Flow Meter DP-65

Baffle plate principle

- High reliability
- Low pressure drop
- Insensitive to soiling
- EX-version according to ATEX directive available

D-EN-DP65-20190312

Fon 0 67 32 - 91 91 20 Fax 0 67 32 - 96 24 42 info@schmidt-messtechnik.de

Flow Meter DP-65

Baffle plate principle

Features
- High reliability
- Low pressure drop
- Insensitive to soiling
- EX-version according to ATEX directive available
- Suitable for high temperature applications
- Product-specific scale at no charge
- Sandwich mounting
- For horizontal or vertical installation

Application
- Water treatment
- Fire protection systems
- Heating circuits
- Pharmaceutical industry
- Chemical industry

Operating data	
Operating pressure max. DN 100 – DN 300 DN 40 – DN 80	 PN 16 PN 40
Pressure drop	Low pressure drop
Media temperature	
Steel (coated)	-20 °C – 130 °C
Stainless steel (PTFE bearings)	-20 °C – 150 °C
Stainless steel (bronze brarings)	-20 °C – 300 °C
For higher temperatures refer to thermal separation	
Ambient temperature	-20 °C – 80 °C
Measuring accuracy	±2,5 % of full scale (1)
Viscosity max.	380 cP
Scale	medium-specific, 120 mm, various units e.g.: l/h, m3/h, kg/h
Display housing (2)	
Material	Aluminum, coated
Ingress Protection	IP65
Display cover	Polycarbonate
Process connection	Sandwich mounting

(1) Optional: ±1,6 % of full scale
(2) Stainless steel housing optional

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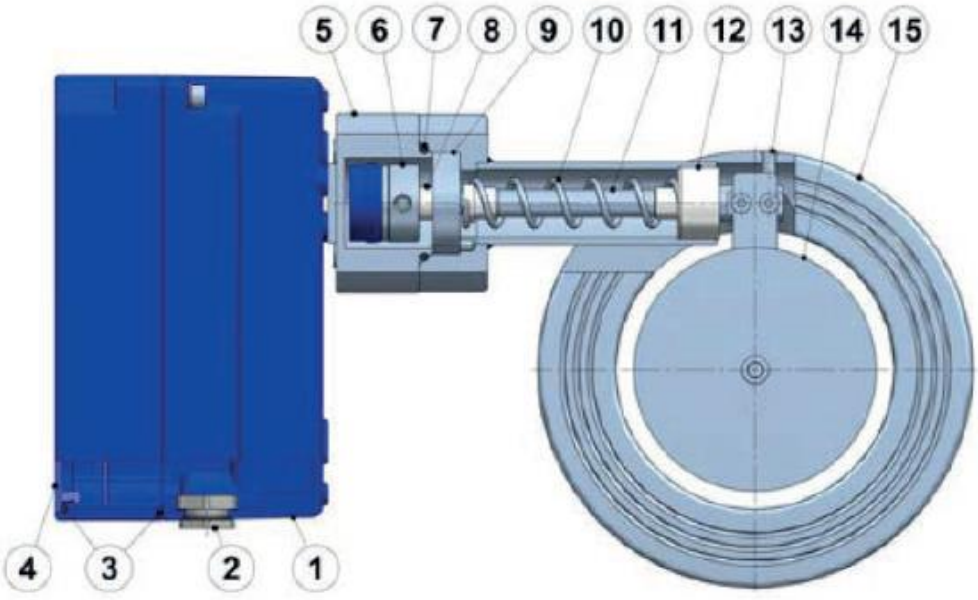
Measuring ranges

Type		Measuring range for H_2O at 20 °C					
	DN	m³/h	m³/h	m³/h	m³/h	m³/h	m³/h
DP-65	40	0,8 – 4	0,8 – 6	1 – 8	2 – 10	3 – 16	
DP-65	50	0,8 – 6	1 – 8	2 – 10	3 – 16	3 – 25	
DP-65	65	2 – 10	3 – 16	3 – 25	4 – 30	5 – 35	6 – 40
DP-65	80	2 – 16	3 – 25	5 – 40	6 – 45	8 – 50	10 – 60
DP-65	100	5 – 40	8 – 60	10 – 80	12 – 90	15 – 100	
DP-65	125	8 – 60	15 – 100	15 – 120	20 – 135		
DP-65	150	15 – 100	20 – 160	25 – 200	40 – 220	50 – 250	
DP-65	200	20 – 160	30 – 250	40 – 350	50 – 400		
DP-65	250	25 – 200	50 – 400	60 – 500	80 – 600		
DP-65	300	30 – 250	50 – 400	80 – 600	100 – 800		

