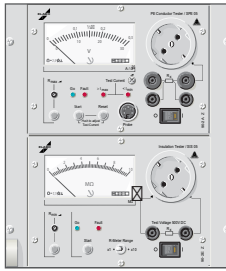


8.15 Compact tester

Isolation and PE meter, safety testing equipment



Isolation and protective earth wire meter
6HU / 2WU



Safety testing equipment VDE 0701/02
6HU / 2WU

Rack mount with two analogue safety meters:

1 protective earth wire meter 90-2A

Test current: 10...25A

- 1 analogue divider, which calculates and displays the resistance value of the protective earth wire and its connections from the voltage drop which occurs in the test item and the currently flowing test current.

Measurement range: 0...0.30Ohm

- 1 multi-turn trimmer and
- 1 probe for preselecting a maximum resistance value. A visual and acoustic error message is output when this is exceeded. The error message is also output when the test current is set too high or too low (the limit values can be adjusted internally).
- 1 Schuko socket
- 2 screw-type terminals
- 2 laboratory safety sockets
- 1 DIN socket for connecting the test probe 94-4S
- 1 illuminated rocker switch

1 isolation meter 90-2E

Measurement voltage: 500V DC, stabilised

Short-circuit current: maximum 3mA (no protective measures for operating personnel are required)

- 1 analogue divider with high measuring accuracy
The resistance value is displayed in two linear ranges:
0... 10M0hm
0..100M0hm
- 1 spindle-operated potentiometer on the front plate for a lower limit value for the isolation resistance; if the level is below this value, then a visual and acoustic error message will appear.
- 1 Schuko socket
- 2 laboratory safety sockets
- 1 illuminated rocker switch

Order no. 37-3G

Insert plate for the measurement of:

- protective earth wire resistance
- replacement discharge current
- protective earth wire current / contact current
- isolation checking of repaired or modified electrical devices in accordance with VDE 0701/02.

1 four-line dot matrix display, illuminated

1 LED "Error"

1 LED "Polarity reversal"

2 Function keys "0701 and 0702"

1 Function key "Auto"

1 test socket

1 connection for test item (4mm safety socket)

Technical data:

Imprecision 5% ±1 digit (in all ranges)

Protective earth wire resistance measurement

Measurement range 0 ... 1000 mOhm

Limit value < 300mOhm

Measurement current 0.2A DC (autom. polarity reversal)

Replacement discharge current measurement

Measurement range 0 ... 20 mA

Limit value (in accordance with VDE 0701) for devices with heat resistance

[SK1] < 3.5kW: <3.5mA

[SK1e] > 3.5kW: < 1mA/kW

Measurement voltage 40V AC

Isolation resistance measurement

Measurement range 0.2...20 M0hm

Limit value (in accordance with VDE 0701)

[SK1] > 1M0hm

[SK2] > 2M0hm

Test voltage 500V DC

Short-circuit current 4.9mA

Protective earth wire current measurement

Measurement range 0...10mA

Limit value (in accordance with VDE 0702)

[SK1] < 3.5 mA (autom. polarity reversal)

Contact current measurement

Measurement range 0...10mA

Limit value (in accordance with VDE 0702)

[SK2] < 0.5mA (autom. polarity reversal)

Delivered complete with test probe and connection terminals.

Order no. 37-2L

Additional devices can be found in the Test Instruments catalogue.

Motor test bay 120 kVA

The Elabo motor test bay contains the ideal test room equipment for electrical engineer operations and industrial electrical workshops. The device concept has been developed following decades of practical testing experience, and enables the professional electrician to carry out continuously changing testing tasks safely and carefully. Together with the 3-phase variable transformer and the additional modular equipment, it is possible to perform every conceivable test – and reliable diagnostics – on almost any load.



An Elabo motor test bay is comprised of:

- desktop rack with high-current and insert component
- 3-phase transformer assembly
- inserts of the 6HU system
- worktable with floor cabinet.

