

Conductivity meter without display and operating unit

- Analog 4-20 mA output
- Universal process connection
- Three cell constants for covering a wide measuring range
- Temperature compensated measurement

Please see adapters

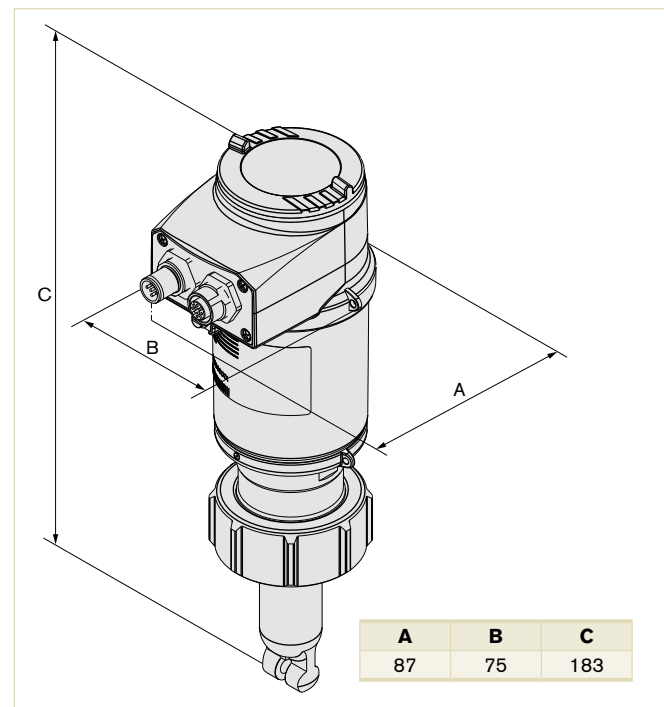


The Bürkert ELEMENT neutrino meter, Type 8222, is a compact device designed for measuring the conductivity of fluids.

Technical Data

Pipe + conductivity meter	
Pipe diameter	DN25-110 mm (DN < 25 mm with reduction)
Conductivity measurement	
Measuring range	0.05 µS/cm to 10 mS/cm
Accuracy	± 3% of measured value
Temperature measurement	
Measuring range	-40 °C to +130 °C
Accuracy	± 1 °C
Temperature compensation	
Cell constants C = 0.1 or 1	according to a NaCl graph
Cell constants C = 0.01	according to an ultra pure water graph
Medium temperature*	
with G 1½" PVC connection nut	0 °C to +50 °C
with G 1½" PVDF connection nut	-20 °C to +100 °C restricted by the used adaptor
(on request)	restriction with adaptor S022 in:
	- PVC: 0 °C to +50 °C - PP: 0 °C to +80 °C
	- Metal: -20 °C to +100 °C
with G ¾" ext. threaded connection	-20 °C to +100 °C restricted by the used adaptor
	restriction with adaptor S022 in:
	- PVC: 0 °C to +50 °C
	- PVDF: 0 °C to +100 °C
	- metal: -20 °C to +100 °C
Fluid pressure max	PN16 (see pressure / temp. chart)
4-20 mA output accuracy	± 1%
Environment	
Ambient temperature	-10 °C to +60 °C (14 to 140°F) (operating and storage)
Relative humidity	≤ 85%, without condensation
Electrical data	
Power supply	12 - 36 V DC, filtered and regulated
Current consumption with sensor	≤ 25 mA
Reversed polarity of DC	Protected
Voltage peak	Protected
Output	
Current	4... 20 mA max. loop impedance: 1100 W at 36 V DC; 610 W at 24 V DC; 100 W at 12 V DC
Response time (10% - 90%)	5 s (standard)


Envelope Dimensions [mm] (see datasheet for details)



