SUNBELT RENTALS

Datasheet

0370 330 6021
www.sunbeltrentals.co.uk

B10E
AC/DC Voltage Power Supply

- **Reliable and stable power supply for circuit breaker testing**
- **Continuously variable 24-250 V AC or DC output**
- **Separate outputs for close coil, trip coil and spring charging motor voltage**
- **Direct triggering for minimum trip voltage testing**
- **Operate with a breaker analyzer for efficiency in testing sequence**

DESCRIPTION

A variable DC voltage is needed to test a circuit breaker. Substation batteries should not be used since this entails considerable risk for testing personnel, testing equipment and also for the equipment being tested. The best way to ascertain whether or not solenoids and protective mechanisms are sluggish or working properly is to perform a test at minimum tripping voltage. The minimum trip voltage test is described in international and national standards such as IEC 62271-100, ANSI C37.09 etc.

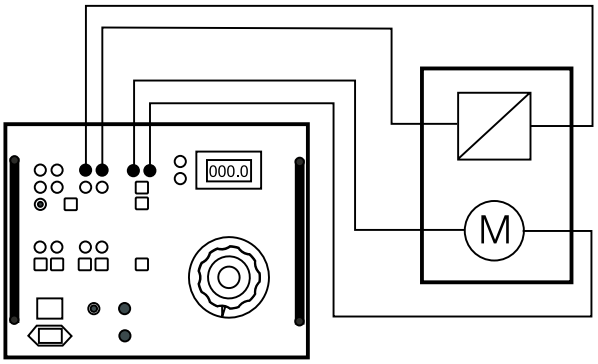
B10E can be used to test breaker coils in this manner. It provides a ripple-free variable DC voltage that can easily accommodate a high, variable load.

Since there is a separate output for supplying spring-charging motors, the B10E is ideal for testing circuit breakers where auxiliary voltage is not connected or available.

The compact Power Supply Unit B10E provides reliable assistance to those who do maintenance on high-voltage breakers. The control panel's intuitive layout makes it easy to operate, and the built-in thermal cutout and overload protector make it safe to use. The B10E has been developed in collaboration with breaker manufacturers and testing personnel.

APPLICATION

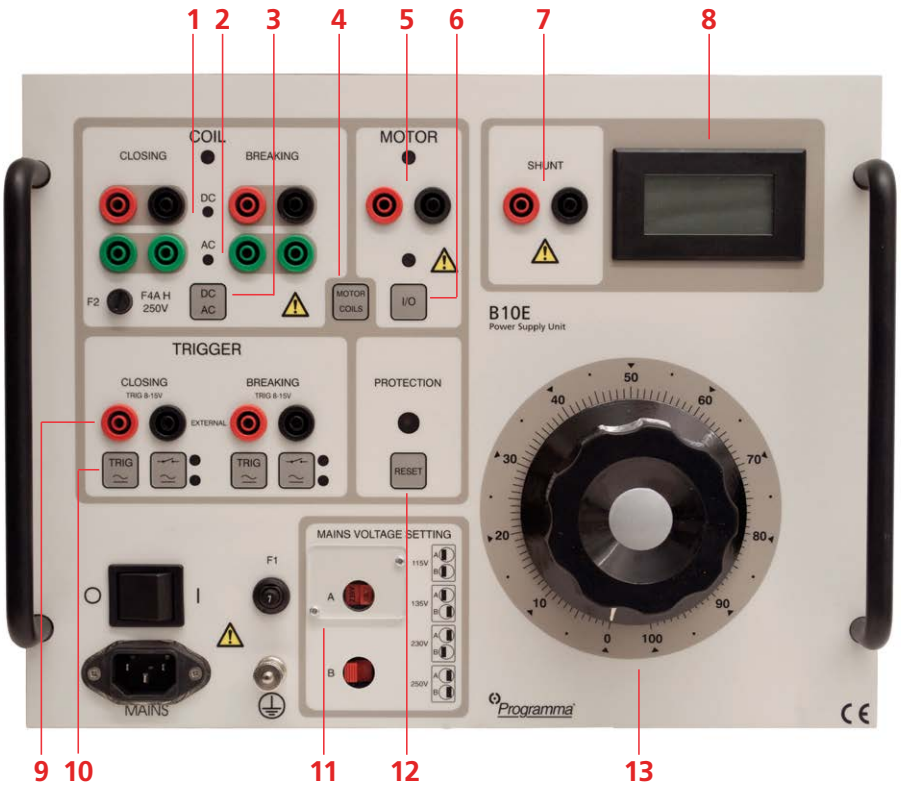
The B10E is a portable self contained test set designed specifically for use in substations and industrial locations. The B10E is intended for testing medium and high-voltage power circuit breakers. Using the latest technology the B10E uses a ripple free variable DC voltage to operate breaker coils, and charging motors to ascertain the condition of these devices with respect to the manufacturer's original specifications.



