

SC-250

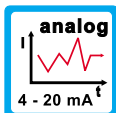
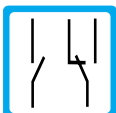
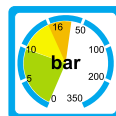
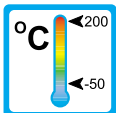
Operation

The instruments, type SC-250, are variable area flowmeter



Application

The flowmeters, type SC-250, are employed to monitor volumeflow of liquids and gases. The instruments are used in many different applications:



Features

The SC-250 prove themselves through reliability and simply handling. Further properties of this sturdy series are:

- high reliability
- product designated scale at no charge
- high chemical compatibility with Teflon-lining (optional)
- flange connection
special process connection on request

Installation hints

The instrument must be installed vertical. The flowdirection is from bottom to top.

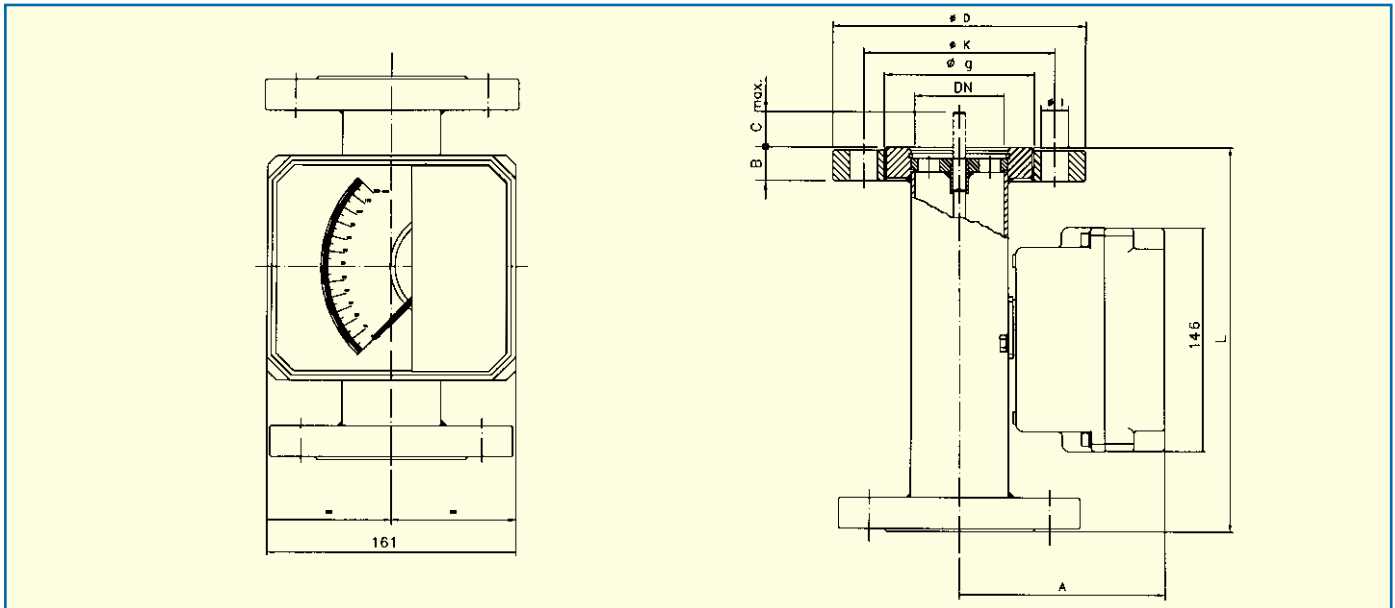
The flowmeter must not be used as a supporting part in a pipeconstruction!

The medium must not contain any solid particles!

Keep adequate distance to magnetic fields (e.g. electromotors)!



Technical Data



Dimensions and weights of the version to DIN 2501

DN	D [mm]	K [mm]	g [mm]	l	B [mm]	PN	A [mm]	C [mm]	L [mm]	weight [kg]
15	95	65	45	14x4	14	40	133	45	250	3,5
25	115	85	68	14x4	16	40	146	45	250	4,5
40	150	110	88	18x4	16	40	154	45	250	7,3
50	165	125	102	18x4	18	40	167	45	250	8,3
65	185	145	122	18x4	18	16	176	45	250	10
80	200	160	138	18x8	20	16	192	45	250	12
100	220	180	158	18x8	20	16	211	–	250	15
125	250	210	188	18x8	22	16	236	–	250	20
150	285	240	212	23x8	22	16	262	–	300	32

