

## Flowmeter

# UDMS



H<sub>2</sub>O

## OVERVIEW

### Operation

- Ultrasonic-Flowmeter

### Application

- Cooling systems and cooling circuits
- Mechanical engineering
- Welding machinery
- Laser plants
- Automotive industry

### Features

- Universal orientation
- High accuracy
- Wide measuring range
- Outputs (optional)
  - 2 switching outputs
  - 2 switching outputs and 1 analog output
- Parameters programmable by keypad
- Display unit rotatable
- Vibration- / shock resistant
- Integrated up- and downstream section
- Threaded connection

### Installation information

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

## OPERATING DATA

<b>Nominal pressure</b>	PN 25
<b>Pressure drop</b>	see diagram on page 6
<b>Media temperature</b>	
Compact design	4 °C - 70 °C
Separate mounting	4 °C - 130 °C
<b>Ambient temperature</b>	
Electronics	-10 °C - 70 °C
<b>Storage temperature</b>	-30 °C - 80 °C
<b>Accuracy</b>	
Characteristic curve deviation	± 2,5 % of measured value at 25 °C
<b>Temperature influence</b>	± 0,2 % of measured value / 10 K
<b>Compensation range</b>	-10 °C - 70 °C
<b>Repeatability</b>	± 0,1 % of measured value
<b>Measured value acquisition</b>	
Sampling rate	500 ms

## MATERIALS

<b>Brass version, wetted parts</b>	
Gaskets:	KLINGERSIL®
all other wetted parts:	Brass, pressed
<b>Brass version, non-wetted parts</b>	
Electronics housing:	Aluminum, die-cast
Key pad:	Polyester

## MEASURING RANGES

Type	Measuring ranges for H <sub>2</sub> O
	l/min
UDMS-10	0,04 – 10
UDMS-25	0,1 – 25
UDMS-40	0,16 – 40
UDMS-100	0,4 – 100
UDMS-170	0,68 – 170

## MEDIA

Water and watery liquids

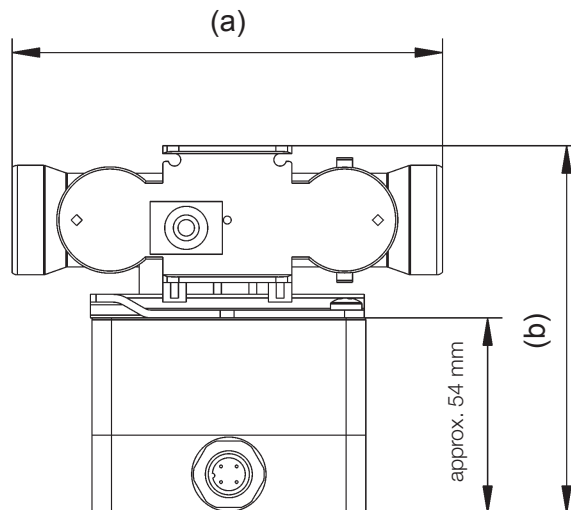
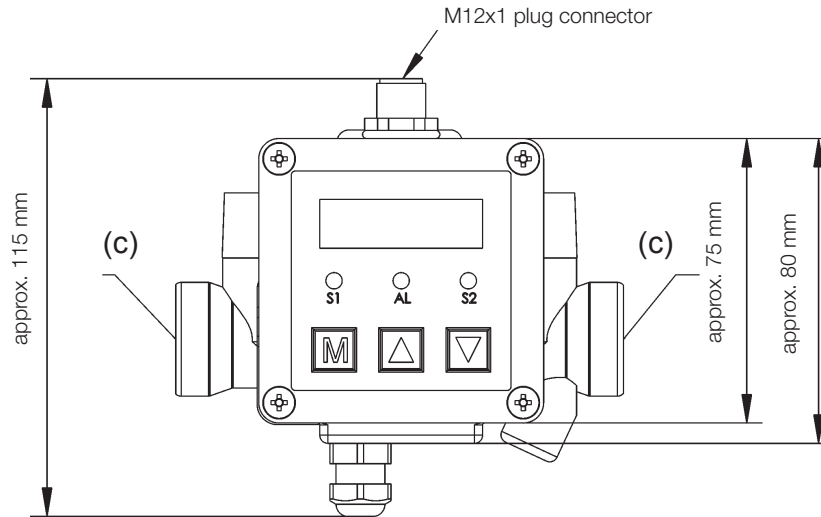
## SUMMARY OF TYPES

Type	Version	
	2 switching outputs <sup>(1)</sup>	2 switching outputs + 1 analog output <sup>(2)</sup>
UDMS-10SD	▲	
UDMS-10SA		▲
UDMS-25SD	▲	
UDMS-25SA		▲
UDMS-40SD	▲	
UDMS-40SA		▲
UDMS-100SD	▲	
UDMS-100SA		▲
UDMS-170SD	▲	
UDMS-170SA		▲

<sup>(1)</sup> See connection diagram A on page 5.

