

Instrumentation for fluids

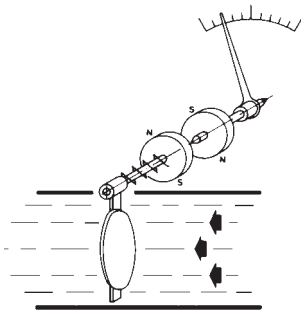
Flow measurement of Gases and Liquids

- Metallic construction.
- Operates horizontally or vertically
- DN-80 to DN-500
- Flow rate:
 - Water: 1.5 m³/h up to 1600 m³/h.
 - Air: 45 Nm³/h up to 48,000 Nm³/h.
- Low Pressure drop.
- Straight pipe requirement of 3 x DN before & after.
- Available with:
 - Local Indicator
 - 1 or 2 Alarm Settings
 - 0/4-20 mA Transmitter with 2 or 4 wire system.
 - Flow integrator/totalizer.
 - 3-15 psi transmitter.
- Intrinsically safe version EEx ib II T5/T6 CENELEC
- Assembly connections:
 - Between flanges (wafer) for DN-80 to DN-300
 - Standard Flanges for DN-250 to DN-500

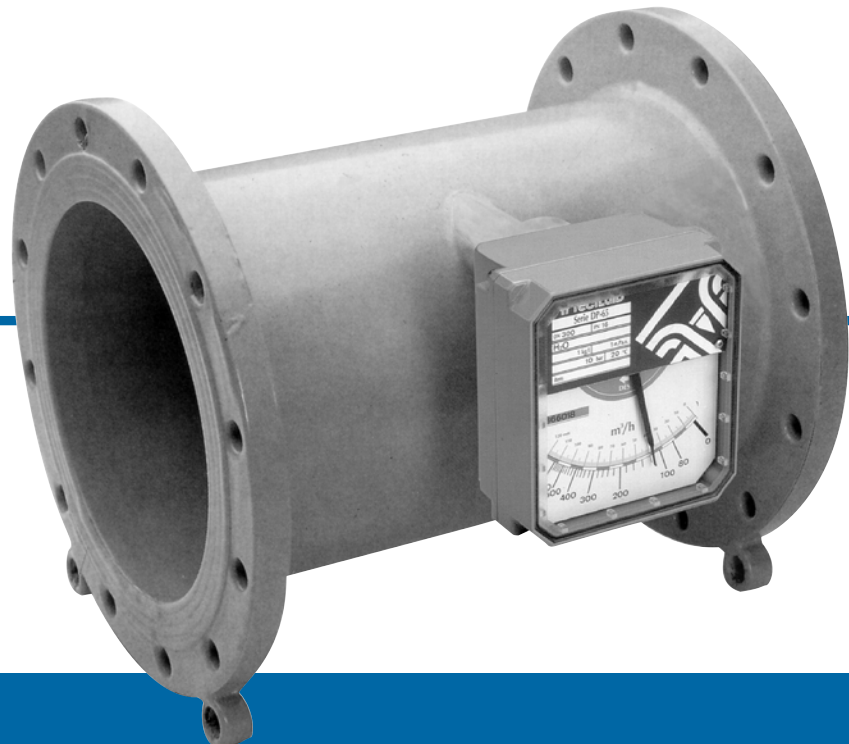
Operation

The fluid flows through the meter and displaces the target disc with a force proportional to flow. The disc movement is restricted with a coil spring until a force balance is achieved between the force from the fluid and the torsion of the spring. The equilibrium position of the target disc is proportional to the flow rate and provides the measurement of flow.

The position of the disc is transferred to the flow indicator through a magnetic coupling. This indirect coupling protects the measurement from any impacts on the disc.



Target Flowmeter Series DP-65 DP-500



Applications

The construction of the flowmeter is simple and robust. It is suitable for gases and liquids and provides a good measurement for fluids containing suspended matter.

The DP-65 & 500 are used in many industries, including:

- Water treatment & distribution.
- Pharmaceutical industry.
- General Chemical Industries.
- Paper industry.
- Heating and cooling circuits.
- Swimming pools.
- Fire protection systems.

