

GCM922A Quartz Crystal Microbalance



The QCM922A is the successor of the market-leading QCM922. The new QCM922A platform adds many key features which provide researchers the capability to measure a small mass change as resonance frequency as well as viscoelastic change as resonance resistance simultaneously. The QCM922A's extended bandwidth allows for segment leading sensitivity, 30MHz, as we as high-speed data acquisition, up to 100 data points per second.

Application Examples

- Measurement of biopolymer interactions, such as protein
- Real-time monitoring of the formation of high molecular and decomposition
- Evaluation of a lithium ion secondary battery with EQCM
- Gas analysis, such as humidity and smell substance
- Quantitative evaluation of the detergency in surfactant
- Film thickness measurement in the plating
- Analysis of structural change by the measurement of the frequency characteristics of the admittance





QCM-922A, PC, Potentiostat/Galvanostat, BNC cable, Stand, Lab jack

Specification

QCM922A-020: Main unit				
Item	Description			
Measuring Item	Simultaneously resonance frequency & resistance or admittance frequency characteristics			
Resonance	Resolution: 0.01 Hz			
frequency	Range: 5 MHz to 30 MHz			
Resonance	Resolution: 0.01 Ω			
resistance	Range: 1 Ω to 10 k Ω			
Admittance				
frequency characteristics	Frequency range: 4 MHz to 30 MHz			
	Fullscale: ± 10 V(14bit)			
Δr analog output	Range: ± 100 Hz to ± 500 kHz			
	Fullscale: ± 10 V(14bit)			
	Range: $\pm 10 \Omega$ to $\pm 10 k\Omega$			
Analog input	2ch, Fullscale: ± 3 V/ 6 V/ 12 V(14bit)			
Gate time	10 ms/ 20 ms/ 100 ms/ 1 s/ 10 s			
Display	20 characters 4 lines OLED			
Interface	USB 2.0			
Input power source	AC 100 to 240 V, 50/60 Hz			
Power consumption	Max. 25 VA			
Dimensions (WxDxH)[mm]	162 x 160 x 95 *			
Weight	About 1.3 kg			
Operation	5 ℃ to 40 ℃ (non-condensing)			
environmental				
temperature				
Compliant	CE marking (EMC, low-voltage directive)			
stanuarus				

QCM922A-020 contains main unit and QCM922A-100

• 9MHz AT-Cut Quartz Crystal Resonator QA-A9M-series

Item	Description	
	Au, Pt, Al, C, Cu, ITO, Ni, SiO2, SUS304, SUS316	
Electrode materials	300nm of electrode material is sputtered onto a Ti film groundwork	
Electrode area	$5 \text{mm}\varphi$ diameter = 19.6 mm ² Area	
30MHz AT-Cut Quartz Crystal Resonator QA-A30M-series		
Item	Description	
Electrode materials	100nm of Au, etc is vapor deposited onto 10nm Ti film groundwork	
Electrode area	5mmφ diameter = 19.6mm ² Area	

Specifications subject to change

OCM922A-100: OA-CL Adapter Cable				
Item	Description			
Material	Case:PVDF			
Connection cable	Connector: LEMO plug(Male) Cable: Coaxial multi cable:about 1.0 m			
Working(W) terminal	Connected to the working electrode of Potentiostat/Galvanostat internally connected through a low pass filter and a measurement electrode surface of the quartz resonator			
Dimensions (WxDxH)[mm]	24 x 40 x 15 *			
Weight	About 130 g(including cable)			
Operation environmental temperature	5 °C to 40 °C (non-condensing)			

• Dip Cell QA-CL3

• Well Cell QA-CL4

Flow	Cell	OA-C	ĽL6

Item	Description		
Materials	QA-CL3 QA-CL4 QA-CL6	Main Body: PTFE, PVDF O-ring: FKM stop	
	QA-CL3	25.5 x 20 x 12 *	
Dimensions (WxDxH)[mm]	QA-CL4	25.5 x 20 x 22 *	
	QA-CL6	28.0 x 20 x 22 *	
Capacity	QA-CL4	Max. 750 μL	
	QA-CL6	90µL	
	QA-CL3	Solution or air	
Usage	QA-CL4	Cell is filled with solution or connected with RG100	
	QA-CL6	Cell is flowed with solution by the pump	

*without a projection part



USA

Europe

Tel: (865) 425-1289 Tel: +44 (0) 1252 556800 Fax: (865) 481-2410 Fax: +44 (0) 1252 556899

www.ameteksi.com

Please see our website for a complete list of our global offices and authorized agents