

Supports to perform test safely and efficiently

Circuit Breaker & Disconnecting Switch Tester

TA-300A

A dedicated tester integrating the operation log for contacts, the current waveform records and the variable power supply



- **High brightness LCD for outdoors' use and simple operations by a touch panel.**
- **Built-in induction voltage elimination circuit.**
- **Able to measure the pre-closing time of the ohmic contact.**
- **Automatic pumping prevention check.**
- **Able to perform the open-phase test.**
- **All test results can be displayed on a screen.**



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■ Features

- **Safe and efficient open/close characteristics test of newly installed CB/DS and their periodic inspection.**

Contact operation of CB/DS and their operation time are recorded.
 Moreover, the current waveform and current value of the operation coil are recorded.
 Supports a test at an ultra-high voltage substation by countermeasures for induction voltage.
 Able to measure the pre-closing time of the ohmic contact.
 Supports automatic pumping prevention check when a free trip free operation test is done.
 Able to perform the open-phase test.

- **User friendly human machine interface by the touch panel display and the operation command.**

For the device screen, high brightness color display is used, not just the test result (Numerical value record and waveform record), as well as the test conditions and all other settings can be performed on the touch panel of liquid crystal display.
 You can start or stop testing by pressing the dedicated buttons.

- **You can check the test results quickly by on the screen and the printer.**

Test result (Numerical value record and Waveform record) can be displayed immediately. In addition, if the exclusive printer (separated sold) is connected, the test result can be printed out. The operation characteristics of CB and DS can be checked easily.
 It is possible to re-display and re-print.

- **By using the numerical value/waveform download-function, you can download the data to PC, and process it easily.**

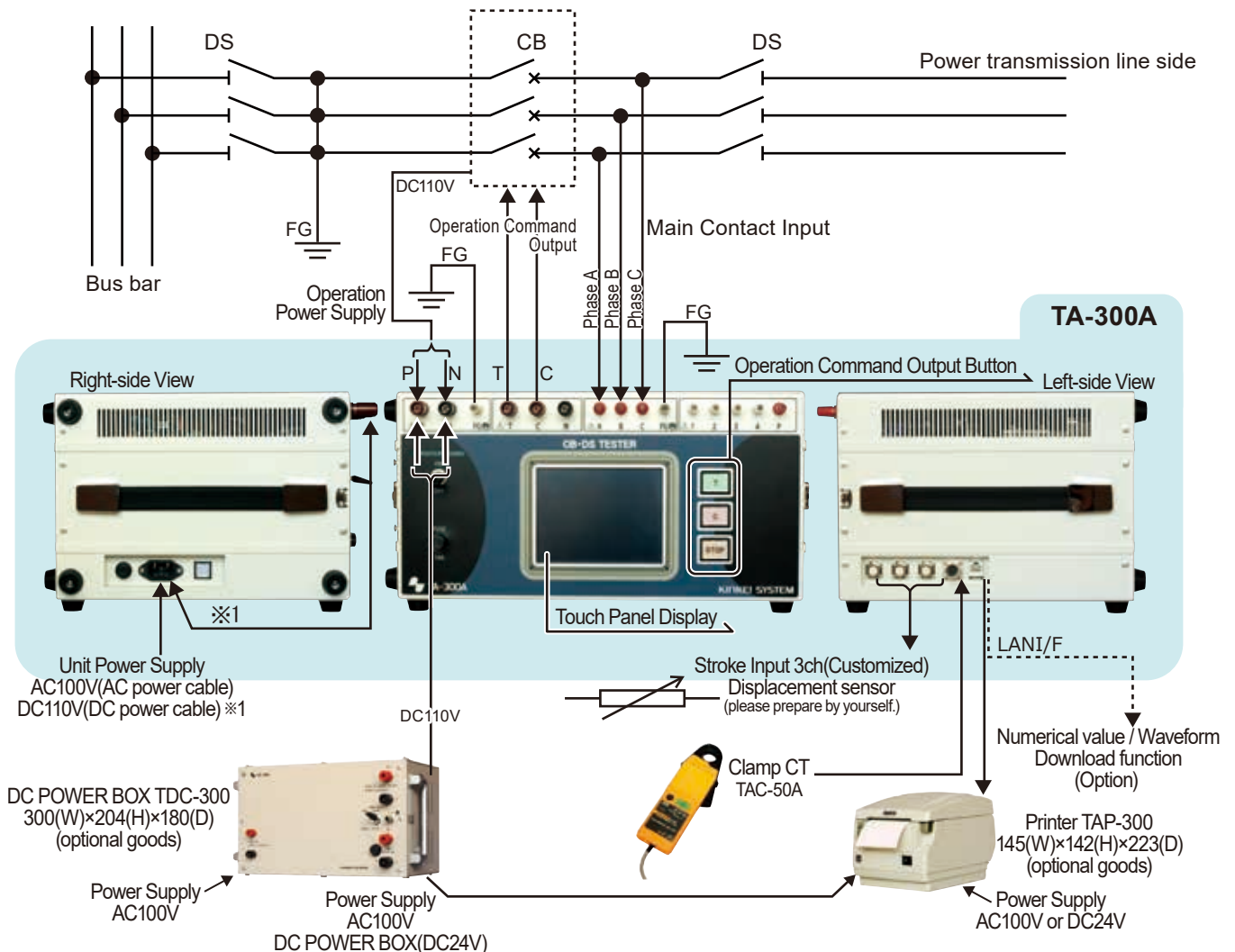
By using the numerical value/waveform download-function, once you connect that with PC, the test result of numerical value record can be saved in the CSV format; waveform record can be indicated in the bit map image, they all can be downloaded. The downloaded data can be printed in the general printer or can be used to written report.
 You can download the numerical value and the waveform data to your PC.
 The downloaded data can be printed in the general printer or can be used to create a report.