Technical Data

- DP-65 for pipe sizes from DN-80 to DN-300.
- DP-500 for pipe sizes from DN-250 to DN-500.
- Mounting Length:

DP-65 DN-80..DN-300, Length = 65mm
Installation between flanges
(Flange not supplied)

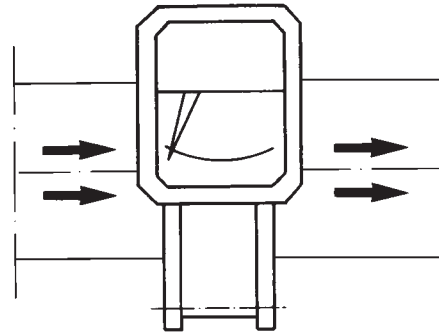
DP-500 DN-250..DN-300, Length = 500mm
DN-350..DN-400, Length = 600mm
DN-500, Length = 700mm
Flange type DIN 2501 as standard.

- Accuracy:
 - ±2.5% of Full Scale.
 - ±1.5% of Full Scale (Special version).
- Scales:
 - Direct in engineering units or in %
- Temperature of fluid:
 - 20°C to +130°C Steel/Polyamide 11
 - 20°C to +180°C Steel
 - 20°C to +180°C AISI-316
- Special versions:
 - 20°C to +250°C AISI-316
 - 20°C to +120°C PTFE
 - 0°C to + 50°C PVC
- Ambient temperature:
 - 20°C to + 80°C
- Working pressure:

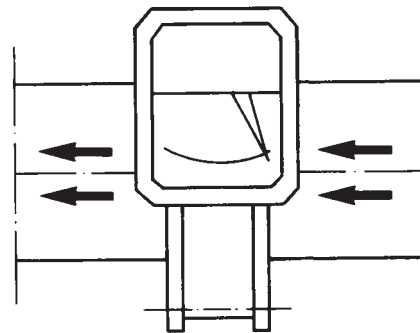
PN-40	DN-80
PN-16	DN-100...DN-200
PN-10	DN-250...DN-500

Flow Directions

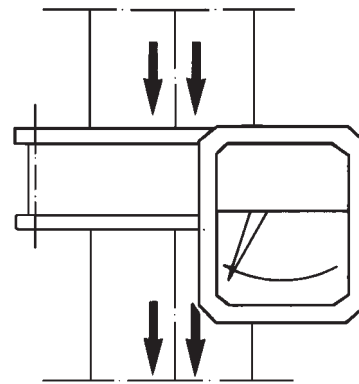
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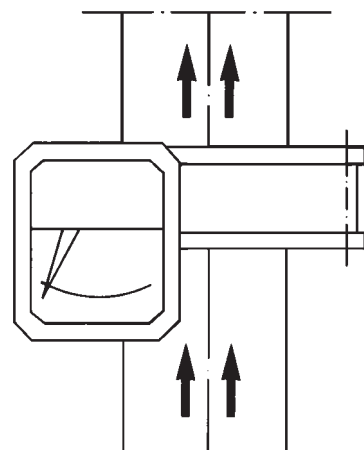
DES



DAB



BD



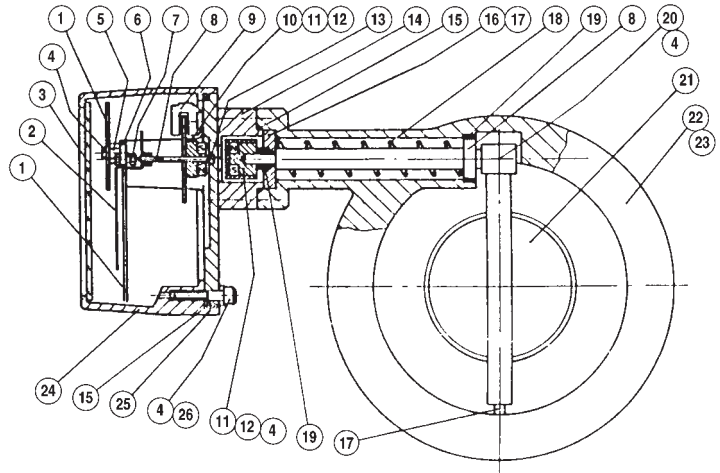
Operation

- Vertical: Rising and falling flows.
- Horizontal: Flow from Left to Right and Right to Left.
- Indicator box: IP-65 in Polyamide 11 coated aluminium .