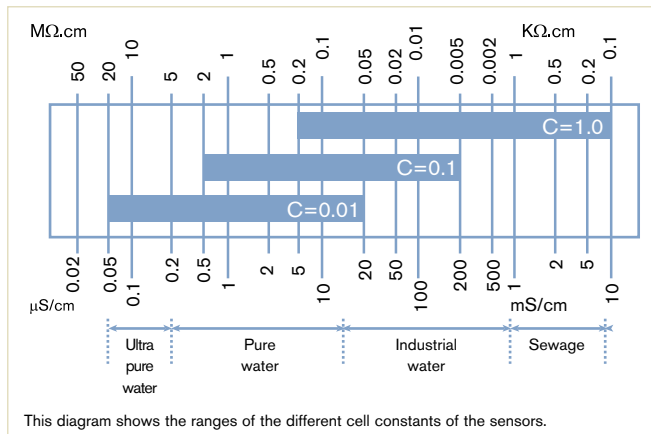
Technical data (continued)

General data	
Compatibility	Any pipe which are fitted out with Bürkert adaptor S022 (see separate data sheet)
Materials	See exploded view, opposite
Housing	Stainless steel 1.4561 (316L), PPS
Cover	PPS
Seals	EPDM
Fixed connector	PA66
Nut	PVC (PVDF on request)
Wetted part materials	
Temperature sensor	PVDF, stainless steel 1.4571 (316Ti)
Conductivity electrodes	Stainless steel 1.4571 (316Ti) for cell constant C=0.01 or C=0.1 or graphite for cell constant C=1.0
Temperature sensor	Pt1000 (316Ti) integrated in the sensor

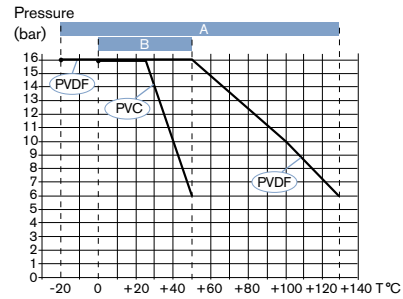
Technical data (continued)

Electrical connections	1x 5-pin M12 male fixed connector, or terminal strip via 1x cable gland M16x1.5
Recommended connection cable for terminal strip	Shielded cable (Measuring data acc. to CEI 664-1/VDE 0110 (4.97))
Solid H05(07) V-U	0.25 to 1.5 mm ²
Flexible H05(07) V-K	0.25 to 1.5 mm ²
With wire end ferrule	0.25 to 1.5 mm ²
With plastic collar ferrule	0.25 to 0.75 mm ²
Diameter	4 to 8 mm
Standards, directives and approvals	
Protection class	IP65, IP67, NEMA 4X and NEMA 6P with M12 cable plug or cable gland tightened or obturated and cover properly mounted and secured
Standard and directives 	
EMC	EN 61000-6-2, EN 61000-6-3
Pressure	Complying with article 3 of §3 from 97/23/CE directive.*
Vibration / Shock	EN 60068-2-6 / EN 60068-2-27

* For the 97/23/CE pressure directive, the device can only be used under following conditions (depend on max. pressure, pipe diameter and fluid).



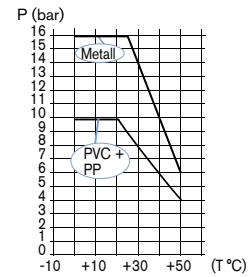
Pressure/temperature chart



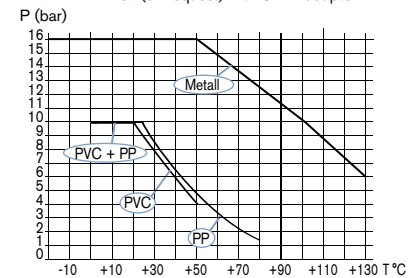
Application range of a 8222 ELEMENT neutrino conductivity meter:
A : with PVDF nut (on request) or G $\frac{3}{4}$ " external threaded connection
B : with PVC nut
 The measures have been made at an ambient temperature of 60 °C.