Testing the minimum trip voltage of a breaker.

FEATURES AND BENEFITS

1. Output for DC voltage supplied to closing/breaking coil
2. Output for AC voltage supplied to closing/breaking coil
3. Changeover switch used to select either DC or AC coil outputs
4. Changeover switch used to select either coil outputs or spring-charging motor outputs
5. DC voltage outputs for spring-charging motor. Provide un-smoothed, half-wave rectified DC ranging up to 18 A
6. Button for turning on spring-charging motor voltage
7. Current shunt used to measure external current in coils or spring-charging motor
8. Digital voltage readout display for voltage selection
9. Inputs for external trig signal or short-circuiting jumper
10. Buttons (2+2):
    - For manual trigging pulse via coil outputs.
    - Changeover switches used to select either contact sensing or voltage sensing at the trig input
11. Changeover switches (A) and (B) for incoming power 115/230/135/250 V AC
12. Reset button for thermal, overload and/or time-limit cut-outs
13. Variable transformer



SPECIFICATIONS B10E

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

Environment

Application field	The instrument is intended for use in medium and high-voltage substations and industrial environments.
Temperature	
Operating	0°C to +50°C (32°F to +122°F)
Storage & transport	-40°C to +70°C (-40°F to +158°F)
Humidity	5% – 95% RH, non-condensing

CE-marking

EMC	2004/108/EC
LVD	2006/95/EC

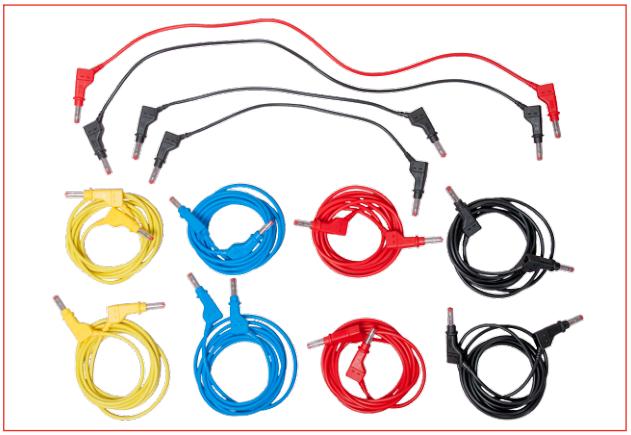
General

Mains voltage	115/230 (135/250) V AC, 50/60 Hz
Power consumption (max)	3300 W
Protection	Thermal cut-outs, +80°C (+176°F) Short-circuit protectors at DC outputs
Dimensions	
Instrument	*350 x 270 x 220 mm (13.8" x 10.6" x 8.7")*
Transport case	610 x 290 x 360 mm (24.0" x 11.4" x 14.2")
Weight	20.8 kg (45.8 lbs) 29.3 kg (64.6 lbs) with accessories and transport case
Test lead set, with 4 mm stackable safety plugs	2 x 0.25 m (0.8 ft), 2.5 mm² 2 x 0.5 m (1.6 ft), 2.5 mm² 8 x 2 m (6.6 ft), 2.5 mm²
Display	LCD

Measurement section

Voltmeter – digital

Range	0 – 300 V DC, 0 – 300 V AC
Resolution	1 V
Inaccuracy	±1% of displayed value, DC ±2.5% of displayed value, AC
Current shunt	5 A/50 mV ±0.5% (built-in)



Cable set GA-00032

Outputs (DC), CATII
COIL, CLOSING/BREAKING

Output voltage	24-300 V DC
Load interval	Max 1 s (at currents over 50 mA)
Ripple	2% peak-to-peak of the preset voltage

No-load voltage (V)	Current (A)	Load dependency
24	10	< 6 %
48	10	< 3 %
110	7.9	< 2 %
250	3	< 2 %
300	1.25	< 2 %

Outputs (AC), CATII
COIL, CLOSING/BREAKING

Output voltage	24-300 V AC
Load current	Max 5 A
Load interval	Max 30 min

Output DC, CATII
MOTOR

Output voltage	24-300 V DC (loaded)

Open circuit voltage (V)	Current (A)	Load voltage (V)	Max load interval (s)
44	18	24	20
48	12	40	60
48	18	30	20
120	12	90	60
120	18	70	20
240	6	200	60
240	9	185	20

Max voltage: Terminals to protective earth (ground)

Terminal	Voltage
Coil closing, AC & DC	300 V AC
Coil breaking, AC & DC	300 V AC
Motor	250 V AC
Shunt	250 V AC
Trigger closing	250 V AC
Trigger breaking	250 V AC

ORDERING INFORMATION

Item	Art. No.
B10E	
Included accessories:	
Cable set GA-00032	
Transport case GD-00182	BG-29092

Postal address
Megger Sweden AB
Box 724
SE-182 17 Danderyd
SWEDEN

T. 08 510 195 00
E. seinfo@megger.com

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LOCATIONS

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