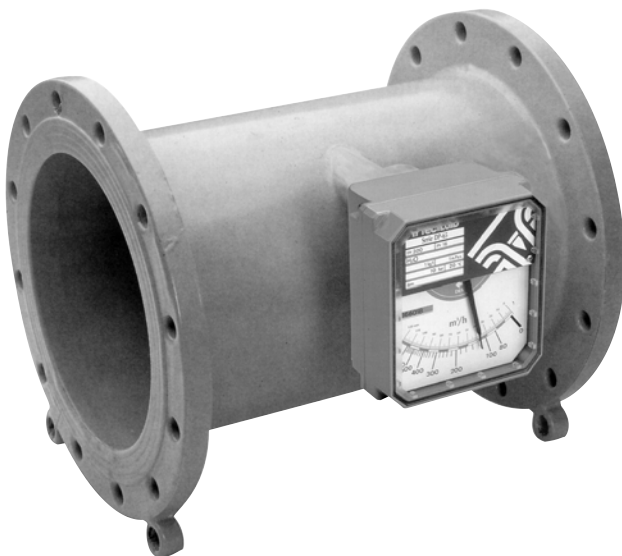
Models

- DP-65 & DP-500
Body material: Steel coated in Polyamide 11.
Disk, axis and spring in AISI-316.
- DP-65/SS & DP-500/SS
All wetted parts in AISI-316.
- DP-65/PVC & DP-500/PVC.
Body in PVC; disk, axis and spring lever in Hastelloy.
- DP-65/PTFE & DP-500/PTFE.
Body in PTFE; disc, axis and spring lever in Hastelloy.
- DP-65 & DP-500/AMM with adjustable micro switch alarm.
- DP-65 & DP-500/AMD with inductive alarm, (and relay WE77)
- DP-65 & DP-500/TEH with 0...4-20 mA transmitter, (4 wire)
- DP-65 & DP-500/TOTH with flow totalizer.
- DP-65 & DP-500/TTEH volume totalizer + analog output
- DP-65 & DP-500/TK with 0...4-20 mA transmitter, (2 wire).
- DP-65 & DP-500/TKEX with 0...4-20 mA intrinsically safe transmitter.
- DP-65 & DP-500/1200 with pneumatic transmitter, (3-15 psi/0,2-1 bar).

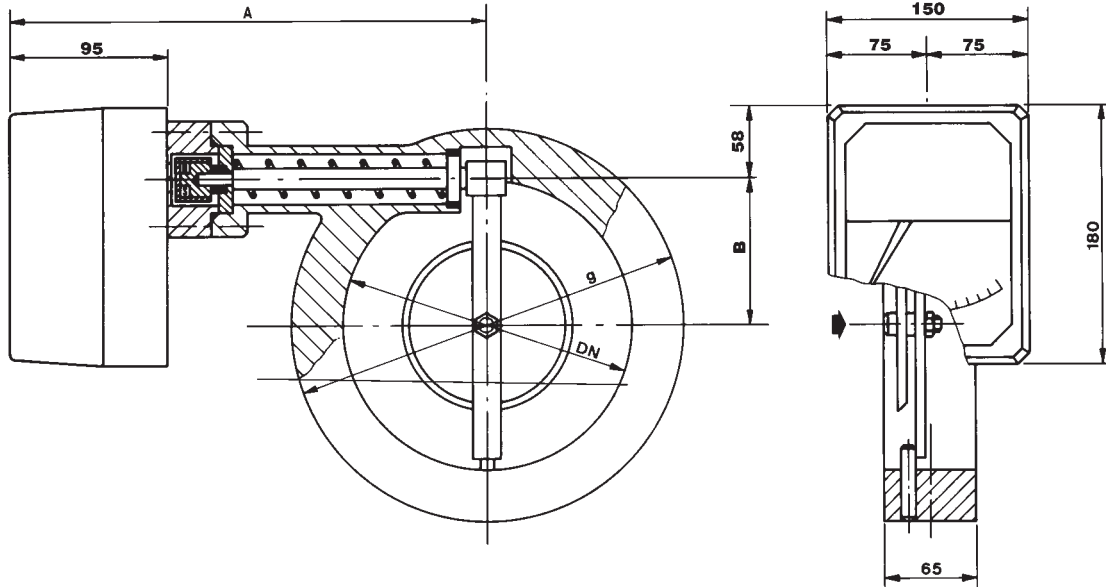
Metallic Target Flowmeter Series DP-65/DP-500



