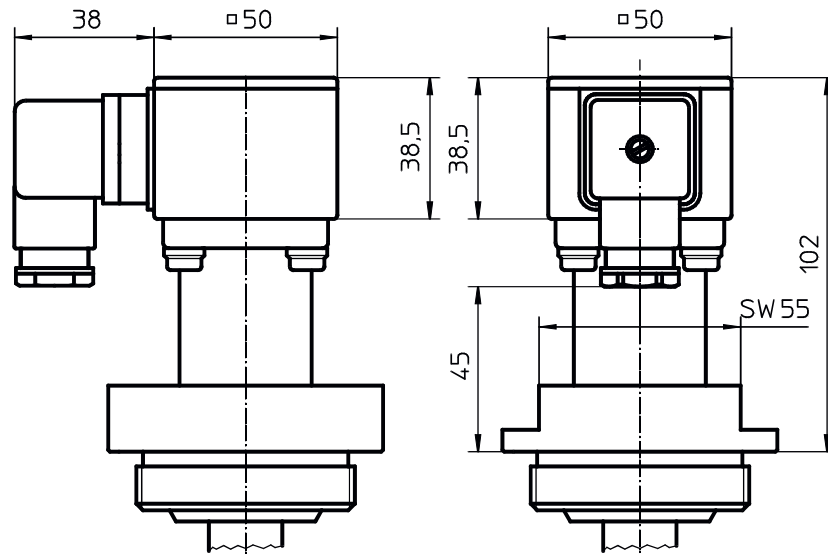
Dimensions [mm]



Dimension table [mm]

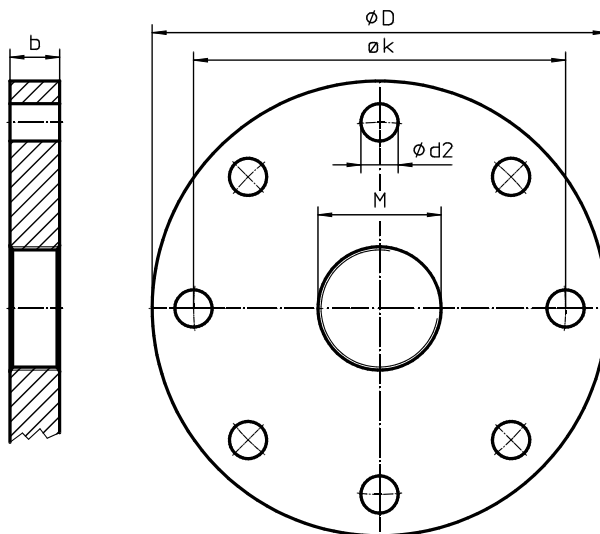
Material	Installation length A	Total length B	Measuring start C	Measuring length D
Stainless steel 1.4435	2100	2170	20	2050
	1900	1970		1850
	1700	1770		1630
	1400	1470		1350
	1200	1270		1150
	1000	1070		930
	750	820		690
	470	540		420
	470	540		230
PVC-U	1400	1470	19	1350
	1200	1270		1150
	1000	1070		930
	750	820		690
	470	540		420
470	540	230		
PP	1400	1470	15	1350
	1200	1270		1150
	1000	1070		930
	750	820		690
	470	540		420
470	540	230		
PVDF	1400	1470	23	1350
	1200	1270		1150
	1000	1070		930
	750	820		690
	470	540		420
470	540	230		

Dimensions of connection housing [mm]



Dimensions of mounting flange [mm]

Material	$\varnothing D$	$\varnothing k$	$\varnothing d2$	b	M
DIN metal	220.0	180.0	18	20.0	G2
DIN plastic	220.0	180.0	18	24.0	G2
ANSI metal	228.6	190.5	19	23.8	G2
ANSI plastic	228.6	190.5	19	23.8	G2



Connection diagram - 2-wire transducer

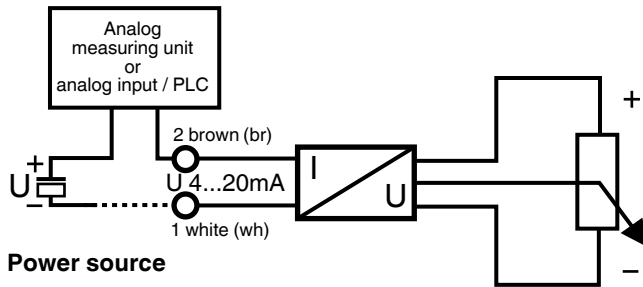
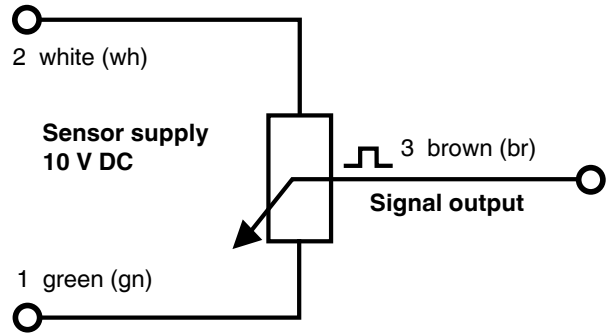


Figure: Terminal of connector

Connection diagram - Chain of resistors



Colour: Wire colour of cable connection

Application example: Multifunction display GEMÜ 1276



GEMÜ 1276 is a digital display unit for electrical standard signals used in measurement and control engineering applications as a panel mountable unit.

The varied features enable a large number of applications.

The GEMÜ measured value indicators can be connected with this type of device, starting from simple display applications to combined switch point evaluations and other serial signal interfaces.

For further level transmitter, accessories and other products please see our Product Range catalogue and Price List.
Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT AND CONTROL SYSTEMS

