

ME49T || Electropneumatic Level Transmitter

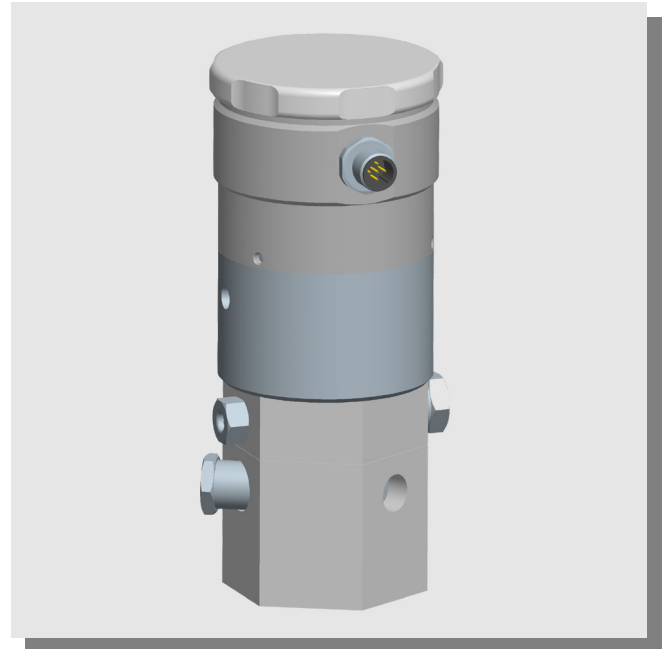
The electropneumatic level transmitter ME49T detects the liquid level by measuring the hydrostatic pressure with a resistance pressure measuring cell. The ME49T may be applied in explosion-hazardous areas.

The device can be installed in zone 1. It may be connected to zone 0 by a sounding pipe connection.

Construction and Operation

The electropneumatic level transmitter consists of these components:

- **Explosion protected pressure transmitter ME49**
- **Flame arrester**
The flame arrester connects the bubbling-through component and the pressure transmitter pneumatically. During an hazardous incident the flame arresting device avoids fire breakthrough into the bubbling-through component and thereby into zone 0.
- **Bubbling-through component**
The bubbling-through component limits the air flow from pneumatic system to the sounding pipe. It is EC-type approved per EN 13463-1 and EN 13463-5 as non-electrical equipment and may be attached to zone 0.

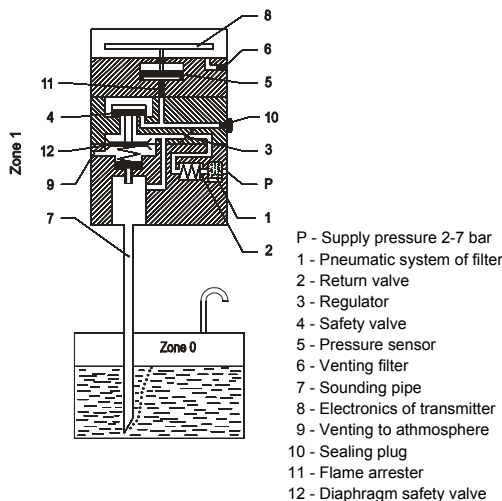


Main Features

- Explosion protected model
- Level measurement of soiled viscous media
- Possibility of long distance measurement

The electropneumatic level transmitter acts per bubbling through principle. The regulator (3) continuously bubbles air through a sounding pipe (7). A respective pressure is built up inside the sounding pipe. This pressure is measured by the pressure sensor (5) and transformed into a proportional signal 4...20 mA (8). If pressure inside the sounding pipe exceeds acceptable overpressure of the pressure sensor (5) the safety valve (4) cuts off the connection to the pressure sensor and protects it against overpressure and damage. The return valve (2) prevents return flow out of the sounding pipe into the pneumatic system.

Functional Scheme



Specifications ME 49 T

General

Ranges	40 mbar	60 mbar	100 mbar	160 mbar	250 mbar	400 mbar	600 mbar	1 bar	1.6 bar
Overpressure safety	4 bar	4 bar	4 bar	6 bar	6 bar	6 bar	10 bar	4 bar	4 bar

Linearity	± 0.5% FS
Hysteresis	< 0.1% FS
Perm. ambient temperature	-20° ... 60°C
Perm. media temperature	-20° ... 60°C
Pressure connection sounding pipe	Female thread G1"
Pressure connection pneumatic	Female thread G1/4
Electrical connection	Plug connection M12
Protection class	IP 65 per DIN EN 60 529
Materials: in contact with media	Chrome-nickel-steel 1.4571, 1.4305, ceramic, FPM, chemically nickel-plated brass
Materials: housing	Chrome-nickel-steel 1.4571




Operating voltage	24 V DC (Range 15-30 V DC)
Limit values of supply circuit, clamps 1 and 2	$U_i \leq 30 \text{ V}$
	$I_i \leq 100 \text{ mA}$
	$P_i \leq 750 \text{ mW}$
Output signal	4 ... 20 mA
Electrical Connection	2-wire
Load at nominal voltage	$\leq 450\Omega$ or $R_L[\Omega] \leq (U_B - 15V) / 0.02 \text{ A}$
Current limiting	approx. 30 mA
Temperature drift of zero	0.4% FS/10K
Temperature drift of range	0.05% FS/10K