Application range of a 8222 ELEMENT neutrino conductivity meter

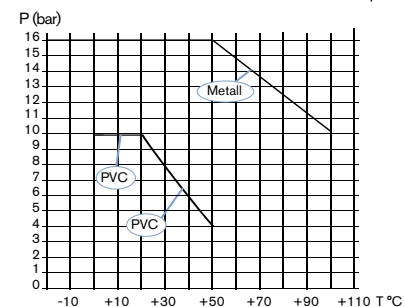
- with PVC nut with S022 adaptor



- with PVDF nut (on request) with S022 adaptor

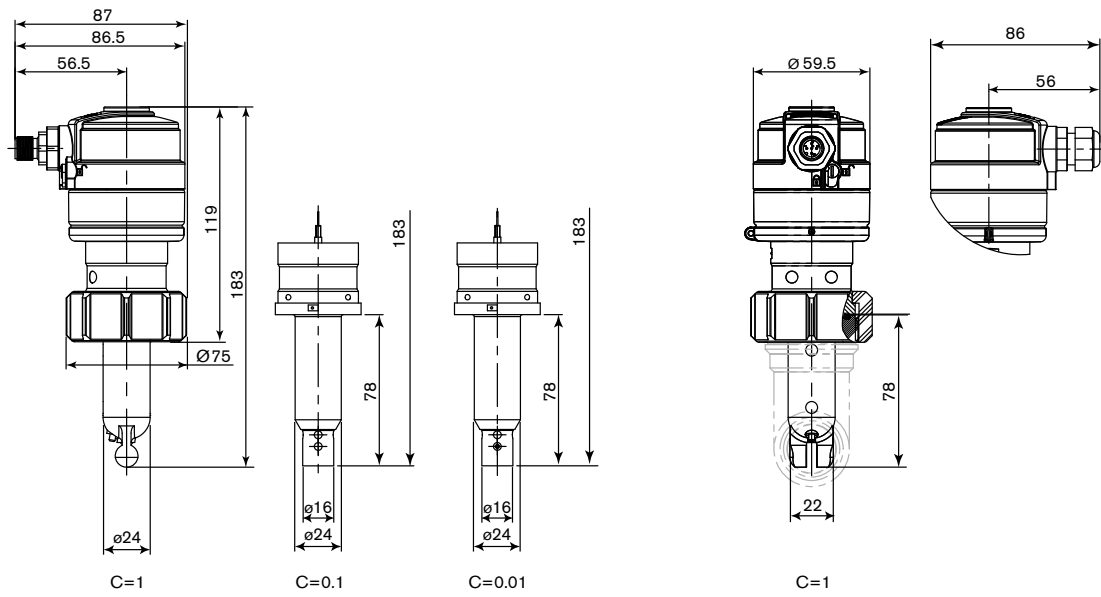


- with G $\frac{3}{4}$ " threaded connection with S022 adaptor



Envelope Dimensions [mm] (see datasheet for details)

with a G 1½" union connection nut



Ordering Chart

Description	Voltage supply	Output	Sensor version	Nut material	Electrical connection	Item no.
Compact conductivity meter with a G 1½" union connection nut	12 - 36 V DC	4 - 20 mA	C = 0.01	PVC	5-pin M12 male fixed connector	561 661
					Cable glands	561 662
			C = 0.01	PVC	5-pin M12 male fixed connector	561 663
					Cable glands	561 664
			C = 0.01	PVC	5-pin M12 male fixed connector	561 665
					Cable glands	561 666

Accessories

Description	Item no.
EPDM seal for cover/housing sealing	561 752
EPDM seal for conductivity meter with G ¾" external thread / S022 adaptor sealing*	561 955
Calibration solution, 300 ml, 5 mS	440 015
Calibration solution, 300 ml, 15 mS	440 016
Calibration solution, 300 ml, 100 mS	440 017
Calibration solution, 500 ml, 706 mS	440 018
Calibration solution, 500 ml, 1413 mS	440 019
5 pin M12 female straight cable plug with plastic threaded locking ring, to be wired	917 116
5 pin M12 female straight cable plug moulded on cable (2 m, shielded)	438 680

* Important!

To ensure the tightness between the meter, with G ¾" thread, and the S022 INSERTION adapter, only this O-ring should be used.

Note

For a complete transmitter the following items must be ordered:

- Transmitter, Type 8222 ELEMENT neutrino
- INSERTION Adapters (see Type S022)