

# PME-500-TR

## Circuit Breaker Analyzer



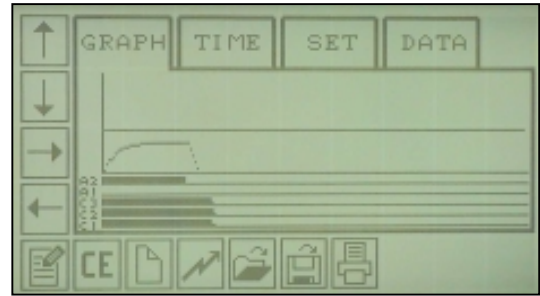
# PME-500-TR

## FEATURES

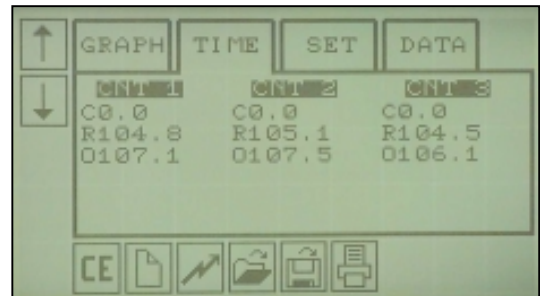
- 3 timing inputs for the three main contacts, 0.1 ms resolution.
- 2 isolated auxiliary binary inputs, with a capacity for dry contacts or voltage signals up to  $\pm 360V$  DC, 0.1 ms resolution.
- Measures and records the Coil currents simultaneously (open and closed) , with 1 ms resolution up to 50 A DC (auto range).
- Automatic measurement of the contact resistance, 0.1  $\mu\Omega$  resolution.
- Stores up to 60 test results in the memory of the equipment.
- Connection to the breaker by means of a special simplified cable connector or by 4 mm input taps.
- Built-in thermal paper printer, 110 mm.
- Autonomous power supply with internal rechargeable batteries, up to 10 hours.
- Programmable operating sequences C, O, C-O, O-C, C-O-C and O-C-O.
- Immediate graphic display of the test results.
- A large Touch Screen panel (113 x 61 mm) displays graphic images and is also the front panel control.
- Allows the setup of the test data and test configuration from the touch screen panel (it converts into a complete keyboard).
- Supplied with software to download test results to a computer.
- Reduced size and light weight (340 x 300 x 150 mm).

## APPLICATIONS

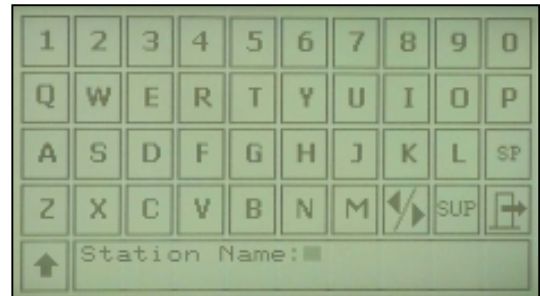
- Simultaneous measurement for the 3 main contacts (open / closed) and 2 auxiliary contacts, including pre-insertion resistors (if required).
- Evaluates the synchronism between the circuit breaker poles.
- Determines the maximum currents, opening and closing times, simultaneously in both coils.
- Evaluates the state of the substation auxiliary batteries by graphically showing the coil consumption.
- Immediately displays and prints test results, both numerically and graphically.
- Automatically calculates the contact resistance.



