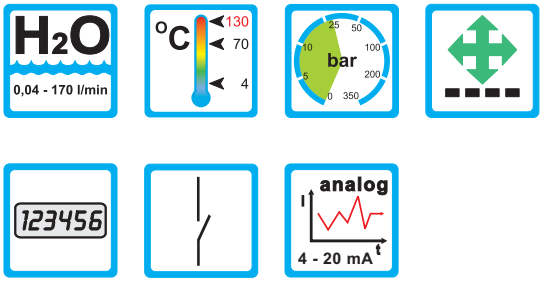
Flowmeter

UDMS



Range of Application

Measuring principle

- Ultrasonic

Application

- Cooling systems and circuits
- Mechanical engineering e.g. welding machines and laser plants
- Automotive industry

Features

- Wide measuring range
- High accuracy
- Outputs (optional)
  2 switching outputs
  2 switching outputs and 1 analog output
- Parameter programmable by keypad
- Display unit rotable
- Integrated up- and downstream section
- Threaded connection

Installation information

- The operating instructions for UDMS must be observed!
- Download: www.meister-flow.com

Operating Data

Type	UDMS
Nominal pressure	PN 25
Media temperature	4...70 °C
Enclosure separate from sensor	4...130 °C
Pressure loss	see diagram on page 3
Linearity error	± 2,5 % m.v. at 25 °C

Measuring ranges

Type	Measuring ranges
UDMS-10	0,04 ... 10 l/min
UDMS-25	0,1 ... 25 l/min
UDMS-40	0,16 ... 40 l/min
UDMS-100	0,4 ... 100 l/min
UDMS-170	0,68 ... 170 l/min

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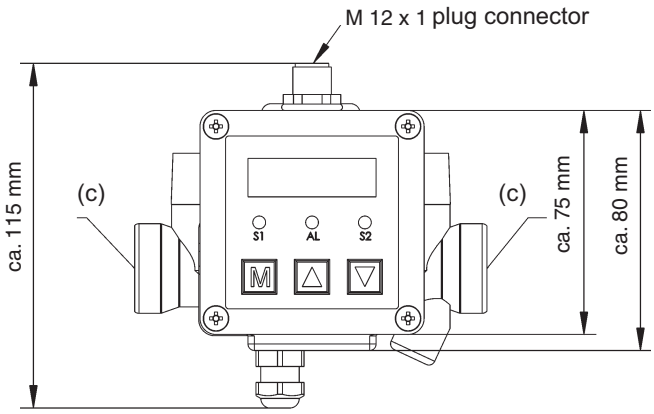
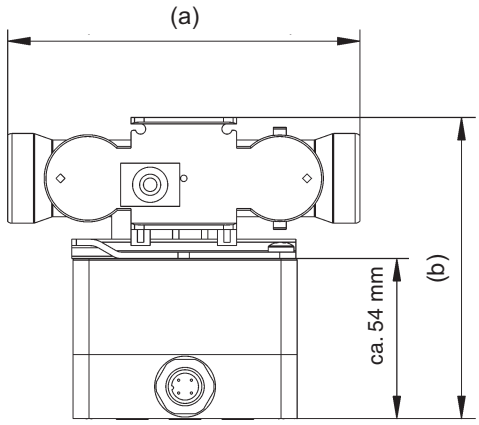
Dimensions and versions

Dimensions



Type	a [mm]	b [mm]	c	Weight [g]
UDMS-10	110	100	G 3/4"	850
UDMS-25	110	100	G 3/4"	850
UDMS-40	190	100	G 1"	1200

Dimensions



Type	a [mm]	b [mm]	c	Weight [g]
UDMS-100	260	130	G 1 1/4"	3000
UDMS-170	300	135	G 2"	4000

Versions

Type	Nominal size DN	Process connection Thread, male	Measuring range [l/min]	2 switching outputs Connection diagram A (see page 3)	2 switching outputs + 1 analog output Connection diagram B (see page 3)
UDMS-10SD	20	G 3/4"	0,04 - 10	▲	
UDMS-10SA	20	G 3/4"	0,04 - 10		▲
UDMS-25SD	20	G 3/4"	0,1 - 25	▲	
UDMS-25SA	20	G 3/4"	0,1 - 25		▲
UDMS-40SD	25	G 1"	0,16 - 40	▲	
UDMS-40SA	25	G 1"	0,16 - 40		▲
UDMS-100SD	32	G 1 1/4"	0,4 - 100	▲	
UDMS-100SA	32	G 1 1/4"	0,4 - 100		▲
UDMS-170SD	50	G 2"	0,68 - 170	▲	
UDMS-170SA	50	G 2"	0,68 - 170		▲

