

System Inspection for imc measurement devices 7/18/2014

“We protect your investment!” is our motto for success.
For this reason we offer extensive system maintenance services.

System Inspection = Complete function test according to manufacturer inspection plan¹

The work is performed by the manufacturer’s experienced specialists in accordance with the recorded device history in the Service database.

Along with all digital components, the functioning of the power adapter and UPS are inspected
Result: Service report = status report with recommendation for maintenance interval and recalibration interval

Extra charge for additional required material.

(Plus charges for calibration / adjustment, repair)

Typical work includes:

- ✓ visual inspection
- ✓ verify and save the device configuration
- ✓ check our service database for reported errors concerning the device
- ✓ check internal supply voltages
- ✓ check the UPS function²
- ✓ check internal battery for system clock
- ✓ check the measurement channels regarding noise, offset and function
- ✓ function test of analog output
- ✓ function test of digital channels (incremental encoder, digital In- and Output, field bus)

¹ In contrast to the function test according to the manufacturer inspection plan (imc System Inspection), the steps performed in Maintenance / System Revision or Extended System Inspection increase the system’s life expectancy.

- Extended System Inspection (also possible in on-site service)
Includes: in addition to the system inspection, important maintenance work, system checkup, function test in accordance with manufacturer’s inspection plan, service report
Required materials charged separately.
(Plus charges for adjustment, repairs, material)
- Maintenance / System revision = Preventative maintenance including system inspection and system maintenance
Includes: maintenance in accordance with DIN 31051:2003-06, system updating, system checkup, system modification, function test, service report.
Any added modular components are billed to customer.
(Extra charges for adjustments, repairs, material)
System revision can only be performed at imc factory.

² Devices with the optional UPS-function have maintenance-free lead gel rechargeable batteries (4 x type LC-R061R3PG, Panasonic). This internal auxiliary battery is automatically charged upon applying power with the device switched on. Due to the inevitable discharging, it is recommended to connect the power supply at the latest after six months even if the device is left deactivated.

If the UPS is needed often (many charging and discharging cycles), the lifespan depends on the amount of discharging (does the UPS run down only briefly or is the battery totally discharged each time?). The manufacturer promises 200 cycles at 100% discharge and 1200 cycles at 30% discharge and 25°C. With devices in the extended temperature range, we recommend checking the buffering capacity at frequent intervals.

- ✓ Scandisk of hard disk and formatting if necessary
- ✓ on request software update
- ✓ device cleaning on the outside
- ✓ renewing labels
- ✓ for devices with 230 V power supply: performance of VDE safety inspection in accordance with BGV A3 (VGB 4) or DIN EN 61010-1
- ✓ service report = status report with recommendation for maintenance interval and recalibration interval

Within the framework of the imc System Inspection, it is also possible to take account of customer-specific or device-specific prerequisites or conditions (for instance, the characteristics of an ICP channel or the custom interconnections can be checked). All work performed is documented internally by imc with reference to the device's serial number; the customer receives a service report and a test certificate.

=> *When should System Inspection be performed?*

In conjunction with calibration, we recommend every 1 .. 2 years depending on the device's workload.

What should I order?

Ordering options with imc CRONOS-PL as an example

- **System Inspection**
CRPL/INSP-CRPL-x
Flat charge for 1 µ-MUSYCS device
Includes system checking, function check, service report
Additional charges for extra work for necessary maintenance
Additional charges for adjustment, extra work for necessary maintenance, repairs, material
The System Inspection is also possible on site for standard devices.

Options

- **Maintenance / System Revision**
CRPL/MOD-CRPL-x
Flat charge for system maintenance and if appropriate, modification to the newest version for 1 device.
(Modification not possible for all devices)
Includes: maintenance in accordance with DIN 31051:2003-06, system update, system checking, system modification, function test, service report.
Any added modular components are billed to customer.
Additional charges for adjustment, repairs, material
System Revision is only possible at imc facilities.
- **Calibration / Adjustment**
CRPL/ADJ
Flat charge for 1 CRONOS-PL measurement amplifier
Measurement of actual values
(Customer is notified of deviations outside of tolerances)
Adjustment for each measurement amplifier as well as subsequent output calibration
Manufacturer's calibration conformant to DIN EN ISO 9001

Recommended in conjunction with CRPL/INSP-CRPL-x or CRPL/MOD-CRPL-x
Calibration including adjustment according to manufacturer's specifications is also possible on site for standard devices. Calibration according to user inspection plan available upon request.

- **Device update**

- **1080129 (CRPL/UPD)**

- imc Software Version xx to Version yy per device

- Update of a device so that it can be run with the software version 2.5 R xx or 2.6 R xx

- Includes LabVIEW® VI for imcDevices

- Package includes software on data medium, documentation in PDF format included

- **Express Service**

- **1500011 (SUP/EXPRESS)**

- Preferential, top speed performance of necessary servicing

- Within 5 work days, plus shipment time

- If repair requires longer in spite of the express service, the flat charge is reduced by 110 EUR / day. No further claims are honored.

- Repair costs are extra

Why should every calibration include a System Inspection?

Following *imc System Inspection* the device is returned to the user having undergone complete functional testing (and repair if appropriate)!

The imc System Inspection is the best and most reliable *100% Function test* according to the manufacturer's inspection plan, in which *even latent errors are detected*. In repairs, the system error or parts replacement may make re-adjustment necessary.

Example: A power adapter defect is reported.

The customer's original wish was: Send me a DC/DC converter and I'll repair the power adapter myself.

Error profile following error analysis by imc: defective input channels burdening the power adapter.

Plus: DAC (analog output channels) Channel 2 defective.

Result: The customer received a completely repaired device tested according to the manufacturer inspection plan along with a testing certificate.

If adjustment is also necessary, it is naturally performed as part of the service. In such a case, the customer's device is furnished with a new calibration certificate.