A number of different versions are available for the worktable and the floor cabinet (see laboratory catalogue).



The corpus of the desktop rack housing is made of 19mm laminated board and coated on both sides with a layer of basalt grey melamine resin. Removable rear wall made of 2mm aluminium plating, corpus colour powder-coated. Mains connection and connection for the variable transformer to the labelled serial terminal board at the installation site.

High-current component:

The high-current component contains all of the control and fuse elements required for operation as well as all of the contact combinations required for the selectable current and voltage ranges. The large analogue current meters installed are equipped with linear scales. Overlapping measurement ranges enable optimum resolution. All of the important mains parameters can be measured in parallel fashion with the 3-way digital-display mains analyser.

Additional meter and testing equipment:

Depending on the application, a wide variety of meters and testing equipment can also be integrated in the setup, e.g. various high-voltage testing equipment.

Versatile utilisation:

The combination made up of high-current component, 3-phase transformer-assembly and the modular insert panel enables a variety of testing on motors, transformers and on the loads of smaller and larger power:

- Testing electrical machines of every type
- Stator and rotor testing also uninstalled
- Heating up coils for either drying or waterproofing
- Troubleshooting with short-circuited coils
- Current and voltage supply system for 1-phase, 3-phase and DC devices
- Performance of safety checks on electrical components of every type in accordance with existing DIN standards.

High-current component motor test bay



Technical data:

Mains connection:	3 / N / PE ~ 50Hz 400V on labelled terminal board	- reactive power measurement (VAR cap, VAR ind)
Main switch:	key-operated switch, can be used simultaneously as an emergency-off switch	- apparent power measurement (VA)
Main fuse:	motor circuit breaker with undervoltage actuation; continuously adjustable thermal actuation response from 160...200A	- power factor measurement (cos phi)
Control circuit:	all current ranges are secured with 3-pin thermal-magnetic circuit breakers	- frequency (Hz)
Assembly:	3 moving coil ammeters (144 x 144mm) embedded with linear scale, two ranges and meter rectifier	programmable using keys on the front plate on the device
Current ranges:	1.5A, 5A, 15A, 50A, 100A	Drawings:
Voltage ranges:	I 3 / N / PE ~ 50Hz / 0...230V II 3 / N / PE ~ 50Hz / 0...450V III 3 / N / PE ~ 50Hz / 0...690V individual load capacity up to 100A, for short periods up to 150A	1 Schuko socket
Multifunction display:	microprocessor-controlled network analyser with 3 independent green displays, digit height 16 mm Up to 30 parameters are to be assigned according to preference, e.g.: - simultaneous measurement of the voltages of all of the phases - simultaneous display of all of the currents of all of the phases - measurement of the neutral conductor current - active power measurement (W), including with asymmetrical load	1 CEE socket, 3-pin, 16A, blue 3 CEE sockets, 5-pin, 16A, 32A, 63A, red 8 high-current butterfly clamp, aligned like a terminal board 1 delta-wye switch
		DC-supply:
		I 0...approx. 150V II 0...approx. 300V III 0...approx. 450V ripple of the direct current 18%
		DC voltage display:
		moving coil voltmeter 144 x 144mm with 100V double scale, can be switched to 500V
		DC current display:
		moving coil voltmeter 144 x 144mm with 10A double scale, can be switched to 100A
		Fuse:
		SILIZED fuse