Options

Thermal separator
Stainless steel housing
DP-AMM: Microswitch
DP-AMD: Inductive contact
1 or 2 adjustable limit switches
TH7 / TH7T: Transmitter



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Flow Meter DP-65

Baffle plate principle

Materials: Parts description

		Version	
		Steel, coated	Stainless steel 1.4404
Item	Description	Material	
1	Display housing:	Aluminum, coated	
2	Cable gland M16:	Polyamide	
	+ gasket:	NBR	
3	Gasket:	NBR	
4	Display cover:	Polycarbonate [3]	
5	Lock washer:	EN 1.4404 (AISI 316L)	
6	Magnet group:	EN 1.4404 (AISI 316L) + Alnico, coated	
7	Gasket:	NBR	
8	Bearing:	PTFE / Bronze	
9	Shaft support disc:	EN 1.4401 (AISI 316)	
10	Spring:	EN 1.4310 (AISI 304)	
11	Shaft:	EN 1.4401 (AISI 316)	
12	Bearing:	PTFE / Bronze	
13	Target disc stop:	EN 1.4404 (AISI 316L)	
14	Target disc:	EN 1.4404 (AISI 316L)	
15	Device body:	Steel Polyamide coated	EN 1.4404 (AISI 316L)

ED

DES

DAB

BD

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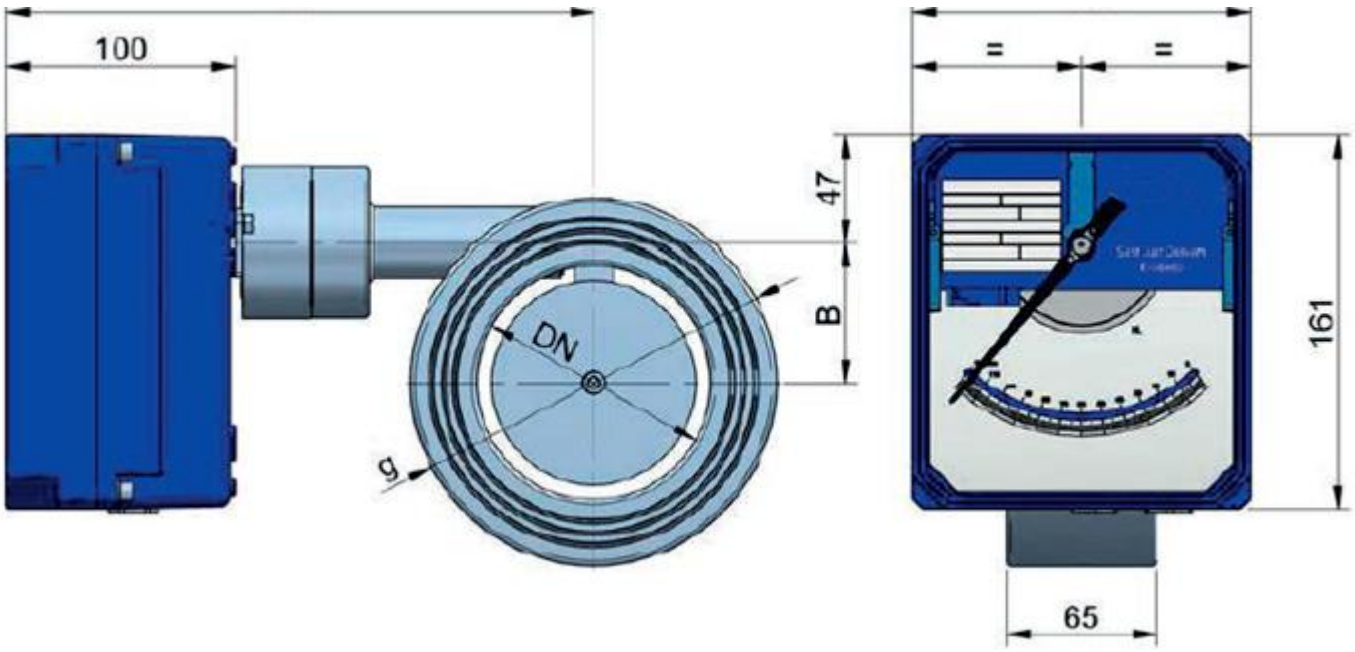
Flow Meter DP-65

