

Product information

Analysis - Conductivity

Digital Conductivity- Converter CONDIX4213



- Digital, conductive 4-electrode flow-converter for outer pipe diameter from 20 mm up to 63 mm
- 6 types of temperature compensation selectable
- Status LED
- RS485 Interface with MODBUS RTU-protocol
- Installation with PVC-U standard fittings
- Flow fitting DFA32 as option accessories
- 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

Characterisitcs

The digital conductivity converter CONDIX4213 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.

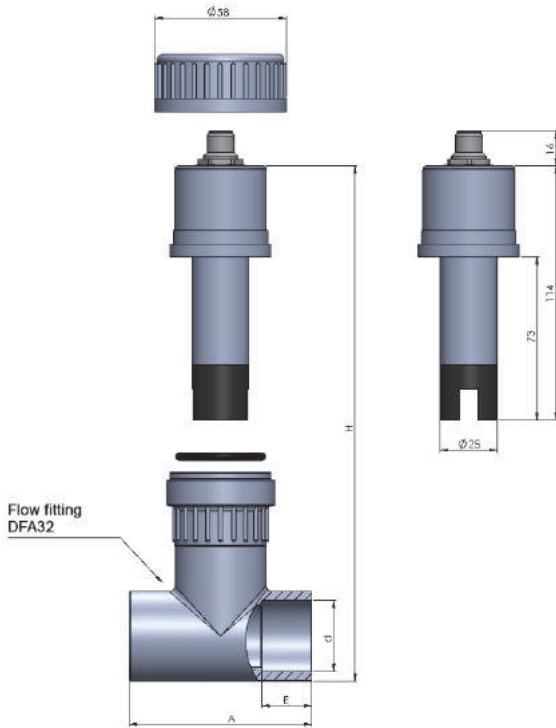
The 4-electrode measurement principle with a cell constant of 0.5 1/cm is suitable for a range of applications up to 500 mS/cm. Applications can be found in the water treatment of landfill seeping water, seawater or black water treatment on ships

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 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 accurac	
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	: PVC fitting with cap nut
Process pressure	: max. -1..16 bar
Materials	
Process material	: PVC-U, casting resin, graphite (electrodes)
Viewing window	: Acrylic glass (PMMA)
Electrical connection	
Design	: 8 pole round connector plug
Materials	: brass nickel plated
Interface	: RS485, Half-Duplex
Protokoll	: 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

Product information

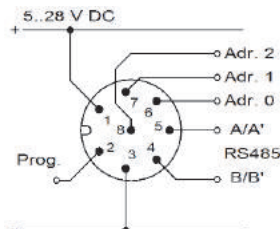
Dimensions



d	H	A	E
20	135	78	22
25	135	78	22
32	135	78	22
40	140	98	26
50	155	118	31
63	169	144	38

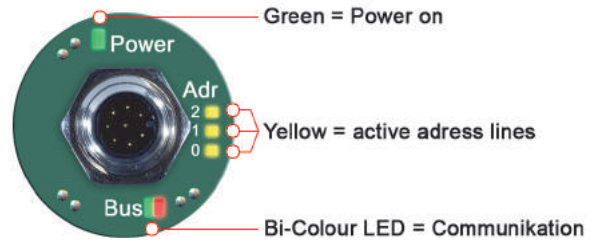
Connection diagram

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

Optical signaling



Top view CONDIX4213: Optical signalling for supply voltage, bus communication and addressing.

Ordering code

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

1. Model	4213	
2. Cell constant	C0,5	
3. Interface	MB	RS 485, MODBUS RTU
4. Options	00	Without option

Accessories

Art. No.	Type	Description
-	GHMware	Download: www.ghm-group.de/en/info-desk/
475291	EYY220	Programming adapter
Diverse	DFA32	Flow fitting for CONDIX4213
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

Product information

Analysis - Conductivity

Digital Conductivity- Converter CONDIX4613



- Digital, conductive 4-electrode flow-converter
- Compact design
- 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..200 mS/cm
- Resistant against pollution
- Not influenced by polarisation effect or wire resistive

Characterisitcs

The digital conductivity converter CONDIX4613 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 $0.4 \text{ 1}/\text{cm}$ is suitable for a range of applications up to 200 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	: $C = 0,4 \text{ 1}/\text{cm}$ (exact cell constant labelled on the type plate)
---------------	--

Measuring range

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

Basic accurac

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

Materials

Process material	: PVC-U, casting resin, graphite (electrodes)
Viewing window	: Acrylic glass (PMMA)

