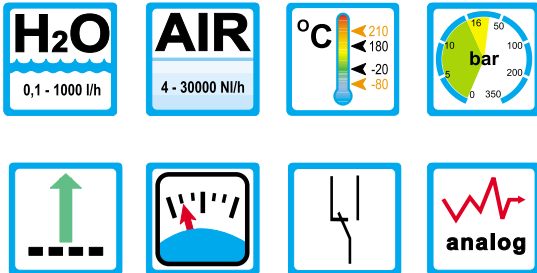


# Flowmeter

## M-21



### Range of Application

#### Operation

- Float measuring principle  
Optional with valve for flow regulation.

#### Application

- Water treatment
- Chemical industry
- Food industry
- Heating systems and cooling systems
- Paper industry

#### Features

- Easy installation
- Small size
- Low pressure drop
- Media specific scale
- Options:  
Adjustable limit switches (AMD),  
Analog transmitter (TEH-2), Pressure regulators (RCA / RCD)

#### Installation hints

- The operating instructions for M-21 must be observed!
- Download: [www.meister-flow.com](http://www.meister-flow.com)

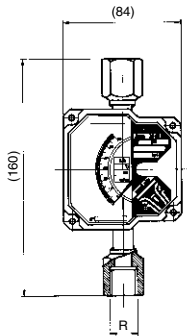
### Operating data

Operating pressure with needle valve	PN 16
without needle valve	PN 40
Media temperature without electronics	- 80 °C to +210 °C
with electronics	- 20 °C to +180 °C (at 20 °C ambient temperature)
Ambient temperature with electronics	see page 3 and page 4
Connections	see page 2
Pressure drop	see table at page 3
Accuracy classified VDE / VDI 3513	4 %



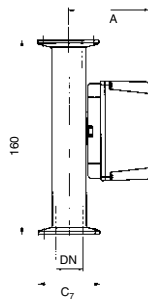
# Technical data and materials

## M-21 with female thread (BSP / NPT)



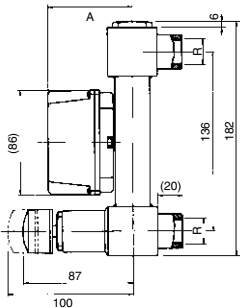
R	A
1/4"	63
1/2"	67
3/4"	72

## M-21 with Clamp-connection (ISO 2852)



DN	A	C <sub>7</sub>
12	66	34
21,3	68	34
25	72	50,5

## M-21 with valve and threaded connection (BSP / NPT)

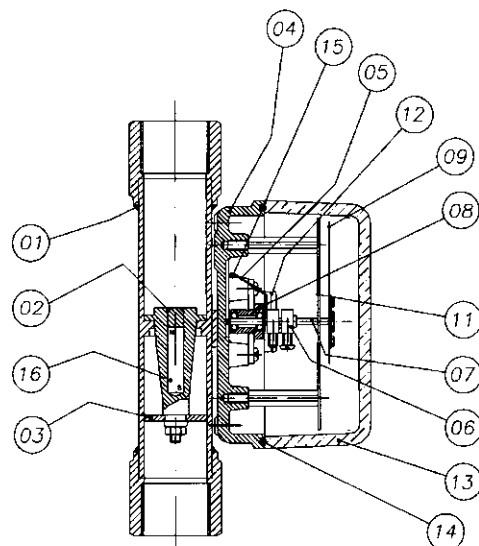


R	A
1/4"	63
1/2"	67
3/4"	72

## Materials

No.	Description	Material
01	Measuring tube	Stainless steel 1.4404
02	Float	Stainless steel 1.4404
03	Ring	Stainless steel 1.4404
04	Housing baseplate	Aluminium (PTFE-coated)
05	Disc	Aluminium
06	Counter weight	Brass
07	Axle	Stainless steel 1.4401
08	Bearing	Brass
09	Pointer	Aluminium
11	Scale / name plate	Aluminium
12	Magnet	Neodym
13	Housing cover	Polycarbonate
14	Gasket	NBR
15	Magnet	Neodym
16	Magnet	AlNiCo
Wetted parts		

## Cutaway drawing



M-21 2 0004 06-09 E.M



# Measuring ranges and options

## Measuring ranges

Tube	Measuring range H <sub>2</sub> O bei 20 °C	Measuring range air bei 20°C and 1 bar abs.
	[l/h]	[NI/h]
M 21001	0,1 - 1	4 - 30
M 21002	0,2 - 2,5	8 - 80
M 21004	0,4 - 4	12 - 120
M 21006	0,6 - 6	18 - 180
M 21010	1 - 10	30 - 300
M 21016	1,6 - 16	50 - 500
M 21025	2,5 - 25	80 - 800
M 21040	4 - 40	120 - 1200
M 21060	6 - 60	160 - 1800
M 21100	10 - 100	300 - 3000
M 21160	16 - 160	500 - 5000
M 21250	25 - 250	750 - 7500
M 21400	40 - 400	1200 - 12000
M 21630	60 - 630	1800 - 18000
M 21M01	100 - 1000	3000 - 30000

