

Product information

Analysis - Conductivity

Digital Conductivity-Converter CONDIX4623



- Digital, conductive 4-electrode flow-converter
- 6 types of temperature compensation selectable
- Status LED
- RS485 Interface with MODBUS RTU-protocol
- Installation with pipe thread DIN ISO 228 (DIN 259; BSP)
- Suitable for conductivities in a range of 0..20 $\mu\text{S}/\text{cm}$ up to 0..500 mS/cm
- Resistant against pollution
- Not influenced by polarisation effect or wire resistive

Characteristics

The digital conductivity converter CONDIX4623 is used for the conductivity measurement of liquids. The integrated digital transmitter submits values and parameters to a master (e.g. PLC, SCADA). Device parameters and input configuration are adjustable via the interface or GHMware configuration software. Application dependent six different types of temperature compensation are available. The 4-electrode measurement principle with a cell constant of 0.5 $1/\text{cm}$ is suitable for a range of applications up to 500 mS/cm . Applications can be found in the water treatment of landfill seeping water, seawater or black water treatment on ships.

Technical data

Power supply

Supply voltage : 4,7..28 V DC, max. 60 mA
CE-conformity : EN 61326-1:2013
EN 61326-2-3:2013

Inputs

Cell constant : $C = 0,5 \text{ 1/cm}$ (exact cell constant labelled on the type plate)

Measuring range

Conductivity : 0..20 $\mu\text{S}/\text{cm}$ up to 0..500 mS/cm
Temperature : -50..+200°C

Basic accuracy

Conductivity : 1% of the measuring value
Temperature : 0,2 K

Linearization errors

Temperature : 0,1%
Operating temperature : 0..+60 °C
Ambient temperature : -10..60 °C
Storage temperature : -10..60°C
Condensation : not allowed
Climate classification : EN 60068-2-38:2010-6
Vibrations : EN 60068-2-6, GL test 2
Process connection : pipe thread DIN ISO 228 (DIN 259; BSP)
Process pressure : max. -1..16 bar

Material

Process material : PVDF, casting resin, graphite (electrodes)
Viewing window : Acrylic glass (PMMA)

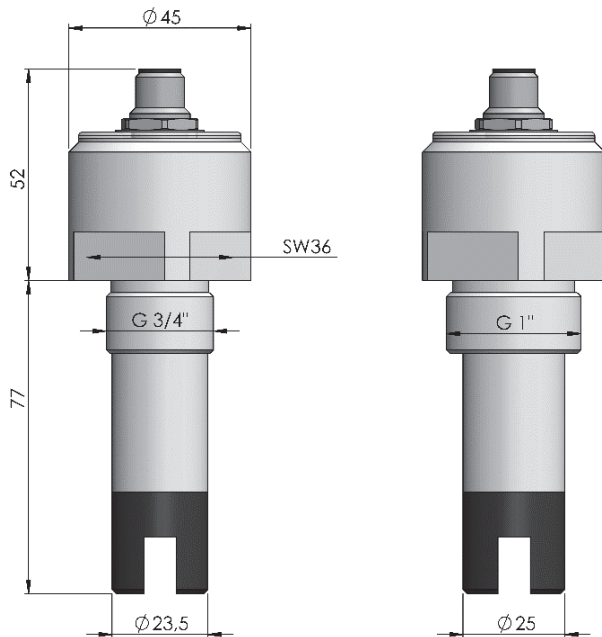
Electrical connection

Design : 8 pole round connector plug
M12x1, IP67
Material : brass nickel plated
Interface : RS485, Half-Duplex
Protocol : MODBUS RTU
Baud rates : 1200, 2400, 4800, 9600, 19200
Total weight : ca. 160 g
Protection class : IP67
Temperature comp. selectable :
- without temperature compensation
- linear temperature coefficient
- compensation of natural waters
- ASTM-D1125 ultra-pure water
- NaCl diluted solution
- ASTM-D5391 acidic pure water
- ASTM-D5391 alkaline pure water

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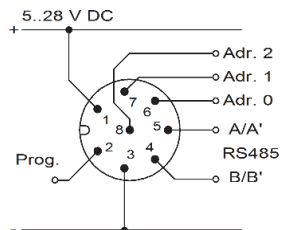
Analysis - Conductivity

Dimensions



Connection diagram

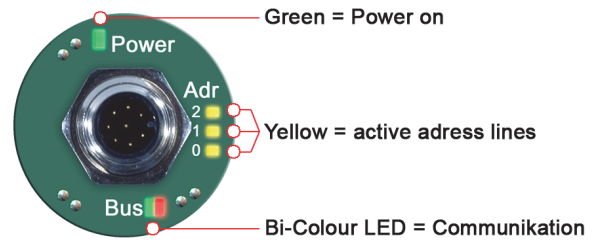
MB-type with
RS485, MODBUS RTU interface



PIN	Signal	Cable color ACI113
1	+ Supply voltage	White
2	Programming PIN (normally not connected)	Brown
3	- Supply voltage, Ground (C / C')	Green
4	B / B' Bus	Yellow
5	A / A' Bus	Grey
6	Adr. 0	Pink
7	Adr. 1	Blue
8	Adr. 2	Red (shield)

The addressing of the CONDIX can be realized with a field attachable female connector (see accessories) or in a junction box.

Optical signalling



Top view CONDIX4623: Optical signalling for supply voltage, bus communication and addressing.

Ordering code

CONDIX 1. 2. 3. 4. 5.
CONDIX - - - -

1. Model	4623
2. Cell constant	C0,5
3. Process connection	G 3/4 A G 1 A
4. Interface	MB RS 485, MODBUS RTU
5. Options	00 Without option

Accessories

Art. No.	Type	Description
-	GHMware	Download: www.ghm-group.de/en/info-desk/
475291	EYY220	Programming adapter
476332	ACI113-00	Field attachable 8-pole female connector, Belden RKC8/9, Brass nickel plated
476331	ACI113-VA	Field attachable 8-pole female connector, Binder 713, stainless steel
476533	ACI113-002-1-00	8-pole female connector M12 (Brass nickel plated) with shielded cable and wire-end ferrules: 2 m
476116	ACI113-005-1-00	8-pole female connector M12 (Brass nickel plated) with shielded cable and wire-end ferrules: 5 m
476117	ACI113-010-1-00	8-pole female connector M12 (Brass nickel plated) with shielded cable and wire-end ferrules: 10 m
476118	ACI113-025-1-00	8-pole female connector M12 (Brass nickel plated) with shielded cable and wire-end ferrules: 25 m