

Adjustment and calibration sets for Metrel testers

		CS 2171	CS 2172	CS 2173	CS 3000	CS 2121	CS 2077	CS 3200B	MD 9050
Appliance / Machine/ Switchgear	Adjustment Set		•	•	•	•			•
	Calibration Set	•		•	•	•			•
Electrical Installation Safety	Adjustment Set				•	•			•
	Calibration Set				•	•			•
HV Insulation Resistance	Adjustment Set						•	•	•
	Calibration Set						•	•	•

Metrel's calibration laboratory

Metrel's calibration laboratory is accredited according to requirements of ISO 17025 standard. Metrel calibration laboratory calibrate also other electrical measurement equipment as Multimeters and Calibrators. The scope of accreditation - see: <http://www.slo-akreditacija.si/teksti-1/doc/cal/LK011.pdf>

The Metrel trained contractual partners are requested to set up their own calibration laboratory for calibration and adjustment services of Metrel measuring instruments. Metrel offers adjustment and calibration sets as per above table at the most favorable price and offers cost - free training at its premises.

Calibration gives evidence of the actual state of the measurement equipment in comparison with the reference measurement values. All calibration sets are calibrated according to standard SIST EN ISO/IEC 17025:2005 and contain accredited calibration certificate.

The user must be sure that measuring equipment at all time meets its technical specifications. To track the status of equipment it is required a periodic calibration. Metrel recommends calibration interval of one year. The actual calibration interval set by the user depends on the actual usage of the specific measurement equipment. All calibrations must be traceable to a national or international standard.

Metrel offers you periodical calibration and if necessary repair of the CS at the most favorable price.



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CS kit sets
for adjustment
and calibration

Measuring
instruments
and testers



Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.

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CS kit set for electrical appliances / machines / switchgear assemblies safety testers



Separate units CS 2171, CS 2172 and CS 2173 are designed for adjustment and calibration of Metrel Electrical Appliances / Machines / Switchgear Assemblies Safety Testers.

These separate units can be used for calibration and adjustment of the below stated Metrel Appliance / Machine / Switchgear Assemblies safety testers:

- MI 2094 CEmultitester
- MI 3321 Multiservicer XA
- MI 2170 Multiservicer
- MI 2142 AlphaPAT
- MI 3304 BetaGT plus
- MI 3305 OmegaGT plus
- MI 3309 DeltaGT
- MI 3310 SigmaGT
- MI 3311 GammaGT.

The following measuring functions can be adjusted and calibrated:

- Continuity,
- Insulation resistance,
- Insulation current at withstanding test,
- Open circuit output d.c. voltage test,
- Discharge time,
- Output a.c. voltage test,
- Short circuit current at Riso,
- Leakage current,
- Functional test,
- Zloop/Line,
- PRCD, RCD

TYPICAL APPLICATIONS

- Excellent opportunity for value added services.
- Access to the latest know-how in calibration / adjustment of Appliance / Machine / Switchgear Assemblies test equipment.
- Versatility of use. Calibration hardware can also be used with the Appliance / Machine / Switchgear Assemblies safety testers of the other makers then METREL.

STANDARDS

Functionality:

IEC/EN 61557; IEC 60439-1; EN 60204; IEC/EN 60204-1 Ed.5; IEC/EN 60439; IEC 60755; IEC 60598-1; VDE 0404; VDE 0701-0702

Electromagnetic compatibility:
EN 61326

Safety:

IEC/EN 61010-1; IEC/EN 61010-031

KIT SET EIS/PAT/CE CS 33 71/72/73:

- CS 2171 Calibration Box
- CS 2172 Adjustment Box
- CS 2173 Discharge Box
- CS 3000 Adjustment & Calibration Box
- CS 2121 RCD Simulator
- MA 4804 Variable transformer
- MD 9050 Digital multimeter

- Variable resistance
- Test lead red, 2 m, 3 pcs
- Test lead black, 2 m, 3 pcs
- Test tip blue
- Test tip black
- RS 232 cable
- Cable RS232 Upload
- Calibration/Adjustment software with a complete package of the calibration procedures on CD
- Instruction manual



Calibration Set: CS 33 71/73

Adjustment Set: CS 33 72/73

Other required equipment

Information on other adjustment and calibration equipment and accessories can be provided on request.

CS kit set for electrical installation safety testers



Separate units CS 3000 and CS 2171 are designed for adjustment and calibration of the Metrel Electrical Installation Safety Testers.

