

THE SPECIALIST FOR STANDARD-COMPLIANT COATING TESTING

Multi-channel Potentiostat MCP CaDis



MCP CaDis is a robust multi-channel potentiostat and galvanostat for testing coatings for cathodic disbondment (CD), electrochemical impedance spectroscopy, or cyclic voltammetry. It is suitable for both automated industrial test benches and high-precision research laboratories.

The device maintains a specified potential with millivolt precision and enables parallel testing with up to 40 channels.

It operates in accordance with standards, is stable over the long term, and is designed for continuous industrial use.



Operating principle

The MCP CaDis keeps the set potential of the test point constant relative to the reference electrode. Current is measured using precise zero-ohm ammeters (current sinks). The target potential is set once. No readjustment is necessary. Potential/cell voltage and current are displayed on LCD instruments (auto range).

All measured variables can be output via analog outputs and/or recorded with the integrated logger. For tests according to AS 3862, it is possible to switch to galvanostatic operation (constant current).

Your benefits at a glance

- **Compliant:** meets international standards for CD tests such as ASTM G8, ISO 15711, CSA Z245.
- **Precise & stable:** potentiostatic control with mV accuracy, automatic range selection of LCD displays.
- **Scalable:** configurations from 4 to 40 channels; 100 mA or 200 mA per channel. Practical: robust analog technology, tolerates short-term power failures.
- **Verifiable:** data logger records potential, current, and optionally temperature.
- **AS 3862-compatible:** switchable to galvanostat constant current mode.

DESIGNED FOR CD TESTING

Specification MCP CaDis

Potentiostat

Control voltage	0 - 5 V, adjustable
Input resistance	$> 10^{12} \Omega$
Current capacity CaDis 100	± 100 mA; overload protected up to 150 mA
Current capacity CaDis 200	± 200 mA; overload protected up to 250 mA
Current to voltage conversion	2 V ref. to full range, tolerance $\pm 0,2 \%$
Max anode voltage	± 13 V
LC displays	Potential (3 ½ digits), Current (0 ... -199.9 mA) or alternatively temperature (0 to 199.9 °C)

Dimensions and power supply

4 channels	320 × 150 × 342 mm
6 up to 10 channels	533 × 150 × 342 mm
12 up to 20 channels	533 × 283 × 342 mm
Power Supply	115/230 V, 50/60 Hz

Data outputs and logger

Analog data output	as voltages; optional as 4-20 mA current signals
Datenlogger CDLOG20 (optional)	4 channels potential + 4× current/temperature (20-bit AD)
Datenlogger CDLOG24 (optional)	8× channels potential + 8× current/temperature (24-bit AD)

Normen & Standards (Auszug)

- **ASTM:** G8, G42, G80, G95
- **ISO/EN:** ISO 15711, ISO 21809-1 Annex H,
ISO 10289 Annex E, EN 12068, EN 10289
- **CSA:** Z-245
- **DIN:** DIN 30670 / DIN 30678 (application
dependent), DIN 30 670
- **BAW/VDA:** BAW 2011 (seawater), relevant
VDA/details according to specification
- **NF:** A 49-7111

Potential/temperature/medium/duration) is selected
in accordance with the required standard.

Options

- Analog data outputs, optional 4–20 mA
- Logging software for evaluation and error
reporting (e.g., electrode contact)
- Temperature measurement: 1
thermometer channel per potentiostat
channel; resolution $\pm 0.1 \text{ }^\circ$; 10 mV/°C
- Galvanostat adapter for AS 3862
- Reference electrodes, anodes, test cells,
heat-resistant silicone/PTFE cell cables

Typical applications

- CD testing of coatings on steel in accordance with international standards
- Coating evaluation in the automotive, aviation, and materials industries
- Long-term testing of coatings and series testing in industry
- Integration into test benches with analog output

**We would be happy to advise you on the right configuration for your application.
Contact us directly or request a customized quote.**