- **Clamp CT makes it easy to measure the drive current and the spring charge motor current.**

By using the clamp CT, the drive current driving measurement is available.
 The motor current measurement of CB is also available.

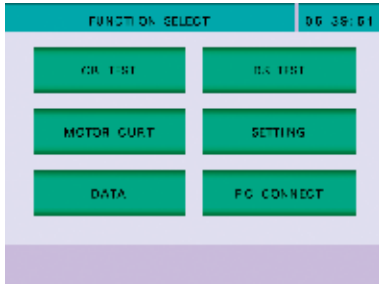
- **Compatible with stroke input function.(Customized)**

■ Testing System Diagram



Examples of Screens

Function Selection



Each function can be selected.

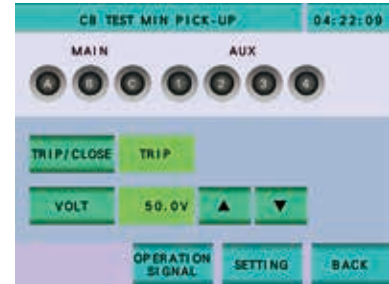
Test Start (CB Trip)



Press the Operation Command Output Button [T] to carry out the test.

Contact closing in red.

Minimum Operation Voltage Test



Setting interval of operation command voltage is 0.5V.

Numerical Value (Test result of main contacts)



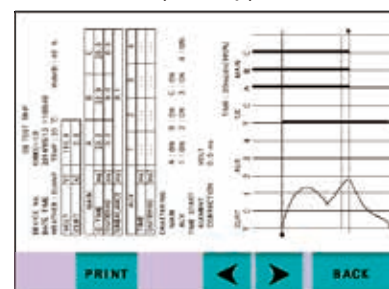
After the test finishes, the test result of main contacts will be automatically indicated in the pop-up screen.

Numerical Value (CB trip)



Detailed results of the measurements except for main contacts are also available. (Detailed results)

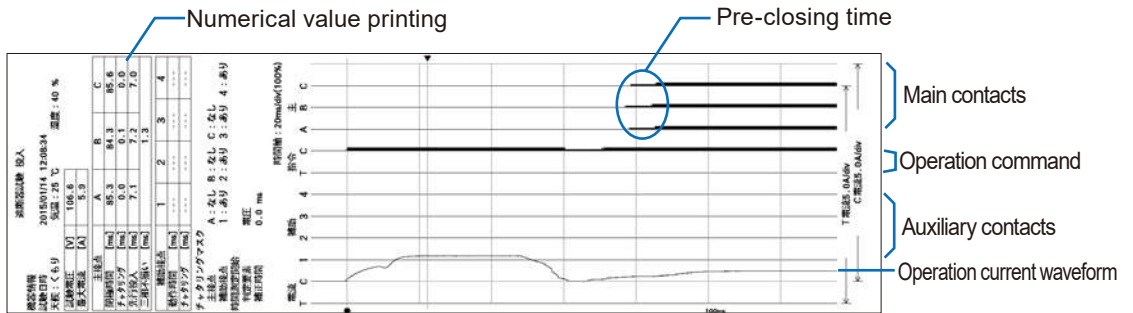
Waveform (CB trip)