Baffle plate principle

Technical drawing



Summary of types

Type	Overall dimensions (mm)				Weight
	DN	g	B	A	approx. [kg]
DP-65	40	88	28	250	5
DP-65	50	102	33	250	6
DP-65	65	122	40	250	7
DP-65	80	138	50	250	8
DP-65	100	158	60	250	10
DP-65	125	188	70	280	12
DP-65	150	212	78	280	14
DP-65	200	268	90	320	20
DP-65	250	320	102	350	29
DP-65	300	370	115	370	35

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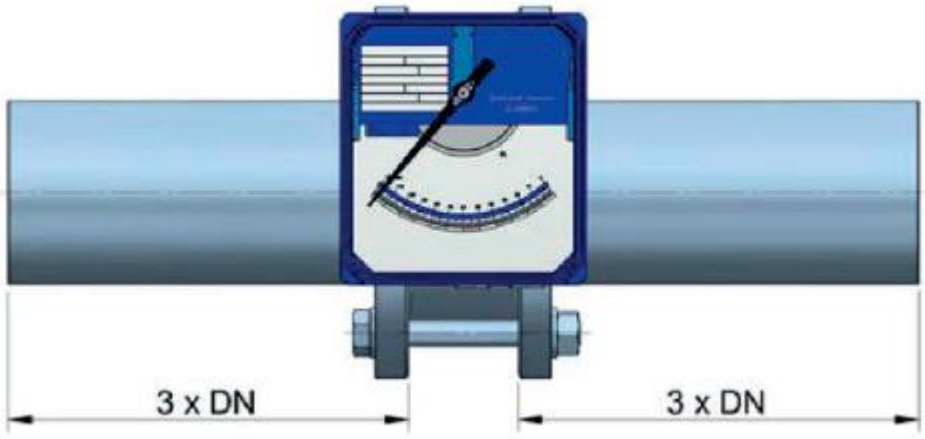
Flow Meter DP-65

Baffle plate principle

Installation

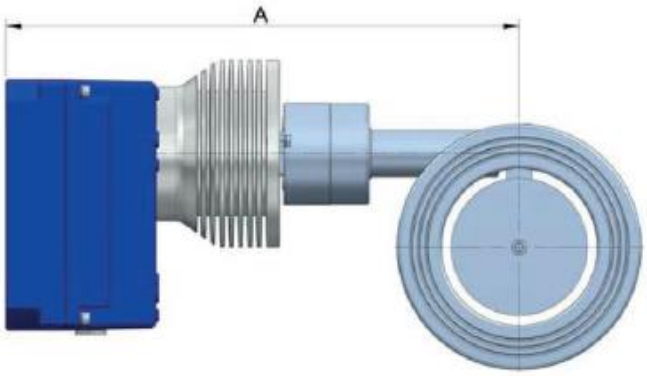


Accessories

Thermal separator

DN	40	50	65	80	100	125	150	200	250	300
A	325	325	325	325	325	355	355	395	425	443

- Standard in aluminum, optional in EN 1.4404 (AISI 316L)
- For employment with fluids at high and low temperatures
- Only with device body made of steel (uncoated) or stainless steel 1.4404 (AISI 316L)
- With electronics: DN-40 – DN-100 400 °C
  DN-125 – DN-150 320 °C
  DN-200 – DN-300 280 °C
- Without electronics: DN-40: – DN-300 400 °C
- Reference ambient temperature: 20°C



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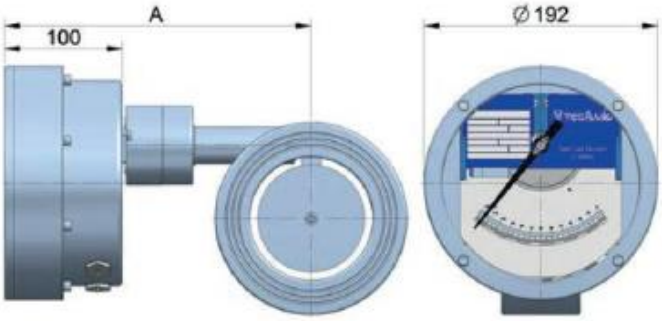
Flow Meter DP-65

Baffle plate principle

Stainless steel housing

DN	40	50	65	80	100	125	150	200	250	300
A	325	325	325	325	325	355	355	395	425	443

- Specifically for use in sanitary or sterile installations, saline atmospheres (offshore platforms), etc.
- All stainless steel construction EN 1.4404 (AISI 316L), with glass display cover
- Can be fitted with standard limit switches and TH transmitters
- Ingress protection: IP67