Electrical Data

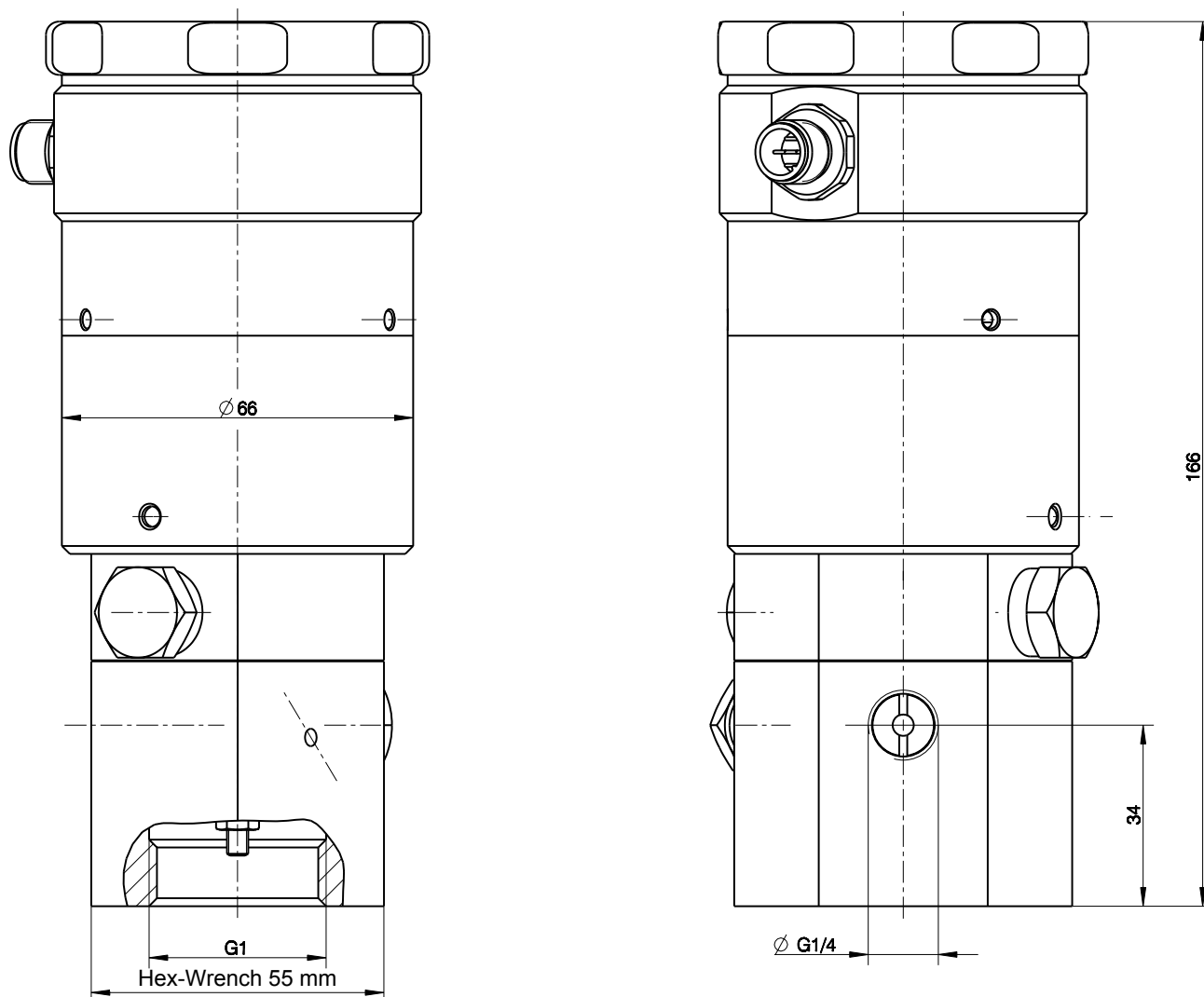
Pneumatic Data

Pneumatic system	clean, dry and oil-free air 2-7 bar, particle size less than to 5 µm, dew point below -25°C
Min. supply pressure	0.5 bar beyond range
Air consumption	approx. 30l _N /h

Declaration of Explosion Protection

Electrical part	 II 1/2G EEx ib IIC T6
Mechanical part	II 1G c
EC-type approval	BVS 03 ATEX E 414 and 1st appendix

Dimensions (all units in mm unless stated otherwise)



Ordering Code

Electropneumatic Level Transmitter

For Application in Explosion-hazardous Areas

ME49 T [] [] Y Y B M A 0 0 0 R

Type										
Level transmitter										
Range										
0 . . . 40 mbar	>	5	7							
0 . . . 60 mbar	>	5	8							
0 . . . 100 mbar	>	5	9							
0 . . . 160 mbar	>	6	0							
0 . . . 250 mbar	>	8	2							
0 . . . 400 mbar	>	8	3							
0 . . . 0.6 bar	>	0	1							
0 . . . 1 bar	>	0	2							
0 . . . 1.6 bar	>	0	3							
Electrical Output Signal										
4 - 20 mA 2-wire	>					B				
Electrical Connection										
M12 plug connection	>						M			
Operating Voltage										
15 - 30 V DC	>							A		
Declaration of Explosion Protection										
Device for application in zone 1, with bubbling-through component attachable to zone 0	>									R
Declaration per ATEX Directive 94/9/EC										
II 1/2G EEx ib IIC T6										
II 1G c										