These separate units can be used for calibration and adjustment of the below stated Metrel Electrical Installation testers:

Multifunction tester:

- MI 3105 Eurotest XA
- MI 3101 Eurotest AT
- MI 3102H Eurotest XE 2.5kV
- MI 3102 Eurotest XE
- MI 3100 EurotestEASI
- MI 3125 EurotestCOMBO
- MI 2086 Eurotest 61557
- MI 2088 Earth Insulation

Single function tester:

- MI 3121H 2.5 kV insulation / Continuity
- MI 3121 Insulation / Continuity
- MI 3122 Zline - loop / RCD
- MI 3123 Earth / Clamp
- MI 2126 Earth 2-3
- MI 3103 GigaOhm 1 kV

The following measuring functions can be adjusted and calibrated:

- Continuity
- Insulation resistance
- Loop resistance N-PE
- Line impedance
- Loop impedance

- Earth/Loop resistance
- Earth resistance
- Varistor breakdown voltage
- Contact voltage
- RCD
- Input voltage
- a.c. current TrueRMS

TYPICAL APPLICATIONS

- Excellent opportunity for value added services.
- Access to the latest know-how in calibration of Electrical Installation Safety test equipment.
- Versatility of use. Calibration hardware can also be used with the appliance testers of other makers then METREL.

STANDARDS

Functionality:

IEC/EN 61557; IEC/EN/HD 60364; IEC/EN 61008; IEC/EN 61009; IEC/EN/TR 60755; BS 7671; AS/NZ 3760; AS/NZ 3018; AS/NZ 3017; CEI 64.8; HD 384; VDE 0413

Electromagnetic compatibility:

IEC/EN 61326-1;
IEC/EN 61326-2-2

Safety:

IEC/EN 61010-1;
IEC/EN 61010-031

KIT SET EIS CS 30 00/21:

- CS 3000 Adjustment & Calibration Box
- CS 2121 RCD Simulator
- MD 9050 TRMS Heavy Duty Industrial Digital Multimeter
- A 1018 and A 1019 current clamp
- Test lead red
- Test lead black
- Test lead green
- Mains cable
- General cable 4 x 1 m
- Shuko plug test cable, 1.5 m
- Calibration/Adjustment software with a complete package of the calibration procedures on CD
- Instruction manual



Other required equipment

Information on other adjustment and calibration equipment and accessories can be provided on request.

CS kit set for hv insulation resistance testers



The calibration kit set CS 2077 and CS 3200B are designed for adjustment and calibration of the Metrel HV Insulation Resistance Testers with working voltage up to 5 kV, 10 kV d.c.

These separate units can be used for calibration and adjustment of the below stated Metrel HV Insulation Resistance testers:

- MI 3200 TeraOhm 10 kV
- MI 3201 TeraOhm 5 kV
- MI 2077 TeraOhm 5 kV
- MI 3202 GigaOhm

The following measuring functions can be adjusted and calibrated:

- Test voltage - for HV measurements the reference resistors of 100 kΩ, 100 MΩ and/or 10 kΩ, 10 MΩ form voltage dividers.
- Insulation resistance test - For IR test compare displayed result with reference value.
- Capacitance test - Test according to IEC 61557-2 requires checking influence of capacitive insulation on IR readout.
- Voltage verification - For voltage verification connect calibration set socket to mains supply. Make parallel connection of tested instrument and external V-meter to appropriate d.c. or a.c. measurement range.

TYPICAL APPLICATIONS

- Excellent opportunity for value added services.
- Access to the latest know-how in calibration of Insulation Resistance test equipment.
- Versatility of use. Calibration hardware can also be used with the appliance testers of the other makers then METREL.

STANDARDS

Functionality:

IEC/EN61557-2

Electromagnetic compatibility:
EN 61326 class B

Safety:

IEC/EN 61010-1;
IEC/EN 61010-031

KIT SET HV CS 32 00/77:

- CS 2077 Calibration Set 5 kV
- MD 9050 TRMS Heavy Duty Industrial Digital Multimeter
- Test lead red
- Test lead black
- Test lead green
- Mains cable
- Calibration/Adjustment software with a complete package of the calibration procedures on CD
- Instruction manual

- CS 3200B Calibration Set 10 kV (with build-in resistor of 3 TΩ and two voltage dividers 100 MΩ : 100 kΩ and 10 MΩ : 10 kΩ)



Other required equipment

Information on other adjustment and calibration equipment and accessories can be provided on request.