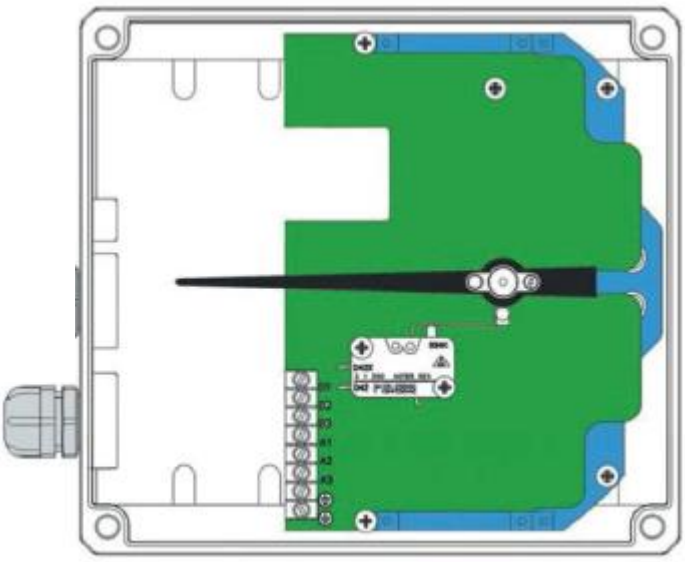
Limit switches

Adjustable limit switch (microswitch) DP-AMM

Electrical microswitch mounted inside the indicator housing

- DP-AMM1: 1 adjustable limit switch
- DP-AMM2: 2 adjustable limit switches
- Ratings: 3(1) A, 250 V (VDE/CEE)
- Hysteresis: ±10% of full scale
- Ambient temperature: -25 °C - 80 °C
- Mechanical life: 10^7 operations
- ATEX certificate: Ex ia IIC T6

Gold-plated contacts on request



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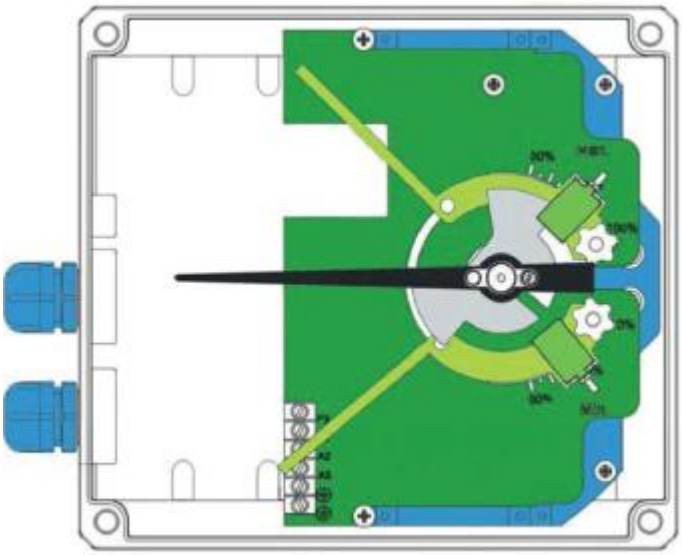
Flow Meter DP-65

Baffle plate principle

Adjustable inductive limit switch DP-AMD

Inductive proximity switch, 3.5 mm (slot type)
NAMUR (EN 60947-5-6) activated by vane, mounted inside the indicator housing

- DP-AMD1: 1 adjustable limit switch
- DP-AMD2: 2 adjustable limit switches
- Power supply: 8 VDC (via amplifier)
- Ambient temperature: -25 °C - 70 °C
- ATEX certificate: Ex ia IIC T6



Amplifier (on request)

- NAMUR (EN 60947-5-6) for 1 or 2 inductive proximity switches
- Power supply: 24 ... 253 VAC, 50 - 60 Hz
  24 ... 300 VDC
- Input: NAMUR Ex ia IIC
- Output: 1 or 2 relay contacts
- Output rating: 2 A / 250 VAC / 100 VA
  1 A / 24 VDC
- Ambient temperature: -20 °C - 60 °C

