

TECHNICAL DATA SHEET
2-ELECTRODE CONDUCTIVITY SENSOR
8310, 8311, 8312, 8315, 8316, 8317



2-electrode conductivity sensor

- For use in ultra-pure water, boiler feed water and drinking water
- Short response time
- Chemically durable materials
- Robust design
- Integrated temperature sensor

Technical data

Conductivity sensor with 2 electrodes						
Model/order no.	Z38310=A=0000	Z38311=A=0000	Z38312=A=0000	Z38315=A=0000	Z38316=A=0000	Z38317=A=0000
Area of application	Ultra-pure water boiler feed water and condensate monitoring		Drinking water	Ultra-pure water boiler feed water and condensate monitoring		Drinking water
Measurement method	2-electrode sensor					
Cell constant K ¹	0.01 cm ⁻¹	0.10 cm ⁻¹	1.00 cm ⁻¹	0.01 cm ⁻¹	0.10 cm ⁻¹	1.00 cm ⁻¹
Measurement range ² SC controller ³	0.01–20 uS/cm	0.1–200 uS/cm	1.00–2000 uS/cm	0.01–20 uS/cm	0.1–200 uS/cm	1.00–2000 uS/cm
Measurement range SIPAN 32/34	0.01–50 uS/cm	0.1–500 uS/cm	1.00–2000 uS/cm	0.01–50 uS/cm	0.1–500 uS/cm	1.00–5000 uS/cm
Measurement range MONEC 9125	0.001–200 uS/cm	0.1–2000 uS/cm	1.00–20000 uS/cm	0.001–200 uS/cm	0.1–2000 uS/cm	1.00–20000 uS/cm
Measurement range SI 792/794	0.001–200 uS/cm	0.1–2000 uS/cm	1.00–20000 uS/cm	0.001–200 uS/cm	0.1–2000 uS/cm	1.00–20000 uS/cm
Maximum temperature	125 °C			150 °C		
Maximum pressure	10 bar			25 bar		
Vessel constant	1.00					
Electrode shaft material	Black polyester, PES ⁴			Stainless steel 1.4404, PES ⁴		
Gaskets	VITON O rings					
Electrode material	Stainless steel 1.4404	Graphite	Stainless steel 1.4404	Graphite	Stainless steel 1.4404	Graphite
Temperature sensor	Pt100 integrated					
Dimensions	Refer to scale drawing					
Process connection	¾" NPT thread					
Cable connection	Fiber-glass-reinforced polyester plug head					
Protection class	IP65					

ATEX protection in compliance with EN 60079-0:2006-07/EN 60079-11:2007-01; can be used in combination with transmitter SI792(x) in ATEX zone 1

¹ K The cell constant is accurate to ± 2%

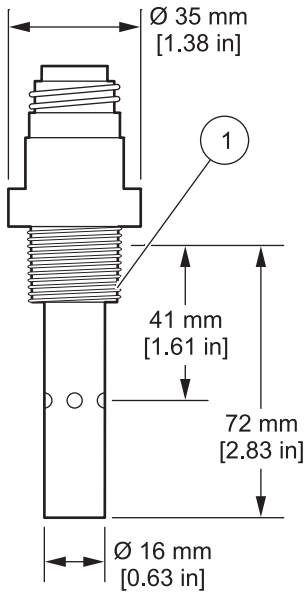
² Measurement range determined by transmitter

³ Connected via gateway AD3400sc to SC60, SC100 and SC1000

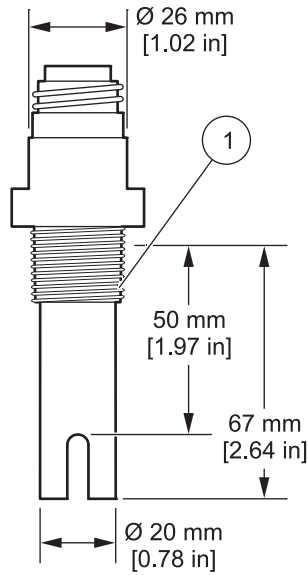
⁴ PES polyethersulfone

Model/order no.	Flow fitting		Welding connector	Dummy plugs
	Z38318=A=0001	Z08313=A=0001	LZY108	LZY109
Material	Stainless steel 1.4404	PVC	Stainless steel 1.4404	Stainless steel 1.4401
pmax at Tmax	25 bar at 150 °C	15 bar (pmax) at 25 °C, 2 bar at 60 °C (Tmax)	10 bar at 150 °C	10 bar at 150 °C
Dimensions	Refer to scale drawing		Total length 30 mm, External diameter 35 mm	Total length 31 mm
Process connection	¼" NPT thread	¾" NPT thread		
Sensor connection	¾" NPT thread	¾" NPT thread	¾" NPT thread	¾" NPT thread

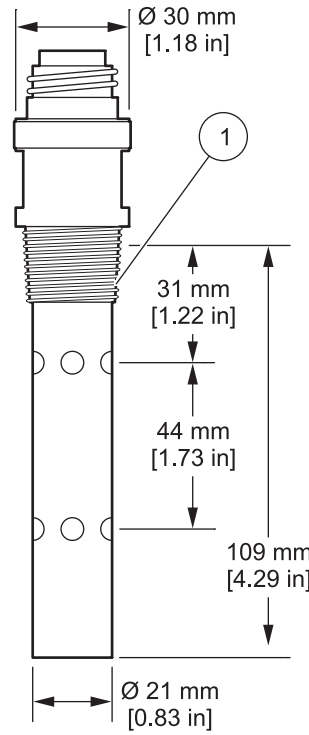
Scale drawings



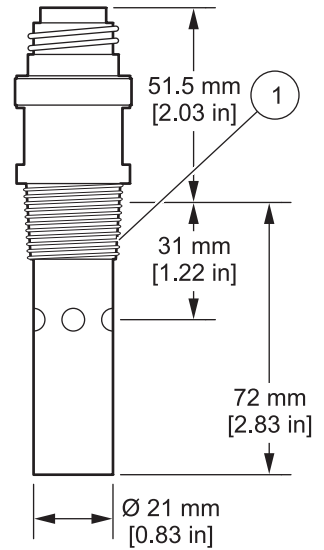
Scale drawing
Conductivity sensor 8310/8311