Item Description	Materials	
	DP-65	DP-65/SS
1 Mask/Scale	Aluminium	Aluminium
2 Indicator	Aluminium	Aluminium
3 Window	Metracrylate	Metracrylate
4 Screw	AISI-316	AISI-316
5 Spacer	Brass	Brass
6 Bridge	Aluminium	Aluminium
7 Bearing housing	Brass	Brass
8 Axis	AISI-316	AISI-316
9 Magnetic Brake	Aluminium	Aluminium
10 Disk Brake	Aluminium	Aluminium
11 Magnet housing	Aluminium	Aluminium
12 Magnet	—Supernialco—	
13 Ball Bearing	AISI-316	AISI-316
14 Locking Piece	AISI-316	AISI-316
15 Gasket	Acrilo-nitrile	Acrilo-Nitrite
16 Disk Spring	AISI-316	AISI-316
17 Stop pin	AISI-316	AISI-316
18 Spring	AISI-316	AISI-316
19 End bush	PTFE	PTFE
20 Axis	AISI-316	AISI-316
21 Disk	AISI-316	AISI-316
22 Body	Steel	AISI-316
23 Coating	Polyamide 11	—
24 Lid	Aluminium	Aluminium
25 Enclosure	Aluminium	Aluminium
26 Washer	Nylon	Nylon

