



PROTON CONDUCTIVITY MEASUREMENT

- For measuring the conductivity of fuel cell or other membranes
- Time saving, accelerated polymer electrolyte membrane testing
- In-plane method for accurate and reproducible results
- Fast and easy to assemble
- Reproducible adjustment of membrane temperature and R.H.
- Integrated full impedance analyser
- Computer control with TestWork software
- Unattended and automated script based testing

HORIBAFuelCon

TrueXessory-PCM

GENERAL FACTS

Material of the case	Stainless steel (1.4301/SS.304)
Material of the probe head	Teflon and stainless steel (1.4301/SS.304)
Measuring method	4 electrodes (in-plane)
Material of the electrodes	Platinum
Sample geometry	15 mm (width) x 40 mm (length)
Temperature range	Ambient to 200 °C
Humidity range	Dry to 100 % @ 95 °C
Impedance range	100 Ω to 50 kΩ
Impedance accuracy	±1 %
Frequency range	1 Hz to 100 kHz
Options	PC with TestWork Professional license



The measurement of the proton conductivity is an important method to investigate the performance of membranes for PEMFC, DMFC or other technologies as well as for quality assurance of the manufacturing process.

The TrueXessory-PCM measuring device offers a highly reproducible measurement of the proton conductivity and complete impedance curves under different operating conditions for low and high temperature PEMFC and DMFC membranes. The membrane sample with a typical geometry of 1.5 cm x 4.0 cm can easily be fixed into the 4-electrode measuring head for the in-plane measurement.

The TrueXessory-PCM consists of an impedance spectroscopy analyzer and a sample holder. The sample holder is equipped with integrated

humidification and heating elements, to accurately adjust the humidity and sample temperature.

Additional equipment like mass flow controllers or gas supply is not necessary. The device can be operated stand-alone or together with a computer and HORIBA FuelCon's powerful TestWork software.

Based on high-quality material for chemical stability of the electrodes and the sample holder, the HORIBA FuelCon offers you a valuable and cost-effective tool for your material qualification, research and development. Together with the TestWork software script-based unattended, automated test runs combined with the necessary data acquisition can be performed.

Please feel free to download the latest information available at www.horiba-fuelcon.com. If you have any questions, please do not hesitate to contact us. We will be happy to support you and discuss your testing requirements!

HORIBA FuelCon reserves the right to make changes at any time without notice.

BZM145_01_11 2019/02

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