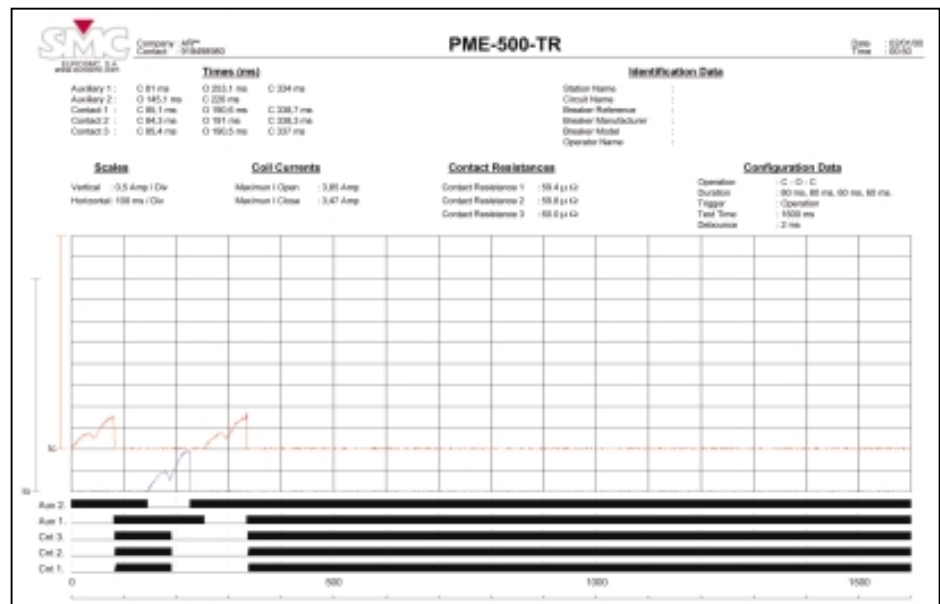
Graphic test results



Numeric test results



Display converted to keyboard



The test results can be viewed or printed from the computer.  
Test results can be personalized by adding your company logo.

## DESCRIPTION

The PME-500-TR is an extraordinary advance in the concept of circuit breaker test equipment, due to a simple and easy control method. The equipment saves testing time and improves testing productivity.

The control of the equipment is by a touch screen panel. This allows test parameters to be entered and gives a visual display of the test results in graphic and numeric format. A built-in thermal printer enables test results to be printed immediately.

The PME-500-TR can be connected to a voltage supply between 100 and 240V. The unit is also supplied with internal rechargeable batteries that have 10 hours operation time, allowing to test breakers, without the need of a voltage supply.

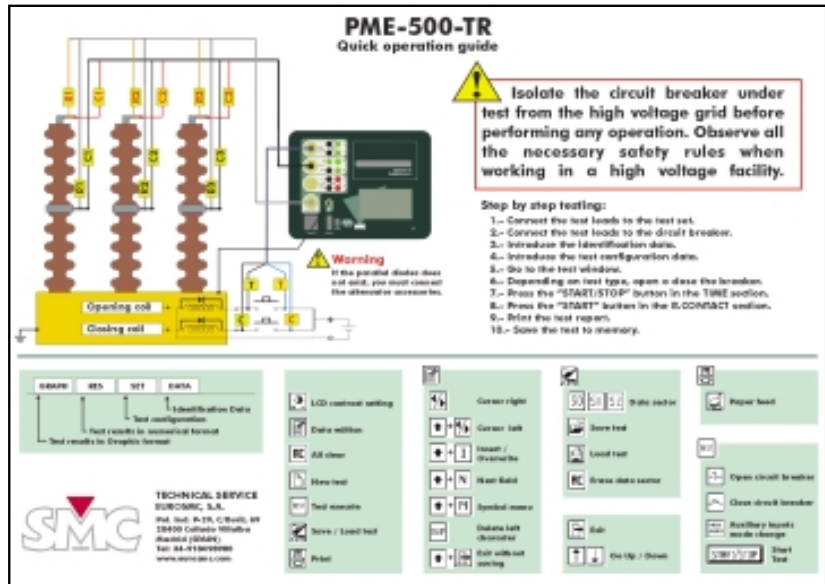
The equipment is provided with special test leads that have a multi-pole connector. It is possible to measure the contact resistance of each main pole automatically, with a test current of 10 A and a resolution of 0.1  $\mu\Omega$ .

All connection elements are located on the front panel. The test connection inputs are duplicated, as the equipment is supplied with special testing cable leads and there are also 4 mm input taps, in which any other cable can be used.

The software EuroBreaker Basic is supplied with the equipment. This software enables to download test results stored in the unit. The software also enables printing test results from the PC.

All the features contained in the equipment, such as manual control via the touch screen panel, an internal battery supply, a built-in printer and having a clear and easy to operate system, makes the PME-500-TR the most advance equipment within its category to test circuit breakers.

The unit is enclosed in an airtight waterproof case.



An easy to follow fast guide is incorporated in the lid of the front cover.



Test results from the printer incorporated in the equipment.

Equipment with the standard accessories supplied.