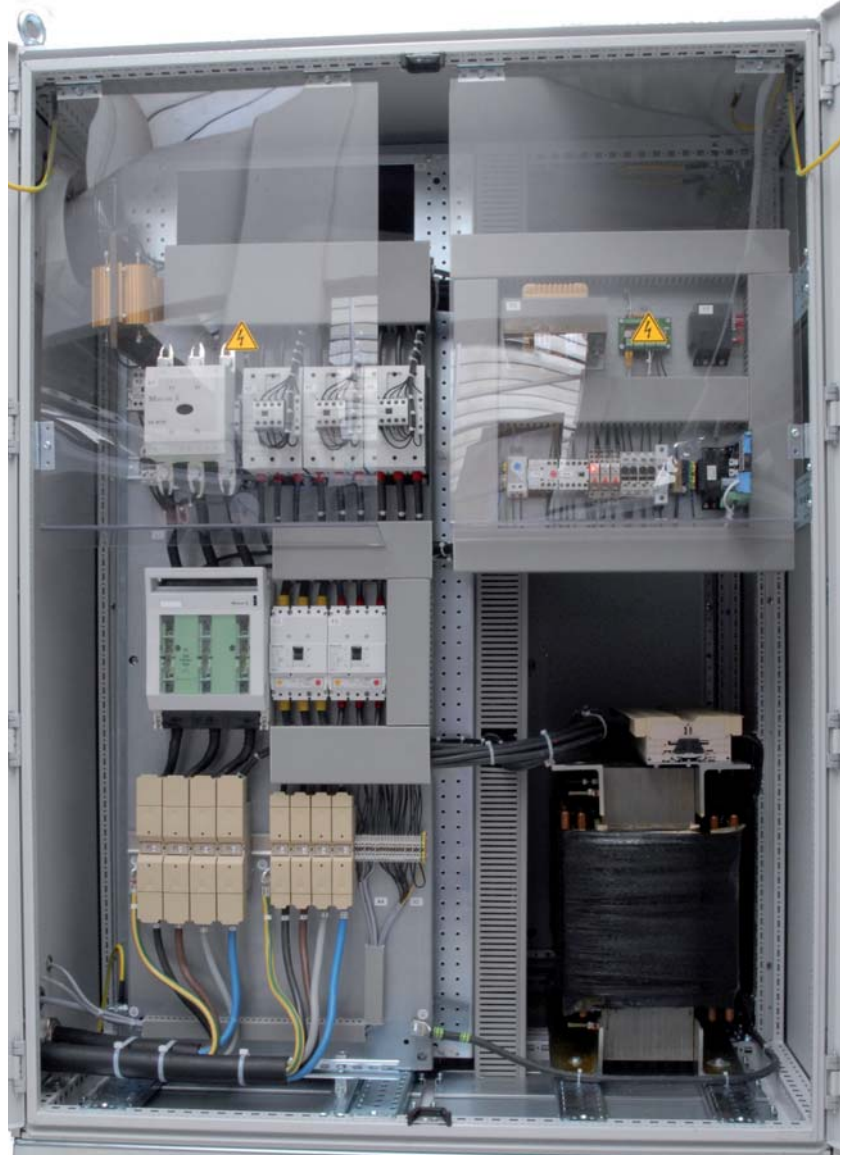
Order no. 36-3A Z802

Motor test bay transformer assembly, 3-phase

3-phase transformer assembly with separated coils for heavy-duty operation pursuant to VDE 0552, § 5.

The transformer is to be setup separately from the test station and to be connected with flexible cable. Connection with serial terminal board at the test room

The assembly is tailored to each respective project.



Technical data:

Rated output:	120kVA	Cooling:	AN (natural air cooling)
Mains input voltage:	3 / N / PE 400V AC / 50Hz	Housing:	steel plate housing
Mains output voltages:	I 3 ~ 0...133 / 230V II 3 ~ 0...260 / 450V III 3 ~ 0...400 / 690V	Protection Class:	IP 20
Current drop:	maximum 100A in each voltage range, for short periods 150A; uniform low transition resistances caused by hard silver plating of the bank contacts and bus bars	Motor drive:	24V DC with power supply unit, step controller with nominal value setting by means of ten turn potentiometer at the test station
		Transformer actuating time:	approx. 10...80s, continuously adjustable
		Weight:	approx. 1200kg
		Ambient temperature:	40°C
		Dimensions:	W approx. 1200mm, D approx. 1000mm, H approx. 1800mm

Order no. 36-2P