

POB series

Coil Tester & Power Supply Units

- Lightweight - only 10,60 kg
- Powerful – up to 40 A
- Voltage 10 V to 300 V DC
- Voltage 10 V to 250 V AC
- Minimum Trip Voltage test
- Output protection
- Fully automatic operation



Powerful DC and AC power supply for a circuit breaker test

The Coil Tester & Power Supply POB series is a powerful tool for testing circuit breakers, where the substation battery is not connected or available. It operates the circuit breaker coils and spring charging motors as a part of commissioning and maintenance testing.

The POB series generates true DC (ripple free) or AC voltage and can also be used to test a minimum trip voltage of the circuit breaker coils. The output voltage is selectable from 10 V to 300 V DC or from 10 V to 250 V AC.

POB device series are powerful and a versatile units which, at 230 V mains supply, are capable of generating on its Motor output the initial current of 40 A as well as the continuous DC currents as presented in Duty cycle table below.

The set is equipped with thermal and over-current protection. The POB series is easy to use and has the accessory cable-set with touch-proof contacts. Thanks to a proprietary hardware and software solution, it is capable of canceling electrostatic and electromagnetic interference in HV electric fields.

Motor Output DC											
Model	Mains Voltage	Load Voltage	Max Current	Max load interval	Model	Mains Voltage	Load Voltage	Max Current	Max load interval		
POB30D & POB30AD	230 V	110 V DC	24 A 20 A 10 A	20 sec 60 sec contin.	POB40D & POB40AD	230 V	110 V DC	30 A 24 A 12 A	20 sec 60 sec contin.		
		220 V DC	12 A 10 A 7 A	20 sec 60 sec contin.			220 V DC	15 A 12 A 8 A	20 sec 60 sec contin.		
		110 V AC	10 A 5 A	1 sec contin.			110 V AC	15 A 10 A	10 sec contin.		
		220 V AC	10 A 5 A	1 sec contin.			220 V AC	12 A 6 A	10 sec contin.		
	120 V	48 V DC	24 A 20 A 10 A	20 sec 60 sec contin.		120 V	48 V DC	30 A 24 A 12 A	20 sec 60 sec contin.		
		110 V DC	12 A 10 A 7 A	20 sec 60 sec contin.			110 V DC	15 A 12 A 8 A	20 sec 60 sec contin.		
		125 V DC	10,6 A 8,9 A 3,5 A	20 sec 60 sec contin.			115 V DC	13,2 A 10,5 A 7 A	20 sec 60 sec contin.		
		220 V DC	7 A 6 A 5 A	20 sec 60 sec contin.			220 V DC	8 A 6 A 5 A	20 sec 60 sec contin.		
		110 V AC	10 A 5 A	1 sec contin.			110 V AC	12 A 8 A	10 sec contin.		
		220 V AC	10 A 5 A	1 sec contin.			220 V AC	8 A 5 A	10 sec contin.		
	Coil Outputs DC										
	POB30D & POB30AD	230 V	0-300 V DC	6 A		contin.	POB40D & POB40AD	230 V	0-300 V DC	7,5 A	contin.
	Coil Outputs AC										
	POB30AD	230 V	0-250 V AC	6 A		contin.	POB40AD	230 V	0-250 V AC	15 A	contin.
Duty cycles POB device series											

Application

The POB series is used in switchyards, power and industrial environment, in manufacturing, in commissioning and as well in maintenance of the circuit breakers for:

- operating circuit breakers
- supplying spring-charging motors
- power supply at test with breaker analyzers
- minimum trip voltage-test of the circuit breaker's coils

The POB series has a built-in capability to perform automatic test of minimum trip voltage. The minimum trip voltage test is described in a number of international and national standards such as IEC 62271-100, ANSI C37.09 etc. Performing tests and acquiring of many other important parameters are possible with circuit breaker analyzers.

The POB series is then used as a power supply unit. It is compatible with breaker analyzers from different vendors. The POB series can also be used as a general power supply unit or temporary battery charger.

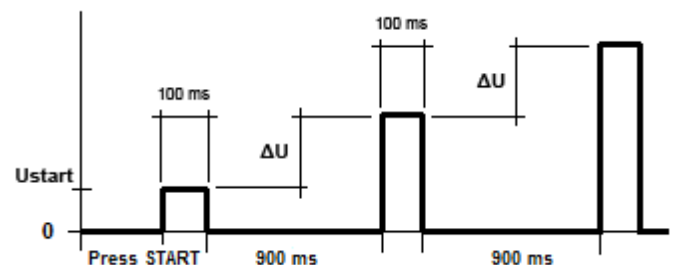
Automatic testing of the Minimum Trip Voltage of a breaker

Procedure steps:

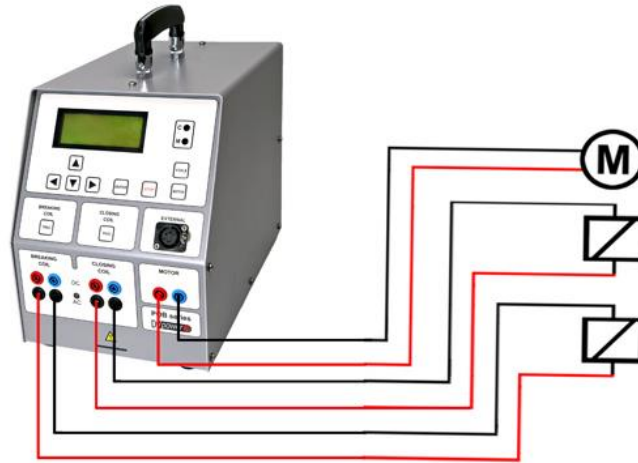
1. The circuit breaker mains terminals have to be de-energized and safety grounded on both sides and the auxiliary (control) circuit as well. The local safety regulations should be followed.
2. Connect the Power supply unit POB series to the breaker's coil circuit.
3. Set the minimum test voltage.
4. Set the step voltage.
5. Set the maximum voltage.
6. Press the TRIG key