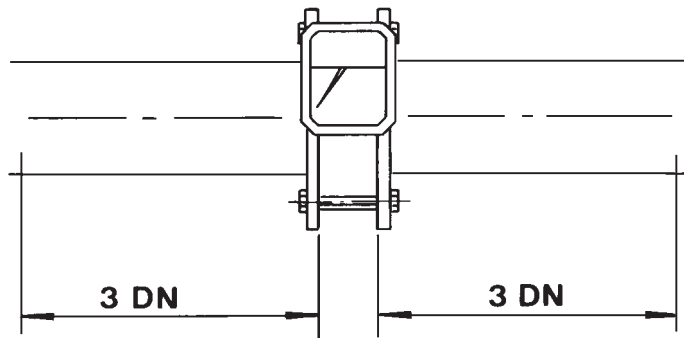


Series DP-65/DN-80 to DN-300

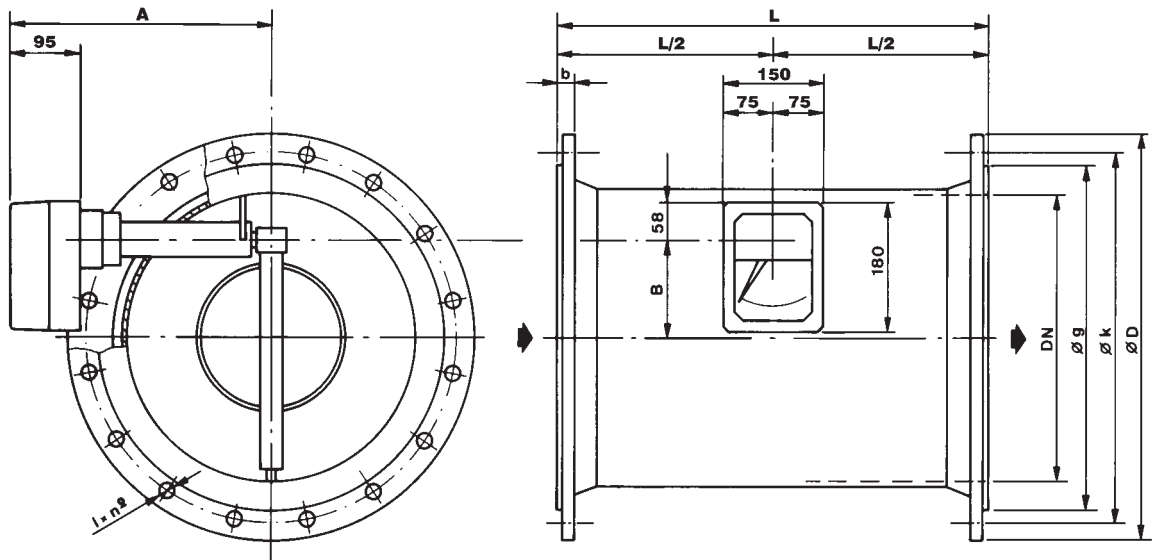


DN	Standard Flow Rates m ³ /h Water 20°C			Dimensions & Weight			
				g	B	A	Wt (Kg)
80	2-16	3-25	5-40	138	50	245	8
100	5-40	8-60	10-80	158	60	245	10
125	8-60	15-100	15-120	188	70	275	12
150	15-100	20-160	25-200	212	78	275	14
200	20-160	30-250	40-350	268	90	315	20
250	25-200	50-400	60-500	320	102	345	29
300	30-250	50-400	80-600	370	115	363	35

Equivalent scale in Nm³/h Air @ 20°C & 1.013 mBar Abs. = Water m³/h x Factor of 30.

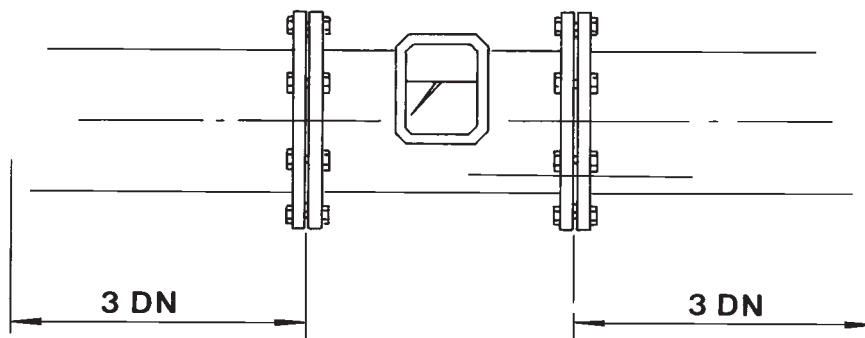


Series DP-500/DN-250 to DN-500



DN	Standard Flow Rates m ³ /h Water 20°C				Dimensions & Weights							1xn°	Wt (Kg)
					L	A	B	D	K	g	B		
250	25-200	50-400	60-500	500	325	90	395	350	320	26	23x12	70	
300	30-250	50-400	80-600	500	325	115	445	400	370	26	23x12	78	
350	40-300	60-500	100-800	600	345	124	505	460	430	26	23x16	86	
400	50-400	80-600	120-1000	600	345	142	565	515	482	26	27x16	97	
500	80-600	120-1000	200-1600	700	425	160	670	620	585	28	27x20	115	

Equivalent scale in Nm³/h Air @ 20°C & 1.013m Bar Abs = Water m³/h x Factor of 30.

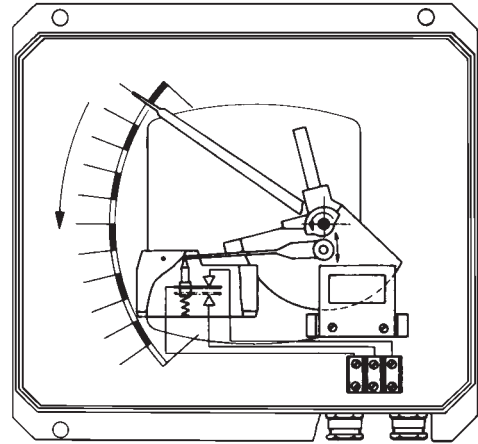


Alarm Options

Adjustable Micro Alarm, Series DP-AMM

Micro-switch bi-stable contact mounted in the indicator enclosure of the flow meter.

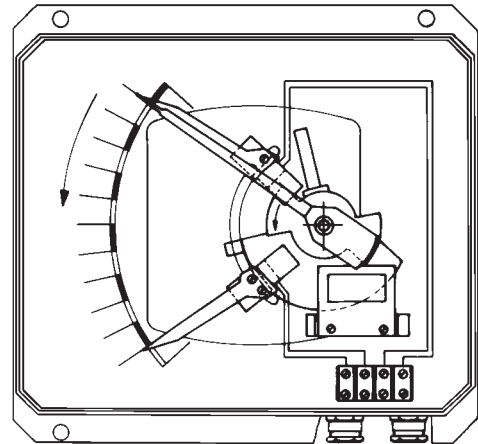
- DP-AMM1: 1 adjustable alarm contact.
- DP-AMM2: 2 adjustable alarm contacts.
- Load: 3 Amp @ 220Vac/50Hz.
- Temperature: -25°C to +80°C.
- Hysteresis: ± 10% of full scale.
- Mechanical life: 20 x 10⁶ Operations.
- Contact speed: 0.01 to 1 mSec.