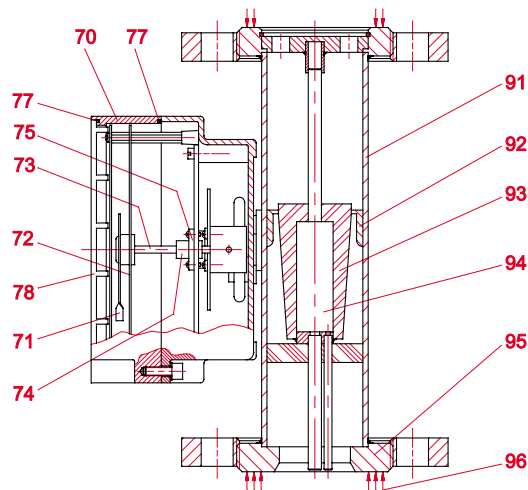
Technical Data

Measuring ranges:		Accuracy:	
Water	refer to table on page 4	standard	± 2,5 % of full scale
Air	refer to table on page 4	optional	± 1,6 % of full scale
Medium temperature:		Ambient temperature:	
Stainless Steel	-50 °C to +200 °C	Stainless Steel	-20 °C to +80 °C
PVC (fully)	0 °C to +50 °C	PVC	0 °C to +45 °C
PTFE (lined)	-20 °C to +150 °C	PTFE	-20 °C to +80 °C
Pressure (1.4404):	refer to table above	Viscosity max.:	10 cP
Operating pressure PVC- und PP-version:			
DN-15 bis DN-50	PN16	DN-65 bis DN-150	PN10
Operating pressure PTFE-version:			
DN-15 bis DN-40	PN40	DN-50 bis DN-125	PN16
DN-150	PN10		
Connection (standard): flanges to DIN 2501			
on request ANSI-, ASA-, BTS-flanges, thread connection, sanitary connection to DIN 11851			
Scale: medium customised, 120 mm, various units e.g.: l/h, m³/h, kg/h			
Special versions (on request):			
High temperature version	-180 °C to +400 °C (only 1.4404)		
PP-version (fully)	0 °C to +80 °C		
Ingress protection:	IP 65	Cable entry:	PG9-cable gland
Heating jacket:	on request		

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Materials and float types



Materials measuring tube

Nr.	Description	Materials		
		Stainless Steel	PVC / PP	PTFE
91	Measuring tube	1.4404	PVC / PP	1.4404+PTFE
92	Orifice	1.4404	PVC / PP	PTFE
93	Float	1.4404	PVC / PP	PTFE
94	Magnet	Alnico		
95	Ring flange	Steel*	PVC / PP	1.4401
96	Flange - sealing surface	1.4404	PVC / PP	1.4404+PTFE

* Stainless Steel on request

Materials indicator

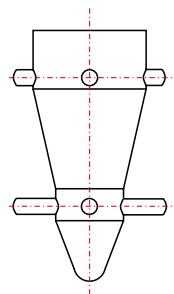
Nr.	Description	Materials
70	Housing	Aluminum
71	Pointer	Aluminum
72	Scale disc	Aluminum
73	Axle	Stainless Steel 1.4401
74	Ball bearing	Stainless Steel 1.4401
75	Magnetic brake	Neodymium
77	Gasket	NBR
78		Polycarbonate / glass

Float types

Type FC
DN-15 to DN-80



Type FC
DN-100 to DN-150



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Measuring ranges

Standard ranges for Stainless Steel float and PVC-float

DN	Float №	Float in 1.4404			Float in PVC *3	
		H ₂ O [l/h]	Air *1*2 [Nm ³ /h]	Pressure drop [mm H ₂ O]	Air *1 [Nm ³ /h]	Pressure drop [mm H ₂ O]
15	15025	2,5 – 25	0,07 – 0,7	400	–	–
	15040	4 – 40	0,12 – 1,2	400	0,2 – 2	240
	15060	6 – 60	0,18 – 1,8	400	0,4 – 4	240
	15100	10 – 100	0,3 – 3	400	0,6 – 6	240
	15160	16 – 160	0,5 – 5	500	1 – 10	240
	15250	25 – 250	0,7 – 7,5	500	1,6 – 16	240
	15400	40 – 400	1,2 – 12	500	2 – 20	240
	15600	60 – 600	1,8 – 18	500	–	–
25	25100	100 – 1000	3 – 30	600	0,6 – 6	180
	25160	160 – 1600	5 – 50	700	1 – 10	180
	25250	250 – 2500	7 – 75	900	1,6 – 16	180
	25400	400 – 4000	12 – 120	1100	2,5 – 25	180
	25101	–	–	–	4 – 40	180
	25161	–	–	–	6 – 60	180
	25251	–	–	–	9 – 96	180
	–	–	–	–	–	–
40	40400	400 – 4000	12 – 120	450	5 – 50	260
	40600	500 – 6300	15 – 180	550	8 – 80	260
	40800	800 – 8000	24 – 240	900	14 – 140	260
50	50800	800 – 8000	24 – 240	700	9 – 90	220
	50100	1000 – 10000	30 – 300	900	15 – 150	220
	50150	1500 – 15000	45 – 450	1000	20 – 200	220
	50101	–	–	–	35 – 350	220
65	65150	1500 – 15000	45 – 450	700	25 – 250	220
	65200	2000 – 20000	60 – 600	1000	40 – 400	220
80	80020	2000 – 20000	60 – 600	800	40 – 400	230
	80025	2500 – 25000	75 – 750	1000	60 – 600	230
	80030	3000 – 30000	90 – 900	1200	–	–
100	81040	4000 – 40000	120 – 1200	1000	60 – 600	240
	81050	5000 – 50000	150 – 1500	1200	100 – 1000	240
	81060	6000 – 60000	180 – 1800	1500	–	–
125	82080	8000 – 80000	240 – 2400	1200	150 – 1500	280
	82100	10000 – 100000	300 – 3000	1500	200 – 2000	280
	82120	12000 – 120000	360 – 3600	1800	–	–
150	83150	15000 – 150000	450 – 4500	2200	250 – 2600	320
	83180	18000 – 180000	500 – 5400	2200	300 – 3200	320

