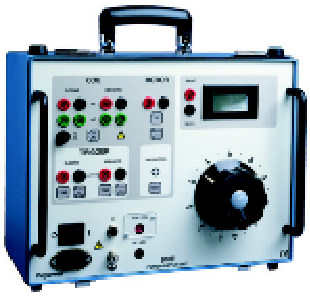


B10E™

Power Supply Unit

Programma® Products

B10E™

Power Supply Unit

A variable DC voltage is usually 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 set improperly is to perform a test at minimum tripping 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.

B10E™ can be used to test breaker coils in this manner. It provides a ripple-free variable DC voltage that can easily accomodate 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 (industrial-truck circuit breakers for example).

The Programma 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 example

IMPORTANT!

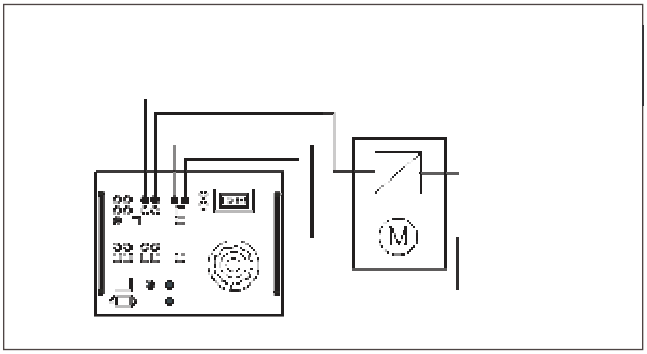
Read the User's manual before using the instrument.

Testing the minimum trip voltage of a breaker

1. Connect Power Supply Unit B10E to the breaker's opening circuit and to the spring-charging motor.
2. Set the desired test voltage using the variac.
3. Activate the trip pulse switch.
4. Repeat steps 2-3 at a higher voltage if the circuit breaker does not trip.

When using the B10E, we recommend that the incoming power be protected by a 16 A wall-socket fuse. The incoming current surge occurring at certain combinations can blow the fuse if a slow-blow 10 A fuse or a quick-action 16 A fuse is used.

To minimize blowing of the wall-socket fuse, the B10E Softstart is equipped with a device that reduces the peak current surges that can blow this fuse. The B10E Softstart will substantially reduce – but will not fully eliminate – the blowing of 10 A fuses.



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 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 89/336/EEC	EMC Directive 89/336/EEC am. by 91/263/EEC, 92/31/EEC and 93/68/EEC
LVD	Low Voltage Directive 73/23/ EEC am. by 93/68/EEC
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	0.1 V
Inaccuracy	±1% of displayed value, DC ±2.5% of displayed value, AC
Current shunt	5 A/50 mV ±0.5% (built-in)
Outputs for trip coils, DC outputs	
Output voltage	24-250 V DC
Load interval	Max 1 s
Ripple	2% peak-to-peak of the preset voltage

No-load voltage (V)	*Current (A)*	*Load dependency*
24	10	< 6 %
48	10	< 3 %
110	6.5	< 2 %
250	3	< 2 %

Outputs for trip coils, AC outputs

Output voltage	24-250 V AC
Load current	Max 5 A
Load interval	Max 30 min

Outputs for spring-charging motor, DC outputs

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

Ordering information

B10E	**Art.No.**
Complete with:	
Cable set GA-00032	
Transport case GD-00182	**BG-29092**

Test lead set GA-00032.

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