AMETEK SI

ModuLab XM ECS

Configurable electrochemical system

Configurable system for electrochemical, materials and photoelectrochemical measurements.



Compliance voltage

±8 V standard; ±30 V / ±100 V with HV options [1]

Specifications

MEASURING RANGE

Polarization voltage	±8 V standard; ±30 V with XM HV30; ±100 V with XM HV100	[1]
Minimum current range, standard	±30 nA	[1]
EIS frequency range	XM FRA 1MHz: 10 µHz–1 MHz; XM FRA 300kHz: 10 µHz–300 kHz (options)	[1]

ELECTRONICS & SIGNAL

Maximum output current	±300 mA base; XM BOOSTER 2A for 2 A; external boosters up to 100 A	[1]
Auxiliary inputs	XM PSTAT AUX: 4 differential voltage channels (factory-fitted option)	[1]

SOFTWARE & DATA

EIS analysis modes	Swept sine, multisine/FFT, harmonic analysis, intermodulation (FRA option)	[1]
Software	XM-Studio included	[1]

ENVIRONMENT & RATINGS

Compliance voltage	±8 V standard; ±30 V / ±100 V with HV options	[1]

GENERAL

Chassis slots	4 or 8	[1]
Maximum data acquisition rate	1 MS/s with XM PSTAT 1MS/s	[1]
Host system	ModuLab XM ECS; at least 1 PSTAT per chassis	[1]

Models

Model	Module function	Chassis slots	Installation	EIS requirement
XM BOOSTER 2A	2 A booster; 8 V with PSTAT, up to 20 V with HV option [1]	2 [1]	Plug-and-play, user-installable [1]	FRA required for EIS [1]

XM FEMTO AMMETER	Low-current option [1]	1 [1]	Plug-and-play, user-installable [1]	FRA required for EIS [1]
XM FRA 1MHz	10 µHz–1 MHz [1]	1 [1]	Plug-and-play, user-installable [1]	FRA module for EIS with PSTAT [1]
XM FRA 300kHz	10 µHz–300 kHz [1]	1 [1]	Plug-and-play, user-installable [1]	FRA module for EIS with PSTAT [1]
XM HV30	30 V polarization and compliance voltage [1]	1 [1]	Plug-and-play, user-installable [1]	FRA required for EIS [1]
XM HV100	100 V polarization and compliance voltage [1]	1 [1]	Plug-and-play, user-installable [1]	FRA required for EIS [1]
XM PSTAT 1MS/s	Potentiostat/galvanostat; 1 MS/s [1]	1 [1]	Plug-and-play, user-installable [1]	FRA required for EIS [1]
XM PSTAT AUX	4 differential auxiliary voltage channels [1]	0 [1]	Factory fitted to XM PSTAT [1]	FRA required for EIS [1]

Sources

[1] ModuLab XM ECS
AMETEK Scientific Instruments · product-page · Ordering information; Differentiated Specifications and options; Differentiated Specifications · checked 2026-10-16
https://www.ameteksi.com/products/potentiostats/single-channel/modulab-xm-ecs

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.