Adjustable Inductive Alarm, Series DP-AMD

Inductive proximity sensor, 3.5 mm, according to standard NAMUR DIN 19234, mounted in the indicator enclosure of the flow meter.

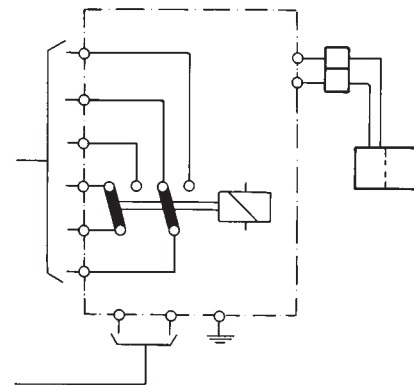
- SC-AMD1...2: 1 ... 2 adjustable alarm contacts.
(+ amplifier WE77/Ex1 or ExEx2).
- Power Supply: 8 Vdc.
- Temperature: -25°C to +70°C.



Relay for Inductive Proximity Sensor

Model WE77/EX 1: For 1 inductive alarm contact.
Model WE77/EX 2: For 2 inductive alarm contacts.

- Power Supply: 220Vac ±15%, 50-60Hz.
(other ac & dc voltages are also available)
- Intrinsic Safety Standard: EEx ia II C (Zone 0)
- Output: for 1 or 2 contacts.
- Load: 4 Amp @ 220Vac/250VA
- Temperature: -25 to +70°C.

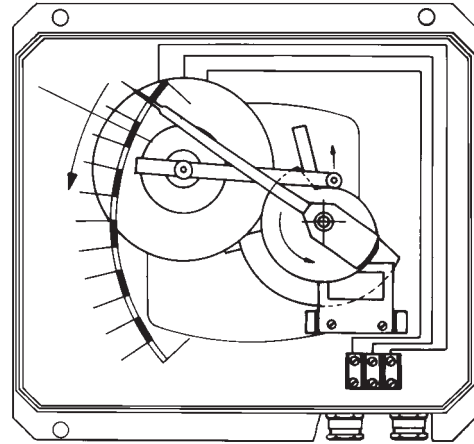


Transmitters

Electric Transmitter DP-TK-Ex

The electric transmitter TK-Ex is a two wire angular position converter. It provides a 4-20 mA output signal directly proportional to the measured flow rate. Certified intrinsically safe to Cenelec EExib IIC T5/T6.

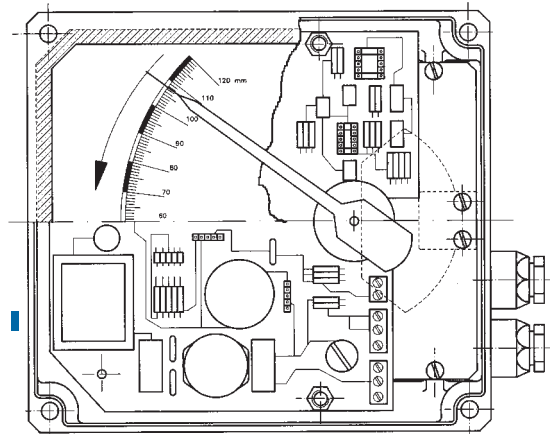
- Power supply: 12.7 to 36Vdc
- Load: 4mA + Output current
- Output signal: 4-20 mA
- Electrical connection: 2 wire
- Internal capacitance: $C_p < 15F$
- Ambient temperature: EEx ib CT4 70°C Max.
CT5 65°C Max.
CT6 50°C Max.



Electric Transmitter DP-TEH

Halltec Transducer based on a half effect pickup with zero friction on the indicating mechanism. Output signal directly proportional to the measured flow rate.