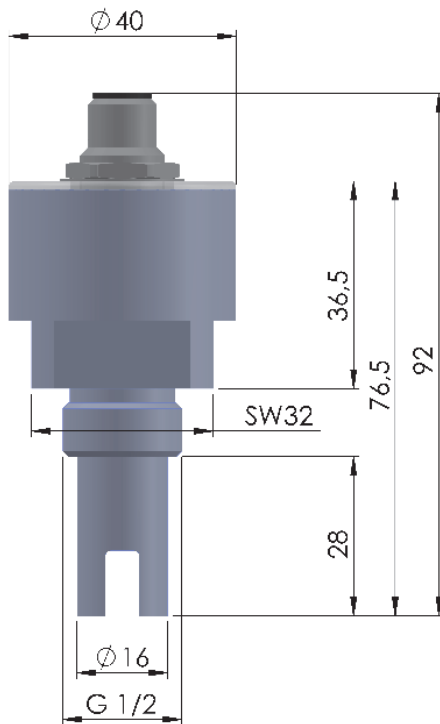
Electrical connection

Design	: 8 pole round connector plug, M12x1, IP67
Materials	: brass nickel plated
Interface	: RS485, Half-Duplex
Protokoll	: 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

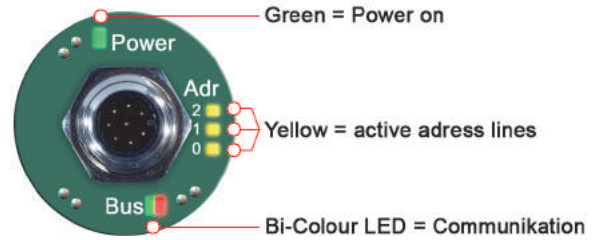
Product information

Analysis - Conductivity

Dimensions



Optical signaling



Top view CONDIX4613: Optical signalling for supply voltage, bus communication and addressing.

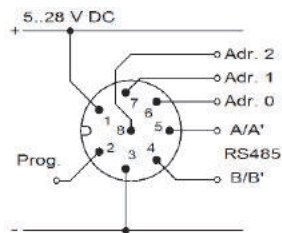
Ordering code

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

1. Model	4613
2. Cell constant	C0,4
3. Process connection	G ½ A G ½ A
4. Interface	MB RS 485, MODBUS RTU
5. Options	00 Without option

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

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

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.

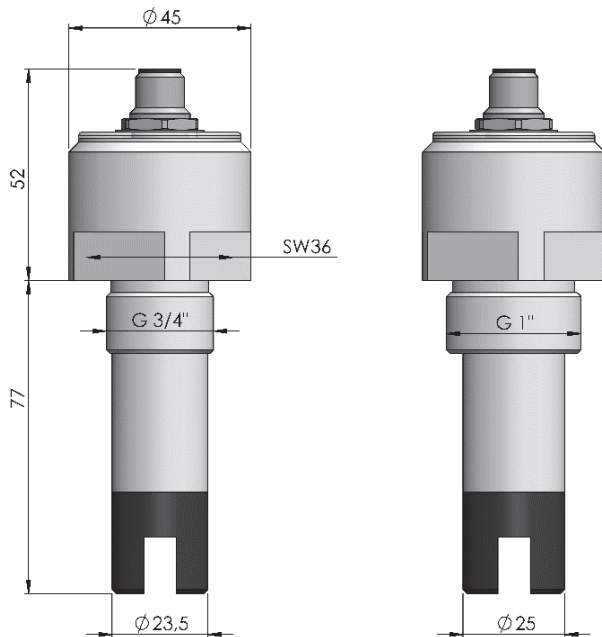
Technical data

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 $1/\text{cm}$ (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

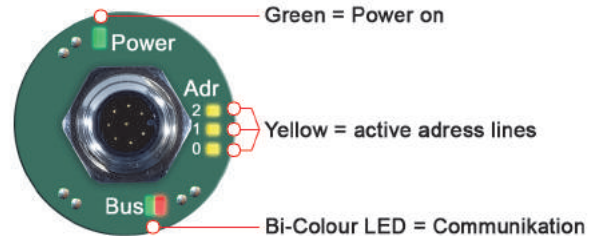
Product information

Analysis - Conductivity

Dimensions



Optical signalling



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

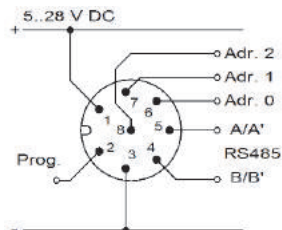
Ordering code

CONDIX - - - -

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

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.

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