*1 At 1,013 bar abs., 20 °C

*2 Damper is recommended (DN-15 to DN-80)

*3 Up to 40 °C, for higher temperatures a PTFE-float must be used

Measuring ranges for other media and operating conditions on request!



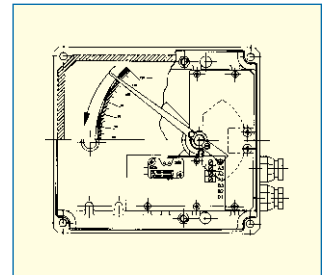
Electronic measuring transducers and limitswitches

Adjustable micro-limitswitch type SC-AMM

Bistable microswitch installed in the indicator housing of the flowmeter

- SC-AMM1: 1 adjustable limitswitch
- SC-AMM2: 2 adjustable limitswitches
- Switch values: 3 (1) A / 250 V (VDE/CEE)
- Hysteresis: $\pm 10\%$ of endvalue
- Ambient temperature: $-25\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$
- Mechanical lifetime: 10^7 switch operations
- Supply: 220 V AC, load: 6 A 24 V DC, load: 0,5 A

(gold plated on request)



Adjustable inductive limitswitch type SC-AMD

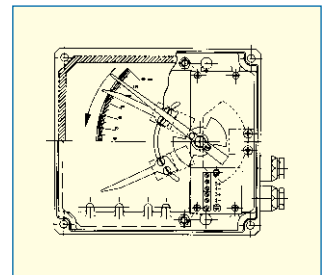
Inductive proximityswitch, 3,5 mm, according to standard NAMUR DIN 19234, installed in the indicator housing of the flowmeter

- SC-AMD1...2: 1...2 adjustable limitswitches
- Power supply: 8 V DC (via amplifier)
- Temperature: $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$

Amplifier (on request)

Model NAMUR (DIN 19234) for 1 or 2 adjustable inductive contacts

- Power supply: 24...230 V AC, 50 - 60 Hz 24...250 V DC
- Input: intrinsic safe circuit EEx ia IIC
- Output: 1 or 2 relays
- Load: 2...5 A / 40 V DC
- Temperature: $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$



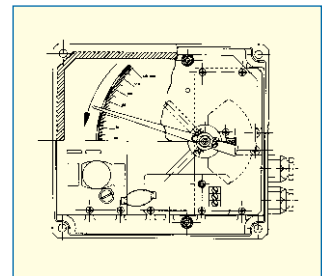
Electronic measuring transducer HALLTEC III

The HALLTEC III is a transducer in 2 wire or 4 wire technique with a hall effect sensor. The hall sensor is based on the non contact sensing through the indicator mechanism.

Model:

- | | |
|------------------------------|------------------------------|
| 2 wire: | 4 wire: |
| TH32 transducer | TH34 transducer |
| TH32T transducer + totalizer | TH34T transducer + totalizer |

- Power supply: 10...50 V DC (2 wire), 24...240 V AC (4 wire)
- max. current / load consumption: max. 20 mA (2 wire), < 2 VA (4 wire)
- Analog output: 4 - 20 mA
- Accuracy: 0,6 % referenced to the magnet position
- Load max.: 2 k Ω
- Pulse output: MOSFET potentialfree N-channel
- I max.: 200 mA
- max. frequency: 2 Hz
- Pulse length: approx. 250 ms
- Totalizer: 9 digits, 4,5 mm peak with reset via potentialfree contact
- Ambient temperature: $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$

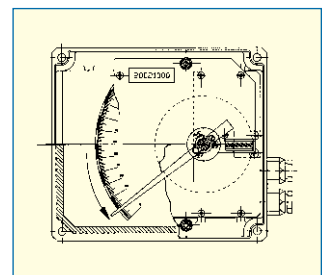


Electronic measuring transducer HALLTEC III (EEx ia IIC T4 ATEX)

Model:

- 2 wire:
- TH32Ex transducer
- TH32TEx transducer + totalizer

- max. current: 20 mA
- Analog output: 4 - 20 mA
- Accuracy: 0,6 % referenced to the magnet position
- Load max.: 700 Ω at 24 V DC power supply
- Totalizer: 9 digits, 4,5 mm peak with reset via potentialfree contact
- Ambient temperature: $-5\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$



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