## Technical data

Tube	Δp	DIN	CLAMP	BSP / NPT
	[mm H <sub>2</sub> O]			
M 21001	280	10	12	1/4"
M 21002	280	10	12	1/4"
M 21004	280	10	12	1/4"
M 21006	280	10	12	1/4"
M 21010	300	10	12	1/4"
M 21016	300	10	12	1/4"
M 21025	300	10	12	1/4"
M 21040	320	10	12	1/4"
M 21060	320	10	12	1/4"
M 21100	320	10	12	1/4"
M 21160	340	15	21,3	1/2"
M 21250	340	15	21,3	1/2"
M 21400	400	25	25	1/2"
M 21630	400	25	25	1/2"
M 21M01	400	25	25	3/4"

## Options: Inductive switch type M21-AMD

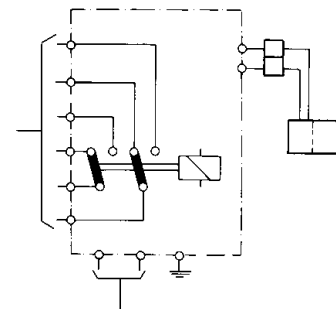
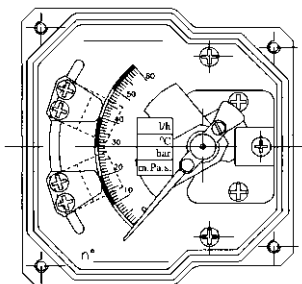
Inductive proximity switch, 3,5 mm, according to NAMUR DIN 19234, mounted in the indicator housing of the flowmeter

- M21-AMD 1...2: 1...2 adjustable limit switches
- Power supply: 8 V DC (via switch amplifier)
- Temperature: -25 °C to +70 °C

## Options: Switch amplifier (on request)

Model NAMUR (DIN 19234) for 1 or 2 adjustable limit switches

- Power supply: 24...230 V AC, 50-60 Hz  
24...250 V DC
- Power consumption: < 1 W
- Input: intrinsically safe circuit EEx ia IIC
- Output: 1 or 2 relays
- Load: 2...5 A / 40 V DC
- Temperature: -25 °C to +70 °C



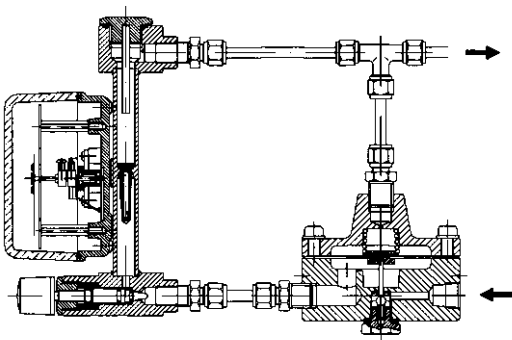
## Options

### Analog transmitter 4-20 mA (HALLTEC II) Type TEH 2 (2 wire-system)

- Power supply: 15 - 50 V DC
- Analog output: 4 - 20 mA (2 wire)
- Ambient temperature: -5 °C to 70 °C
- Ingress protection: IP65
- Accuracy: < 0,6%  
(with reference to the pointer position)
- Max. electr. circuit load:  $R_L = (V_s - 10) / 0,02 \text{ } \Omega$   
(  $V_s$  = Power supply voltage )



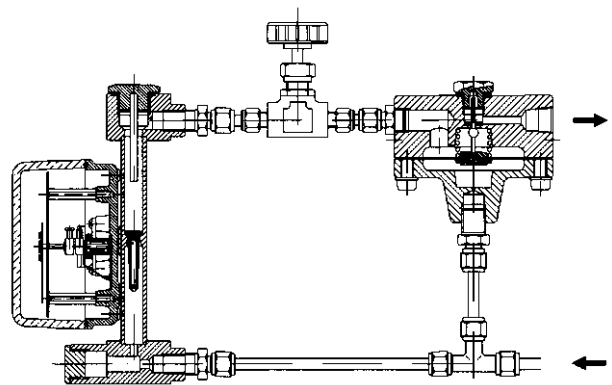
### RCA



### Differential pressure regulator RCA / RCD

The construction of the series M-21 allows the use of the regulator types RCA or RCD. The regulator keeps the flow constant during appearing pressure changes. The RCA will be used for gases with variable input pressure and constant output pressure. The RCD will be used for gases with constant input pressure and variable output pressure. For liquid media only the type RCA can be used. The flow is constant, when the pressure difference between the input and counter pressure is larger than 200 mbar.

### RCD



M-21.4 0004 06-09 E M