

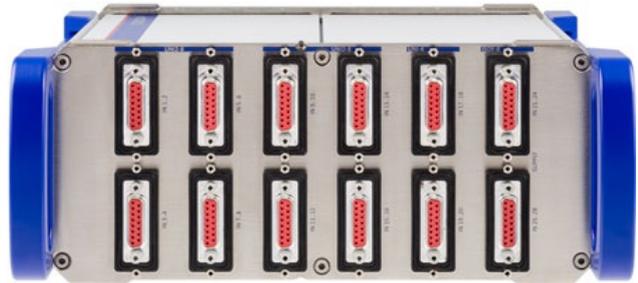
MEASUREMENT SYSTEM

Electromechanical testing in extreme environments

The Cronos-SL by IMC (Germany) is a sealed data acquisition system for harsh environments. CAN networks or CAN-based sensors can be integrated.

Measurement under harsh environmental conditions such as extreme temperatures, water spray, and intense vibration requires appropriately protected measurement equipment. This applies especially to long-duration measurements outdoors or testing on board moving vehicles.

The Cronos-SL by IMC is a mobile measurement system, for applications in tough environments. Conforming to [MIL STD810F](#), one of the highest standards for temperature, environmental contaminants, shock resistance, signal conditioning, AD-conversion, online processing, and data storage are integral components of the measurement system. This makes the product suitable for measurement tasks involving long duration testing and monitoring tasks: e.g. on board vehicles, machinery or at outdoor measurement sites, where regular measurement equipment often fails to meet the environmental conditions.



The Cronos-SL measurement system comes with dimensions of 256 mm x 80 mm x 350 mm (Photo: IMC)

The product's measurement amplifiers are individually configured at build time. The two available housing sizes can be equipped with two or four modules from a selection of applicable I/O options. They not only comprise full analog input conditioning and filtering, but additionally any measurement channel can be subjected to freely defined real-time calculations and analysis directly within the system.



The Cronos-SL comes with an operating temperature of -40 °C to +85 °C (Photo: IMC)



In conjunction with extra digital I/O and analog outputs, these real-time processing capabilities even allow for open and closed loop control tasks or responsive limit monitoring. Field and vehicle bus logging (CAN, LIN, Flexray, etc.) can also be integrated: decoded according to a variety of protocols and fully synchronous to analog channels. Users benefit from a solution that is suited for vehicle testing, integration of CAN networks, ECU communication or additional CAN-based sensors, as well as GPS logging.

I/O connectors can be chosen as waterproof Dsub-15. While capable of autonomous PC-less operation, including onboard storage, the Cronos-SL connects to a PC via an Ethernet TCP/IP interface (or optional WLAN) to allow for setup and interactive operation.

Configurable measurement amplifier

The series is available in two different housing options. With its configurable measurement amplifier design, the product allows direct connection of any desired signal and sensor, and provides both power and conditioning. This enables system adaptation to a variety of measurement tasks. Besides the acquisition of raw data, freely defined processing of channel signals can be performed in real-time. All analog or digital channels, as well as computed data streams, are available for use in open and closed-loop control tasks, or for value limit monitoring. Meanwhile, measurement channels carried on the CAN network, and encoded in a variety of protocols, can be acquired in synchronization with others and processed in the same way as the analog measurement channels.

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