Scale drawing
Conductivity sensor 8312



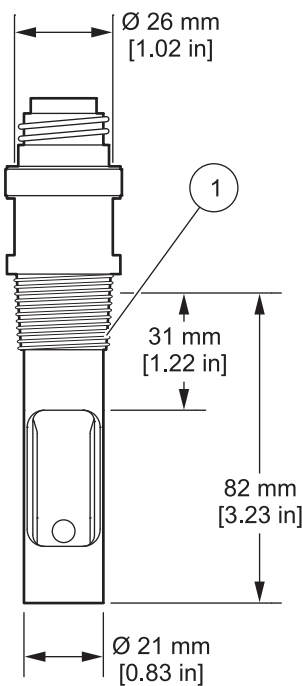
Scale drawing
Conductivity sensor 8315



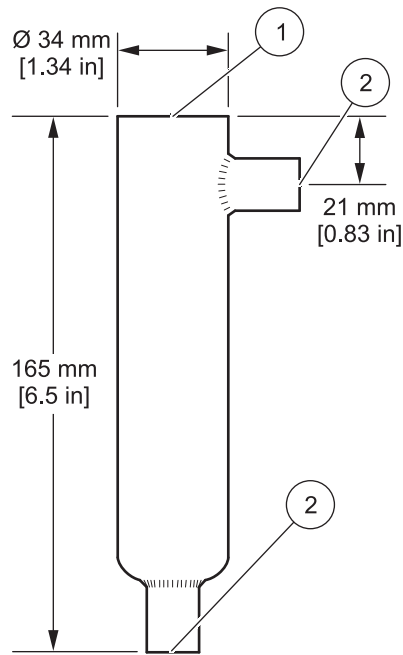
Scale drawing
Conductivity sensor 8316

**Conductivity sensor/
flow fitting**

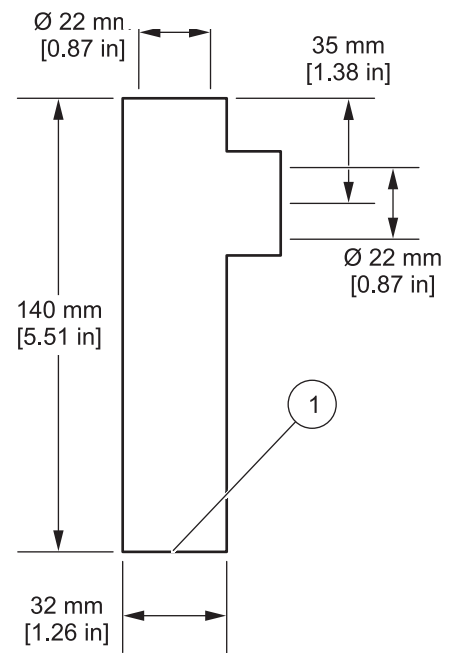
- | | |
|---|-----------------|
| 1 | 3/4" NPT thread |
| 2 | 1/4" G thread |



Scale drawing
Conductivity sensor 8317



Scale drawing
Flow fitting 8318



Scale drawing
Flow fitting 8313

Order information

Conductivity sensors

Designation	Order number
2-electrode conductivity sensor, plastic, K = 0.01 cm ⁻¹	Z38310=A=0000
2-electrode conductivity sensor, plastic, K = 0.1 cm ⁻¹	Z38311=A=0000
2-electrode conductivity sensor, plastic, K = 1.00 cm ⁻¹	Z38312=A=0000
2-electrode conductivity sensor, stainless steel, K = 0.01 cm ⁻¹	Z08315=A=0000
2-electrode conductivity sensor, stainless steel, K = 0.1 cm ⁻¹	Z08316=A=0000
2-electrode conductivity sensor, stainless steel, K = 1.00 cm ⁻¹	Z08317=A=0000

Accessories

Designation	Order number
Flow fitting, stainless steel	Z38318=A=0001
Flow fitting, PVC	Z08313=A=0001
Plug/cable combination, protection class IP65, Length 5 m*	Z08319=A=0005
Plug/cable combination, protection class IP65, Length 10 m*	Z08319=A=0010
Plug/cable combination, protection class IP65, Length 20 m*	Z08319=A=0020
Plug for conductivity sensors	Z08319=A=0000
4-wire shielded special measurement cable type 2664, order per meter	Z5888000,29050
Welding connector	LZY108
Dummy plugs	LZY109

* Cable not suitable for connection to gateway AD3400sc

Standard conductivity solutions

Designation	Order number
0.1 M KCl solution, KS910 12.88 mS/cm, 500 ml	C20C250
0.01 M KCl solution, KS920 1.413 mS/cm, 500 ml	C20C270
0.001 M KCl solution, KS930 148 uS/cm, 500 ml	C20C280
NaCl 25, conductivity, standard 250 ml, 25.0 uS/cm at 25 °C	S51M013



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