



DC CIRCUIT BREAKER TEST DEVICE

CITY ELECTRIC TRANSPORT ■
RAILWAYS ■ METRO

PURPOSE



1000 - 5000 A

Circuit Breaker Test Device (CBTD) is an advanced device for precise, fast and safe testing of high-speed DC circuit breakers applied in traction substations of urban electric transport, metro and railways. It is featured by high reliability of circuit solutions as well as compactness.

CBTD is designed to convert three-phase AC voltage into low-voltage pulse voltage in order to generate rising unipolar current pulse in the circuit breaker main circuit. CBTD can generate up to 5000 A current and record maximum current value at the moment of circuit breaker tripping.

CBTD is designed, manufactured and tested in accordance with the requirements of DSTU IEC 60529:2019, DSTU EN 60664-1:2015, DSTU EN 50110-1:2019.

Special attention was paid to weight and dimensions during the device designing. It helped to develop an ergonomic and compact design that can be used in limited space.

BENEFITS

- / versatility and possibility to operate with different types of circuit breakers;
- / robust housing that guarantees safety of operating personnel;
- / modern component base;
- / various test modes;
- / easy setup and connection;
- / protection against overheating;
- / lightweight and mobile design for easy use in places that were previously inaccessible for test equipment;
- / due to low weight and dimensions, the device is easily transported from one substation to another;
- / replaces large and bulky complex of electrical test equipment and has a compact design allowing it to occupy minimal space at the substation.

TECHNICAL SPECIFICATIONS

Rated technical parameters and specifications of CBTD

Parameter name	Unit	Value
Rated AC supply voltage	V	3x230 3x400*
Deviation of AC supply voltage from rated value	A	0,9...1,1
Rated frequency of AC supply voltage	Hz	50
Maximum voltage at output busbars, without cables connected	V	16
Maximum output current (RMS), not less	A	5000
Dependence of current rise on time	-	linear
Duration of output current generation, not less - static mode - dynamic mode	s	10 0,5
Time interval between checks, not less	s	15
Output current ripple, not more	%	4,2
Error of tripping current value fixing in the range (1000...5000) A	%	±2,5
Number of digits to be indicated: - actual value of tripping current - previous value of tripping current	-	4 4
AC insulation test voltage (50 Hz, 60 s) "power supply network/output busbars" "power supply network/enclosure"	kV	2,0
Protection level according to DSTU IEC 60529:2019	-	IP30
Cooling	-	forced
Operating temperature range	°C	1,0...35
Overall dimensions (WxHxD)	mm	420x905x445
Weight (without cables)	kg	63

* to be specified when ordering

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