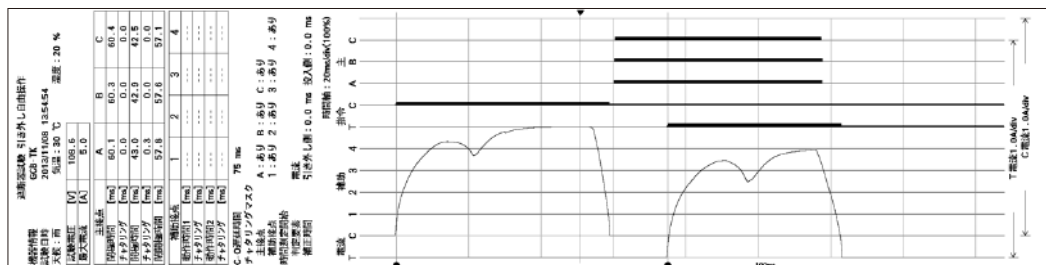
Displaying whole waveform by changing the time axis scale. Display rotation is available.

Print sample

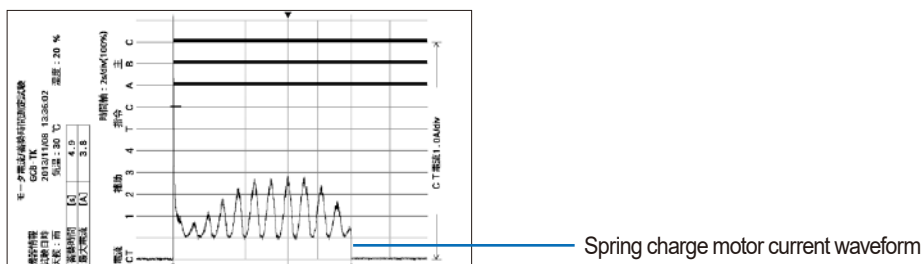
CB Test Close



CB Test Trip-free operation



Motor current/Spring charge time measurement test



■Specifications

Test Types	CB Test	DS Test	Motor Current Test
Contents of Test	Operation time / Minimum operation voltage / Trip-free operation Pumping prevention check / High-speed reclosing / Open-Phase Manual operation time	Operation time Manual operation time	Spring charge motor current Spring charge time measurement

Specification of Input/Output and Measuring Accuracy

Operation Command Output	Number of Circuits : 2 circuits of T (Tripping) and C (Closing) Output Time : CB Test 0.1~1.0s (0.1s step), DS Test 1~10s (1s step) Operation Voltage Output : Output by the operation power input as-is (maximum load: 50A) Variable Voltage Output : Range of Output DC10 ~ 100V (0.5V step) (Maximum Load: 10A)		
Main Contact Inputs	Number of Circuits 3 (Phase A, Phase B, Phase C) No-voltage Contacts Input (DC24V output from the main body, (Energization Current is 30mA or lower)		
Auxiliary Contact Inputs	Number of Circuits 4 No-voltage Input / Voltage Input, DC110V voltage Circuit (Energization Current : 10mA or lower)		
Operation Command Current Measurement	10A Range		50A Range
	Measurement Method Measurement Range Measuring Accuracy	Terminal Current Measurement DC0A~10A In the range of 0.2~10A, ±(Each range1%+0.1A)	Clamp Current Measurement DC0A~10A In the range of 0.7~10A, ±(Each range1%+0.6A)
Measurement of the Contact Operation Time	CB Test	Resolution 0.1ms, Measurement Range 0.0~999.9ms Main Contacts Closing : Operation Time / Preceding Input ±0.2ms, Closing Time/Reclosing Time ±0.2ms Main Contacts Tripping (Setting of Induction Removal Capacitor: N/A) : Operation Time ±0.2ms, Opening Time/ Closing-Opening Time ±0.2ms Main Contacts Tripping (Setting of Induction Removal Capacitor: Yes) : Operation Time ±1ms, Opening Time/ Closing — Opening Time ±1ms Auxiliary Contacts Closing : Operation Time ±0.2ms Auxiliary Contacts Tripping : Operation Time ±0.2ms	
	DS Test	Resolution 1ms, Measurement Range 0~9999ms Main Contacts Closing/Tripping(Setting of Induction Removal Capacitor: Yes or N/A): Operation Time ±2ms Auxiliary Contacts Closing/Tripping: Operation Time ±2ms	
Motor Current Measurement (Option)	Measuring Time	Maximum 70s (Stop automatically stop after deterring measurement is completed)	