<sup>(2)</sup> See connection diagram B on page 5.

# TECHNICAL DRAWING



## MEASUREMENT TABLE

Type	Overall dimensions [mm]			Process connection <sup>(3)</sup> Weight	
	DN	a	b	c	approx. [g]
UDMS-10	20	110	100	G 3/4"	850
UDMS-25	20	110	100	G 3/4"	850
UDMS-40	25	190	100	G 1"	1200
UDMS-100	32	260	130	G 1 1/4"	3000
UDMS-170	50	300	135	G 2"	4000

<sup>(3)</sup> External thread

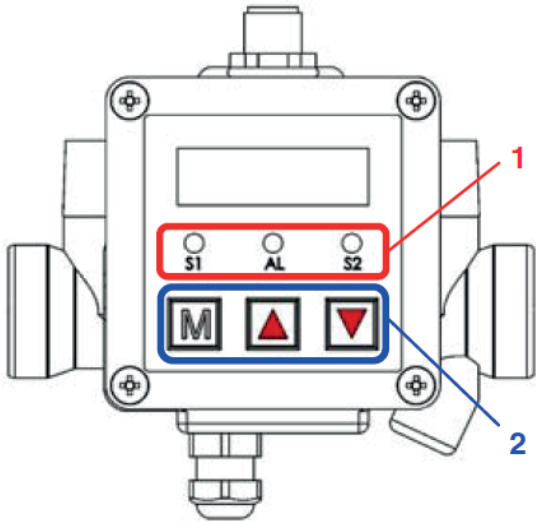
# ELECTRICAL DATA

<b>Electrical connection</b>	Connector M12x1 4- / 5-pin
Connection diagrams	see page 5
<b>Power supply</b>	15...32 V DC reverse polarity protected
<b>Power consumption</b>	approx. 50 mA (without load)
<b>Digital display</b>	
Display	LED 4 digit, 7 segment Display size 12 mm red
Display rate	500 ms
Error display	LED yellow and plain text in display
Operating elements	3 key with noticable pressure point
<b>Ingress Protection</b>	IP65
<b>Analog output</b>	
<b>Current output</b>	4 - 20 mA
Load	max. $R_L = (U_b - 12 \text{ V}) / 20 \text{ mA}$ ( $R_L = 600 \Omega$ at $U_b 24 \text{ V DC}$ )
Load influence	0,3 % / 100 $\Omega$
Scanning rate	500 ms
Resolution	10 Bit 1024 steps per measuring span
<b>Voltage output (Option)</b>	0 - 10 V DC
<b>Rating</b>	max. 10 mA, short-circuit proof
<b>Adjustment range</b>	25 % ... 100 % of measured value

## Transistor switching outputs

Switching function	Normally open / normally closed Standard (increasing / decreasing) Window mode Diagnostic function adjustable
Adjustment range	0 % ... 125 % of measured value
Switching frequency	max. 100 Hz
Switching current	max. 500 mA, short-circuit proof
Delay	0,0 ... 9,9 s adjustable
Display	LED green
<b>Pulse output</b>	On request

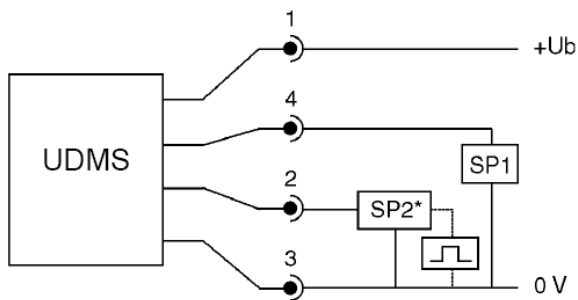
## OPERATING AND DISPLAY ELEMENTS



Pos. 1: LEDs	
AL	(yellow) - Error
S1	(green) - switchpoint 1
S2	(green) - switchpoint 2
Pos. 2: Membrane keys	
M	Programming point to switch from value to function mode, confirm data entry
▲	Menu options / change function, change numerical values
▼	

## CONNECTION DIAGRAMS

Connection diagram A (2 switching outputs)

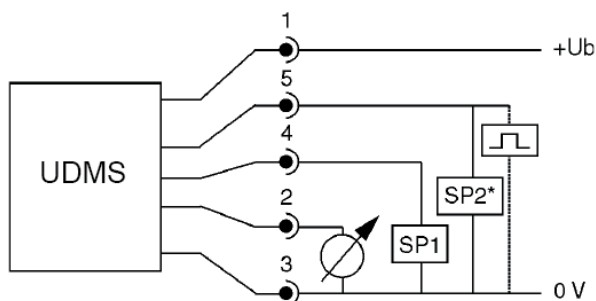


\*SP2 = Pulse output

Pulse output on request

Connector M12x1 / 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.)

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



\*SP2 = Pulse output

Pulse output on request

Connector M12x1 / 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.)

# DIAGRAMS

## Pressure drop diagram