# TECHNICAL SPECIFICATIONS

## INPUTS

MAIN CONTACT INPUTS	
<b>NUMBER:</b>	3 inputs + common (ground)
<b>OPEN CIRCUIT VOLTAGE:</b>	10 V DC maximum
<b>TESTING CURRENT:</b>	100 mA maximum
<b>STATES:</b>	Closed (C) ( $r < 30\Omega$ ) Preinsertion (R) ( $30\Omega < r < 10k\Omega$ ) Open (O) ( $r > 10k\Omega$ )
AUXILIARY INPUTS	
<b>NUMBER:</b>	2 isolated binary inputs
<b>CONTACT MODE:</b>	Open circuit voltage: 5 V DC Testing current: 20 mA maximum
<b>VOLTAGE MODE:</b>	Range: From $\pm 1.5$ to $\pm 360$ V DC Low activation mode (Low) $\pm 1.5$ V DC High activation mode (High) $\pm 15$ V DC

## OPERATING SEQUENCES AND TIMING

AVAILABLE OPERATING SEQUENCES	
<b>CAN BE SELECTED BETWEEN</b>	Closing (C)
	Opening (O)
	Closing-Opening (C-O)
	Opening-Closing (O-C)
	Closing-Opening-Closing (C-O-C)
	Opening-Closing-Opening (O-C-O)
STARTING TIME SIGNAL	
<b>CAN BE SELECTED BETWEEN:</b>	Coil operation
	Activation or de-activation or auxiliary input 1
	Activation or de-activation or auxiliary input 2
TIMING DURATIONS	
<b>CLOSING ORDER:</b>	From 10 ms to 2000 ms (10 ms resolution)
<b>OPENING ORDER:</b>	From 10 ms to 2000 ms (10 ms resolution)
<b>INTERVAL 1:</b>	From 10 ms to 2000 ms (10 ms resolution)
<b>INTERVAL 2:</b>	From 10 ms to 2000 ms (10 ms resolution)

## GENERAL

POWER SUPPLY	
<b>VOLTAGE SUPPLY:</b>	100 to 240 V AC 50-60 Hz
<b>INTERNAL BATTERY:</b>	MiMH Type 12 V DC
<b>NORMAL OPERATING TIME:</b>	10 hours
<b>BATTERY RECHARGE TIME:</b>	4.5 hours
<b>DIMENSIONS:</b>	Height: 340 mm/Width: 300 mm/Depth: 150 mm 14" 12" 6"
<b>WEIGHT:</b>	8 kg. - 17.6 lb.
<b>WORKING TEMPERATURE:</b>	0° - 55° C
<b>STORAGE TEMPERATURE:</b>	-40° / +70° C
<b>HUMIDITY:</b>	Up to 95% (non condensing)
<b>LANGUAGES INCORPORATED:</b>	English, Spanish, French, and German (other languages upon request)

## MEASUREMENTS

TIME MEASUREMENT AND GRAPHIC REPRESENTATION	
<b>RANGES:</b>	Selectable between 100 ms, 200 ms, 400 ms, 800 ms and 2000 ms
<b>RESOLUTION:</b>	$\pm 0.1$ ms (sampling frequency of 10 kHz)
<b>ACCURACY:</b>	$\pm 0.05\%$ $\pm 0.1$ ms
<b>GRAPHIC REPRESENTATION RESOLUTION:</b>	0.8 ms per mm
CURRENT MEASUREMENT AND GRAPHIC REPRESENTATION	
<b>RANGE:</b>	0 - 50 A DC
<b>RESOLUTION:</b>	0.1 A (sampling frequency of 1 kHz)
<b>ACCURACY:</b>	1% of the range $\pm 100$ mA
<b>GRAPHIC REPRESENTATION RESOLUTION:</b>	Automatic scale up to 50 mA per mm (vertical)
CONTACT RESISTANCE MEASUREMENT	
<b>RANGES:</b>	Automatic range selection from 100.0 $\mu\Omega$ to 1.000 $\Omega$
<b>RESOLUTION:</b>	0.1 $\mu\Omega$ maximum
<b>ACCURACY:</b>	$\pm 1\%$ of the range $\pm 1$ digit
<b>TESTING CURRENT:</b>	10 A DC maximum

## TOUCH SCREEN PANEL, PRINTER AND MEMORY

GRAPHIC TOUCH SCREEN	
<b>TYPE:</b>	Transflective LCD
<b>DIMENSIONS:</b>	113 x 61 cm
<b>COLOR:</b>	Black and white
<b>CONTRAST:</b>	Adjustable
<b>ILLUMINATION:</b>	CCFL
BUILT IN PRINTER	
<b>TYPE:</b>	Thermal
<b>PAPER WIDTH:</b>	110 mm (standard)
<b>MAXIMUM DIAMETER OF PAPER ROLL:</b>	40 mm
MEMORY	
<b>INTERNAL MEMORY:</b>	Stores up to 60 test results

## STANDARD ACCESSORIES INCLUDED

Download software EuroBreaker Basic
Instruction manual
1 voltage supply cable, shuko type 2.5 m
1 coil test lead cable
1 auxiliary input test lead cable
1 contact measurement test lead cable
1 contact resistance measurement test lead cable
Nylon protective bag

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