Hardware Specifications

Indicator	6.5 inch Color LCD (640 x 480, VGA)		
Internal Clock	Accuracy : at power-on / at blackout Daily difference ±3 sec. Backup Time : 14 days (After charging 5 hours fully) Lithium 2nd Battery		
Data Storage	Up to 50 test results (numerical value, waveform) are stored in the non-volatile semiconductor memory		
LAN I/F	Physical Specification : RJ-45 Purpose : Connecting to PC or printer		
Numerical value / Waveform Download Function (Option)	Download the test results to PC. (Numerical data is in a CSV file. Waveform data is in an Image file.) Operation Environment : Contact us.		
Printer (Optional goods)	Printing method : Line thermal dot printing method Power Supply : AC100~240V, 150VA or under (with 1.5m cable)	Recording paper : 80mm x 72m Roll Paper External dimensions : 145(W) x 223(D) x 142(H)mm	Weight : about 2kg
Clamp CT (Optional goods)	Input range : DC0~50A	Cable length : 3m	
DC POWER BOX (optional goods)	Power Supply : AC85~115V, 1500VA max Output : DC100/DC110V output(±5%) DC24V output(±5%)(At DC110V power supply, only DC24V output.) External dimensions : 300(W) x 204(H) x 180(D) mm (Not including protrusions) Weight : Below 7Kg(Attached cable set with fuse)		

■General Specifications

	Specifications		
Power Supply	Rated Voltage : DC110V/AC100V Voltage tolerable range of fluctuations : DC88~143V or AC85~115V Rated power frequency : 50/60Hz (AC power) Frequency tolerable range of fluctuation : 48 ~ 62Hz (At the AC Power Supply) Power consumption : At DC110V, below 50W / At AC100V, below 70VA	Standard Accessories	Power supply fuse (1A) 2pcs Operation command output fuse (15A) 2pcs AC power cable 1pc DC power cable (0.5m) 1pc LAN cross cable (1m) 1pc 2P-3P conversion plug 1pc Instruction manual 1copy Inspection report 1copy
Operation Power Supply	Rated Voltage : DC110V Variable Range : DC88~143V When outputting the operation command from the internal power, operation power supply need to have output value + 10V (When output DC100V (MAX), operation power of DC110V is required)	Optional Functions	High-speed reclosing test Function Motor current measurement function* Manual operation time measurement function* ※ A piece of Clamp CT (TAC-50A, cable length 3m) is included Numerical value / waveform download function
Environment	Operation condition Temperature 0 ~ +40°C / Humidity 30 ~ 80% RH (Non-condensing) Storage condition Temperature -20 ~ +60°C / Humidity Below 80% RH (Non-condensing)		
External dimensions	430 (W) x 220 (H) x 361.5 (D)(mm projection is not included)		
Weight	The main body is below 12Kg(Without standard accessories)		

Optional goods Spare parts	Printer TAP-300 (AC power cable 2m, Recording paper 1 roll 72m attached) Recording paper (72m roll, 2 volumes set) DC POWER BOX TDC-300 (included cable set, with fuse) Cable set 3m (Grounding cable 2m attached) Weight about 2kg Cable set 15m (Grounding cable 15m attached, including container case) Weight about 12.5kg * Container case dimensions 620 (W) x 185 (H) x 380 (D) mm (excluding protrusions) Soft accessory storage case (Clamp CT, cable set 3m, instruction manual can be kept inside) Aluminum case for TA-300A (this device, with clamp CT) Weight About 6.8kg Aluminum case for optional goods of TA-300A Weight about 6.5kg (It can store printer, power box, clamp CT, 3m cable set)
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