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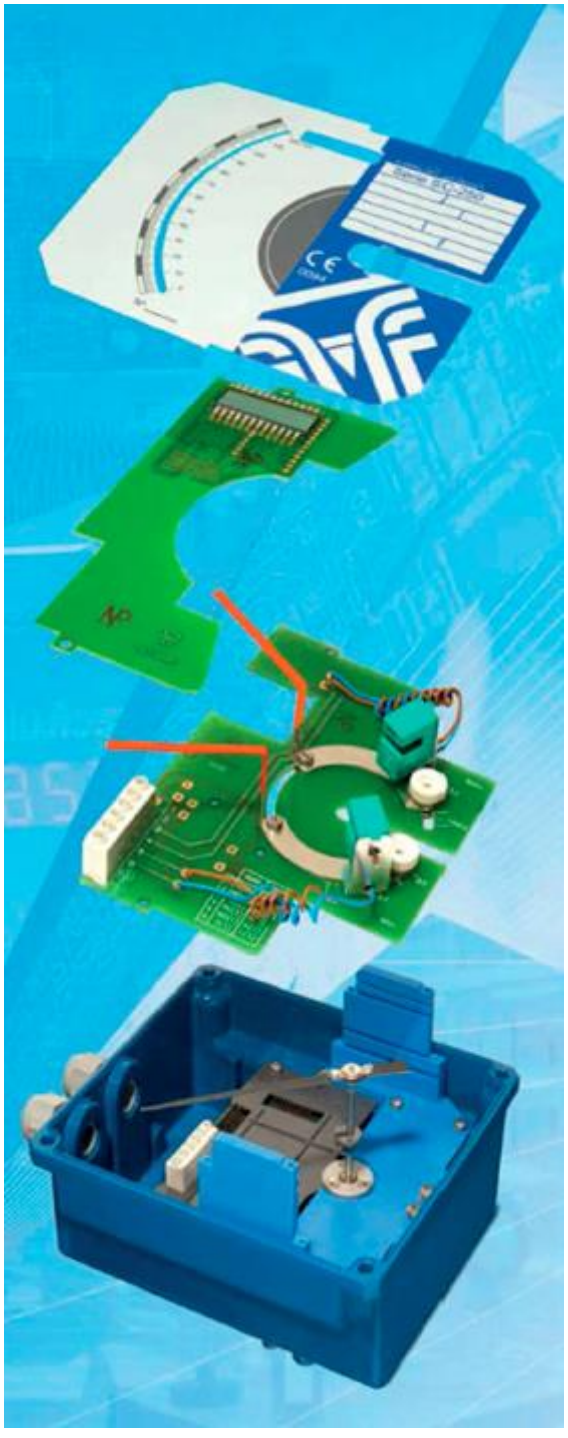
Flow Meter DP-65

Baffle plate principle

Modular housing



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Flow Meter DP-65

Baffle plate principle

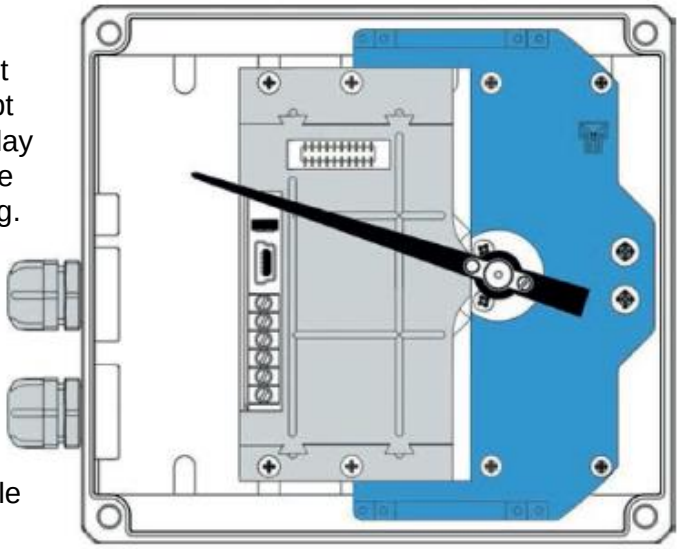
Transmitters and totalizers

Transmitter TH7

The TH7 electronic transmitters provide an analog output proportional to the flow rate and a digital output selectable either as a pulse or an alarm output (except for the Ex versions). The TH7 can also include a display for volume totalization. The transmitter is based on the Hall-effect and is mounted inside the indicator housing.