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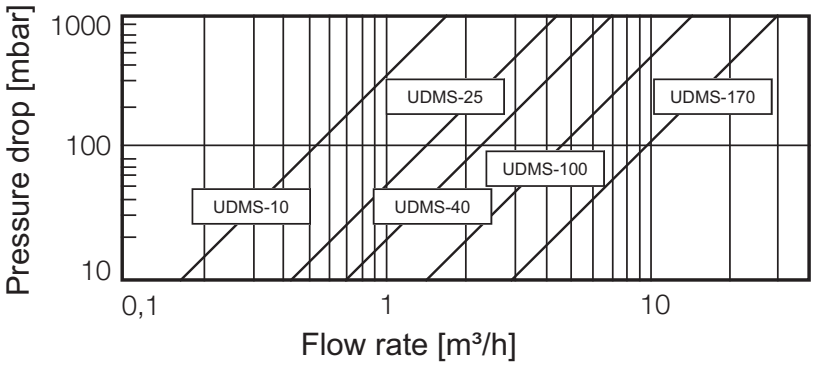
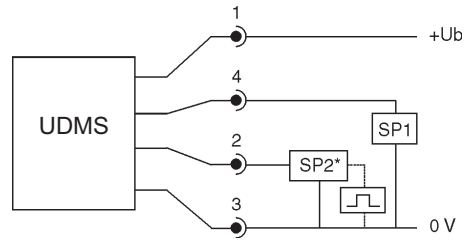
Pressure drop and electrical connection

Pressure drop



Electrical connection

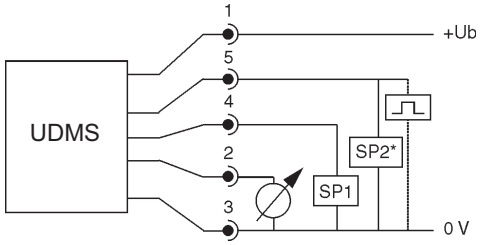
Connection diagram A
(2 switching outputs)



* SP2 = Pulse output

Pulse output on request

Connection diagram B
(2 switching outputs, 1 analog output)



* SP2 = Pulse output

Pulse output on request

Plug M 12x1 4-pin	Version with 2 switching outputs
PIN 1	+Ub (15...32 V DC)
PIN 2	SP2 (0,5 A max.)
PIN 3	0 V
PIN 4	SP1 (0,5 A max.)

Plug M 12x1 5-pin	Version with 2 switching outputs and 1 analog output
PIN 1	+Ub (15...32 V DC)
PIN 2	analog
PIN 3	0 V
PIN 4	SP1 (0,5 A max.)
PIN 5	SP2 (0,5 A max.)

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Technical data

Technical data

Sensor element:	Ultrasonic sensor
Media:	Water similar media
Inlet - outlet zone:	integrated in the measuring device
Max. pressure:	25 bar higher pressures on request
Operating temperature:	
Medium (enclosure separate from sensor)	+4 °C... +130 °C
Electronics	-10 °C... +70 °C
Storage temperature:	-30 °C... +80 °C
Materials:	
Wetted parts	Brass pressed
Seals (media)	KLINGERSIL®
Electronics housing	Aluminum die-cast
Key-pad	Polyester
Display:	4-digit 7-segment LED-display digit height 12 mm, red
Display rate	500 ms
Error display	LED yellow and alphanumeric display
Operating elements:	3 easy-response pushbuttons
Ingress Protection:	IP65
Linearity error:	±2,5 % of measured value at 25°C
Temperature influence:	±0,2 % m.v. / 10 K
Compensation range:	-10 °C... +70 °C
Repeatability:	±0,1 % m.v.

A/D converter:	
Scanning rate	500 ms
Electrical connection:	Plug M12x1 (4- / 5-pin)
Power supply:	15...32 V DC (reversed polarity protected)
Power consumption:	approx. 50 mA (without load)
Analog output:	
Current output	4...20 mA
Load	max. RI = (Ub -12 V) / 20 mA RI = 600 Ω bei Ub 24 V DC
Load influence	0,3 % / 100 Ω
Scanning rate	500 ms
Resolution	10 Bit (1024 steps per measuring span)
Option:	
Voltage output	0...10 V
Rating	max. 10 mA, short-circuit proof
Adjustment range	25 %...100 % m.v.
Transistor switching outputs:	
Switching function	Normally open / normally closed standard / window mode and diagnosis function adjustable
Adjustment range	0 %...125 % m.v.
Switching frequenzy	max. 100 Hz max. 500 mA, short-circuit proof
Delay	0,0...9,9 s adjustable
Display	LED green
Puls output:	On request

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