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РЕЛЕ ПРОТОКА

АСМ 500



Inductive conductivity meter with stainless steel connection head

The conductivity sensor **ACM 500/ACM 510** with stainless steel connection head is a compact system designed for measurement of inductive conductivity. Its small and compact design allows installation in pipelines sized DN40 and larger. With its extremely fast response time it is particularly suitable for applications in the field of product separation.

The HWM 500 sanitary process welding sleeve ensures sanitary installation.



① ACM 500

② LC display for conductivity and temperature

Highlights

- Integral LCD display
- 2 current outputs for conductivity and temperature
- Can be installed on DN40 and larger.
- Extended sensor possible (ACM 510)
- Insensitive to fouling and polarisation

Industries

- Food & Beverages
- Pharmaceutical
- Cosmetics

Typical applications

- Media separations
- Phase separation of cleaning products
- Shortening of the transition phase of CIP systems.

Options and variants



ACM 500 / ACM 510

When using cleaning agents, it is important to separate water/bases and acids reliably and precisely. The quicker the sensor detects a change of medium, the more efficiently is the use of cleaning detergents. This optimizes the application and saves costs for chemicals, etc.

Very quick temperature compensation is ensured thanks to the temperature sensor position in the sensor tip. To support this, the sensor tip is manufactured from stainless steel, and not from PEEK. This means that precise conductivity is available as quickly as possible.

Another plus point is the high operating temperature limit, which means that the ACM 500 / 510 can be built directly into the SIP systems.



LC display

The integral display for mS/cm and °C means that the user can carry out monitoring directly on the spot. This is a tremendous advantage, especially when manually controlled cleaning processes are involved.

Rotary / pushbutton switches

- Press: Program version
- Turn: Select menu
- Press: Configure menu
- Rotate: Select option; left: value decreases, right: value increases

Technical data

ACM 500 & ACM 510

Measuring system

Functional principle	Inductive; 2 toroidal core transformers
LC display	Conductivity and temperature

Operating conditions

Operating pressure	≤ 10 bar / 145 psi
Operating temperature	-20...+130°C / -4...+266°F (140°C / 285°F < 1 hour)
Ambient temperature	-20...+60°C / -4...+140°F
Relative humidity	< 100%, condensing

Materials

Probe	Stainless steel 1.4404 / AISI 316 L
Housing	Stainless steel 1.4301 / AISI 304
Process connection	Stainless steel 1.4404 / AISI 316 L
Insulation material	PEEK (FDA-accepted)
M16 cable gland	Plastic
M12 plug	Brass, nickel-plated

Process connections

Thread	G1" hygienic ①
Protection rating (EN 60529)	IP67
Vibrations	IEC 68-2-6, GL test2

Electrical connection

Power supply	18...36 VDC; max. 180 mA
Response time	T ₉₀ < 3 s
Output, conductivity	
Measuring range	4 ranges, externally configurable: 0.5...999 mS/cm
Temperature compensation	0...5%/K, ranges, adjustable
Temperature drift	< 110 ppm/°C
Accuracy	±1% of the selected measuring range
Repeatability	0.2 % of the measuring range
Output	4...20 mA; max. load 500 ohm; galvanically isolated
Overrange	21.6 mA

Output, temperature	
Accuracy	< $\pm 0.2^{\circ}\text{C}$ / 32°F ($20\dots+50^{\circ}\text{C}$ / $68\dots+122^{\circ}\text{F}$);
	< $\pm 1.5^{\circ}\text{C}$ / 34.7°F ($-20\dots+140^{\circ}\text{C}$ / $-4\dots+284^{\circ}\text{F}$)
Resolution	0.1°C
Temperature drift	< 150 ppm/°C
Repeatability	0.2 % of the measuring range
Output	4...20 mA; max. load 500 ohm; galvanically isolated
Subrange / overrange	2.4 / 21.6 mA