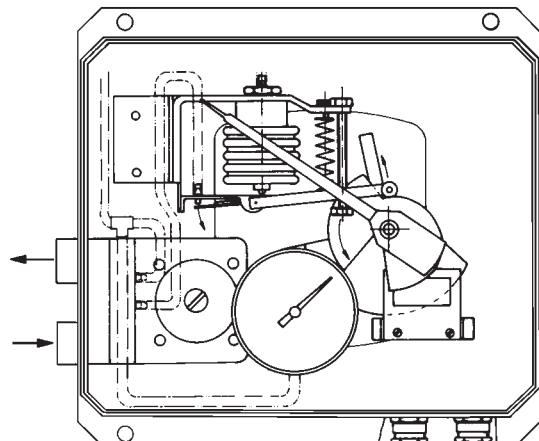
- Accuracy: 1,5% of the reading value
- Analog output available: 0...4-20 mA
0-5v, 0-10v, 1-5v, 2-10v
- Power supplies: 24, 110, 220, 240 Vac, 50/60 Hz
24 Vdc
- Powerconsumption: < 3 w
- Ambient Temperature: -10 to +60°C
- Electric conection: 4 wires



Pneumatic Transmitter DP-TP1200

The pneumatic transmitter DP-TP1200 provides a 3-15 psi or 0.2-1Bar pneumatic signal directly proportional to the measured flow rate.

- Air supply: Air 1.4 Bar \pm 0.1 Bar
- Consumption: 460 NI/h Air
- Output signal: 3-15 psi (0.2-1Bar on request)
- Linearity: \pm 0.4%
- Hysteresis: \pm 0.25%
- Temperature: -10°C to +70°C



Totalizers

Halltec Transducer DP-TOTH/DP-TTEH

Based on a Hall effect pickup with zero friction on the indicating mechanism.

Totalizer DP-TOTH/DP-TTEH

The output signal 4-20 mA (or 0-20 mA) from the transmitters can be connected to an electronic counter either built into the indicator enclosure or mounted remotely.

DP-TOTH (Volume Totalizer)

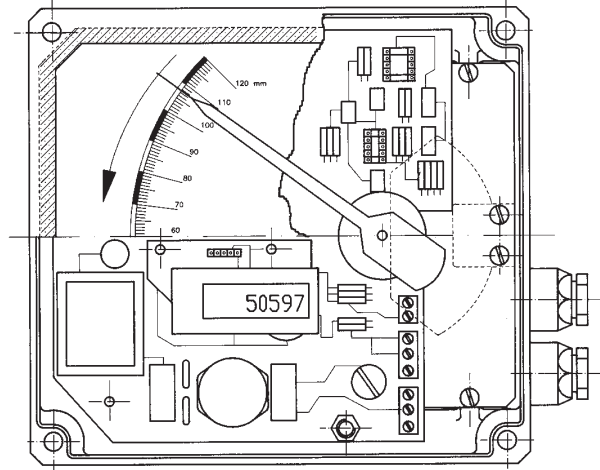
- Electronic LCD counter 8 digits with reset.
- Digit height: 8 mm
- Accuracy: 1,5% of the reading value
- Pulse Output: TTL & open collector

DP-TTEH (Volume Totalizer + Analog Output)

- Electronic LCD counter 8 digits with reset.
- Digit height: 8 mm
- Accuracy: 1,5% of the reading value
- Analog Output Available: 0...4-20 mA
0-5v, 0-10v, 1-5v, 2-10v
- Pulse output: TTL & open collector

General Characteristics:

- Power Supplies: 24, 110, 220, 240 vac, 50/60 DH2
24 Vdc
- Power Consumption: < 3w
- Ambient Temperature: -10°C to + 60°C



We are at your service, please consult us.

TECFLUID develops and manufactures instruments for gases and liquids, using the most advanced techniques.

FLOWMETERS

- Variable area with Glass metering tubes.
- Variable area with Metal metering tubes, and indication via magnetic transmission.
- Target disk and indication via magnetic transmission.
- Orifice disk.
- Electromagnetic.

In preparation:

- VORTEK

COUNTERS

- COVOL (Oscillating piston)
- TM-44 (Turbine)

LEVELS

- Limit switches
- Indicators
- Transmitters

ELECTRONIC EQUIPMENT

- Converters
- Batching Counters
- Flow rate indicators
- Transmitters