Figure 1. Setting up MTV test



Connecting the POB series to a test object



Technical Data

Mains Power Supply

- Connection according to IEC/EN60320-1; UL498, CSA 22.2
- Voltage 90 V – 264 V AC, 50/60 Hz, Single phase
- Power consumption 4000 VA

Output data

- Coils output DC Voltage 10 V to 300 V DC (varies for different device models)
- Coils output AC Voltage 10 V to 250 V AC (varies for different device models); 50/60 Hz; true RMS
- Motor output DC Voltage 10 V to 250 V DC
- Output current max 40 A (varies for different device models)

Measurement

- Voltage 10 V – 300 V DC or 10 V – 250 V AC
- Current 1 A – 50 A
- Accuracy $\pm (0,25\% \text{ rdg} + 0,25\% \text{ FS})$

Environment conditions

- Operating temperature -10°C
- $+55^{\circ}\text{C} / 14 \text{ F} - 131 \text{ F}$
- Storage and transportation $-40^{\circ}\text{C} - +70^{\circ}\text{C} /$
 $-40 \text{ F} - 158 \text{ F}$

- Humidity

Maximum relative humidity 95%, non-condensing

Dimensions and Weight

- Dimensions (W x H x D) without handle
205 mm x 287 mm x 410 mm
8,1 in x 11,3 in x 16,14 in
- Weight 10,60 kg / 23.37 lbs

Mechanical protection

- IP 43

Warranty

- Three years

Safety Standards

- Low Voltage Directive:
- Directive 2014/35/EU (CE conform).
- Applicable standards, for a class I instrument, pollution degree 2,
- Installation category II: IEC EN 61010-1

All specifications herein are valid at ambient temperature of $+25^{\circ}\text{C}$ and recommended accessories. Specifications are subject to change without notice.

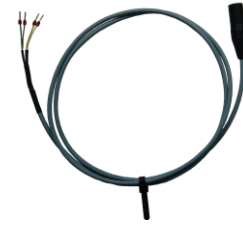
Accessories



Transport case



Cable set



External Trigger cable

POB series – models

POB30AD



Generates 10 V to 300 V DC and 10 V to 250 V AC on coils outputs.
 Motor output range selectable from 10 V to 250 V DC.
 Max output current 30 A.

POB30D




Generates 10 V to 300 V DC on coils outputs.
 Motor output range selectable from 10 V to 250 V DC.
 Max output current 30 A.
 No AC voltage available.
 No external trigger connector available.

POB40ADL




Generates 1 V to 50 V DC and 1 V to 40 V AC on coils outputs.
 Motor output range selectable from 1 V to 50 V DC.
 Max output current 40 A.


POB40D

 <p>The image shows the POB40D Power Box, a grey rectangular device with a digital display at the top. Below the display are several control buttons and indicators. The front panel features three main output sections: 'BREAKING COIL', 'CLOSING COIL', and 'MOTOR'. Each section has two terminals (red and blue) and a yellow warning triangle. The device is labeled 'DVPower Power Box'.</p>	<p>Generates 10 V to 300 V DC on coils outputs.</p> <p>Motor output range selectable from 10 V to 250 V DC.</p> <p>Max output current 40 A.</p> <p>No AC voltage available.</p> <p>No external trigger connector available.</p>
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POB40DL

 <p>The image shows the POB40DL Power Box, which is similar in design to the POB40D. It has a digital display, control buttons, and three output sections: 'BREAKING COIL', 'CLOSING COIL', and 'MOTOR'. Each section has two terminals and a warning triangle. The device is labeled 'DVPower Power Box'.</p>	<p>Generates 1 V to 50 V DC on coils outputs.</p> <p>Motor output range selectable from 1 V to 50 V DC.</p> <p>Max output current 40 A.</p>
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POB40AD

 <p>The image shows the POB40AD Power Box, which includes an AC output section. It has a digital display, control buttons, and three output sections: 'BREAKING COIL', 'CLOSING COIL', and 'MOTOR'. The 'BREAKING COIL' section has two terminals (red and blue) and a warning triangle. The 'CLOSING COIL' section has two terminals (red and blue) and a warning triangle. The 'MOTOR' section has two terminals (red and blue) and a warning triangle. The device is labeled 'DVPower Power Box'.</p>	<p>Generates 10 V to 300 V DC and 10 V to 250 V AC on coils outputs.</p> <p>Motor output range selectable from 10 V to 250 V DC.</p> <p>Max output current 40 A.</p>
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Order info:

Instrument	Art.No.
Coil Tester & Power Supply POB40AD	POB40AD-N-00
Coil Tester & Power Supply POB30AD	POB30AD-N-00
Coil Tester & Power Supply POB30D	POB30AC-N-00
Coil Tester & Power Supply POB40ADL	POB40AD-N-01
Coil Tester & Power Supply POB40D	POB40AC-N-00
Coil Tester & Power Supply POB40DL	POB40AC-N-01

Included accessories
Ground cable
Power supply cable

Recommended accessories	Art.No.
Cable set 6 x 2 m 2,5 mm ²	C6-02-02BPBP
Transport case	HARD-CASE-ME

Optional Accessories	Art.No.
Cable set 6 x 5 m 2,5 mm ²	C6-05-02BPBP
Device bag	DEVIC-BAG-00
Cable bag	CABLE-BAG-00
External Trigger cable set 2 m	TC-02-04MCBP
Coil supply cable set 2 x 2 m 2,5 mm ² with banana plugs	C2-02-02BPBP