Approvals

Immunity (EMC)	EN 61000-6-2
Emission (EMC)	EN 50081-1

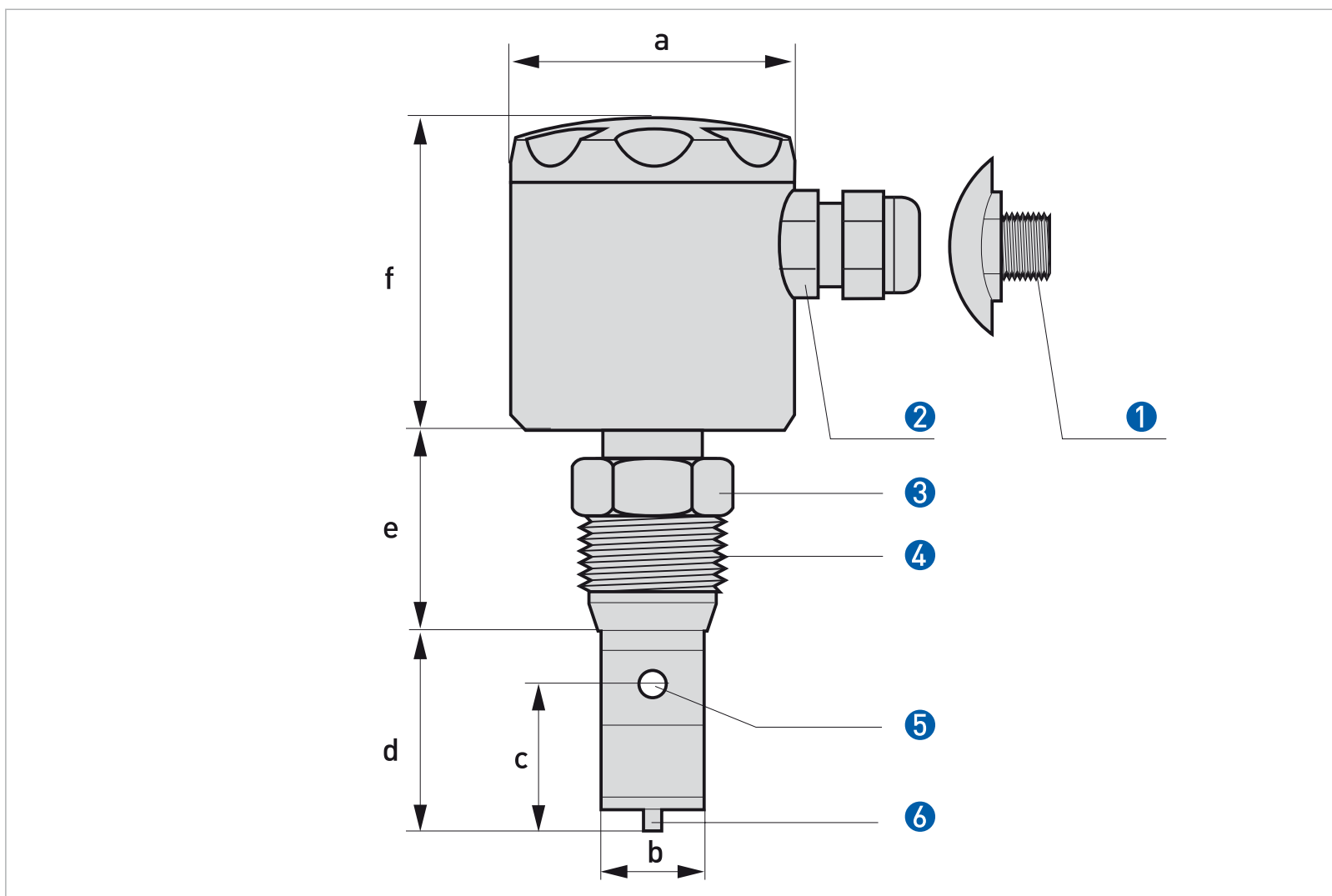
Accessories

Hygienic process sleeve for other process connections	Option ②
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① For further information see additional data sheet "Accessories for hygienic measuring instruments".

② #For further information see additional data sheet "Accessories for hygienic measuring instruments".

Dimensions



- ① M12x1 plug
- ② M16x1.5 cable gland
- ③ SW 36
- ④ G1"
- ⑤ Ø6 mm / 0.2" channel bore
- ⑥ Ø3.5 mm / 0.1" tip of the temperature sensor

Dimensions in mm

	a	b	c	d	e	f
ACM 500 / ACM 510	Ø89	Ø25.5	26	L ①	38	98

- ① L = 37 mm: Standard sensor shaft (ACM 500); L = 84 mm: Extended sensor shaft (ACM 510)

Dimensions in inches

	a	b	c	d	e	f
ACM 500 / ACM 510	Ø3.5	Ø1	1	L ①	1.5	3.9

- ① L = 1.5": Standard sensor shaft (ACM 500); L = 3.3": Extended sensor shaft (ACM 510)

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