- TH7 Transmitter
- TH7T Transmitter + totalizer

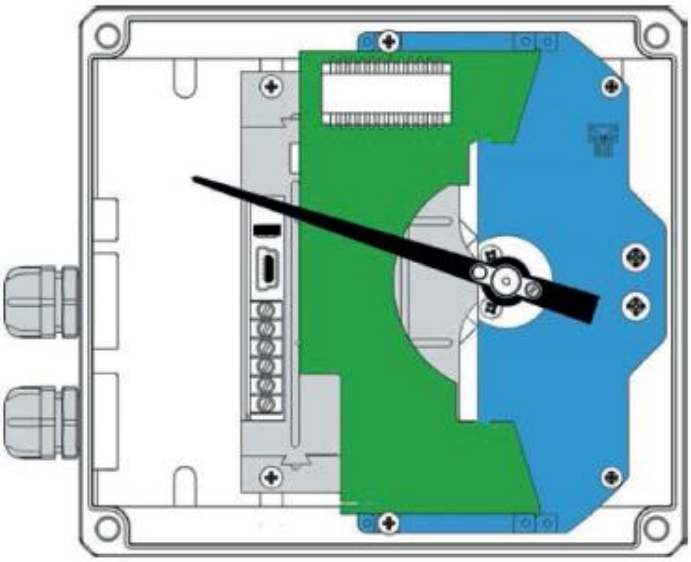
TH7



Technical data

- Power supply: 2-wire, 12 - 36 VDC
- Power consumption: 4 - 20 mA for 0 - 100% of scale
- Analog output: 4 - 20 mA
  Accuracy: < 0,6% of the magnet position
  Maximum load in 4 – 20mA loop: 1100 Ω
  (with 36 VDC power supply)
- Digital output: Potential-free N-channel MOSFET
  Imax: 200 mA for either pulse or alarm output
  Pulse output:
  max. frequency: 6 Hz
  Pulse duration: approx. 62.5 ms
  Alarm output:
  adjustable on a scale value
  Programmable by TH7 software
- Totalizer: 8 digits, 4.5 mm high
  Reset by potential-free contact
- Ambient temperature: -5 oC - 70 oC

TH7T



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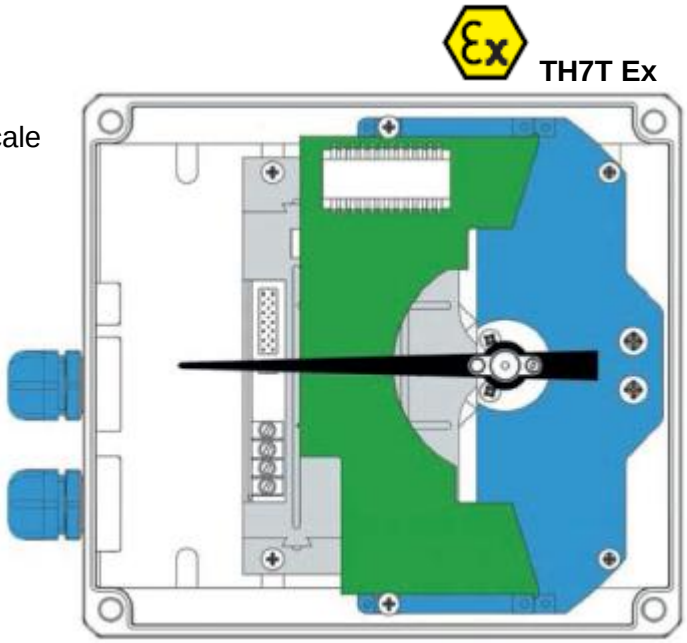
Flow Meter DP-65

Baffle plate principle

ATEX version (Ex ia IIC T4 or T6)
Technical data

- ATEX certificate: Ex II 1 GD
- Power supply: 2-wire, 14 - 30 VDC
- Power consumption: 4 - 20 mA for 0 - 100% of scale
- Analog output: 4 - 20 mA
  - Accuracy: < 0,6% of the magnet position
  - Maximum load in 4 – 20mA loop: 900 Ω (with 30 VDC power supply)
- Totalizer: 8 digits, 4.5 mm high
  Reset by potential-free contact
- Ambient temperature: -5 °C - 40 °C



The limit switches AMM or AMD and electronic transmitters TH7 or TH7T can be mounted together in the same housing.
The TH7 Ex and TH7T Ex transmitters belong to Equipment Group II. They are intended for use in potentially explosive atmospheres, except in mining.

Installation information
The operating instructions for DP-65 must be observed!
Changed operating data apply to the devices in explosion-proof design according to ATEX directive!
The Operating Instructions for DP-65 and the associated Declarations of Conformity must be observed.
Download: www.schmidt-messtechnik.de

Important instructions!
Technical changes and errors reserved.
Pictures can be similar.
The operating instructions belonging to this device must be observed! Download at www.schmidt-messtechnik.com.

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