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PC104/PC105
3-PHASE SOCKET TESTER





Instruction Manual

GENERAL SAFETY INFORMATION: Always read before proceeding.

Warning
These instructions contain both information and warnings that are necessary for the safe operation and maintenance of this product. It is recommended that you read the instructions carefully and ensure that the contents are fully understood. Failure to understand and to comply with the warnings and instructions can result in serious injury, damage or even death.

In order to avoid the danger of electrical shock, it is important that proper safety measures are taken when working with voltages exceeding 30V AC rms, 42V AC peak or 60V DC.

This product must only be used by a competent person capable of interpreting the results under the conditions and for the purposes for which it has been constructed. Particular attention should be paid to the Warnings, Precautions and Technical Specifications. Always check the unit is in good working order before use and that there are no signs of damage to it. Do not use if damaged.

Where applicable other safety measures such as use of protective gloves, goggles etc. should be employed.

Please keep these instructions for future reference. Updated instructions and product information are available at: www.martindale-electric.co.uk

REMEMBER: SAFETY IS NO ACCIDENT

MEANING OF SYMBOLS:

CE	**Equipment complies with relevant EU Directives**
	End of life disposal of this equipment should be in accordance with relevant EU Directives
	Caution - risk of electric shock
	Caution - risk of danger & refer to instructions
	Equipment protected by double or reinforced insulation (Class II)
3 ~	**Three-phase alternating current**

MARTINDALE ELECTRIC

Specification
PC104/PC105
3-Phase Socket Tester



ELECTRICAL SPECIFICATIONS
Input voltage range: 380V to 415V AC (Phase to Phase)
Input frequency: 50Hz
Input current: < 20mA

GENERAL SPECIFICATIONS
Power: From circuit under test

Dimensions: 131(L) x 94(W) x 54(D) mm
Weight: Approx 292g (without plug)

Includes: Instructions

SAFETY:
Conforms to BS EN 61010-1, CAT III 300V
Class II Double Insulation
Pollution Degree: 2

EMC: Conforms to BS EN 61326-1

Since some jurisdictions do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any part of any provision of this warranty is held invalid or unenforceable by a court or other decision-maker of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision or other part of that provision.

Nothing in this statement reduces your statutory rights.

Thank you for buying one of our products. For safety and full understanding of its benefits please read this manual before use. Technical support is available from 01923 441717 and support@martindale-electric.co.uk.

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1. INTRODUCTION

1.1 Inspection

Examine the shipping carton for any sign of damage. Inspect the unit and any accessories for damage. If there is any damage then consult your distributor immediately.

1.2 Description

The PC104 and PC105 are 3-phase socket testers intended to check CEE 4 & 5 pin, 16A, 32A & 63A sockets.

The PC104 checks for phase presence, phase sequence and PE presence.

The PC105 also checks for neutral presence.

The table below shows the model number and the CEE socket type tested.

Model No	Socket Type Tested
PC104/16	16A/3P+E
PC105/16	16A/3P+N+E
PC104/32	32A/3P+E
PC105/32	32A/3P+N+E
PC104/63	63A/3P+E
PC105/63	63A/3P+N+E

1.3 Accessories (included)

- Instructions

4.3 Storage Conditions

The instrument should be kept in warm dry conditions away from direct sources of heat or sunlight, and in such a manner as to preserve the working life of the unit. It is strongly advised that the unit is not kept in a tool box where other tools may damage it.

5. WARRANTY AND LIMITATION OF LIABILITY

This Martindale product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is 2 years and begins on the date of receipt by the end user. This warranty extends only to the original buyer or end-user customer, and does not apply to fuses, disposable batteries, test leads or to any product which, in Martindale's opinion, has been misused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation, handling or storage.

Martindale authorised resellers shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of Martindale.

Martindale's warranty obligation is limited, at Martindale's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to Martindale within the warranty period.

This warranty is the buyer's sole and exclusive remedy and is in lieu of all other warranties, expressed or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. Martindale shall not be liable for any special, indirect, incidental or consequential damages or losses, including loss of data, arising from any cause or theory.

Note: The interchanging of the neutral wire (N) with the earth (PE) cannot be recognised by this device.

⚠ Warning
Where a socket is found to have a wiring error, maintenance should only be carried out by a competent electrician who is familiar with the relevant regulations and the safety risks involved.

3.2 Wiring Colour Coding
In April 2004 the colour coding of UK wiring was harmonised with the IEC wiring colour code. Table 2 shows the old UK colour code and the new IEC colour code.

	Earth	Neutral	Line 1	Line 2	Line 3
Old UK Colours	Green/ Yellow	Black	Red	Yellow	Blue
New IEC	Green/ Yellow	Blue	Brown	Black	Grey

4. MAINTENANCE

4.1 Cleaning
The unit may be cleaned using a soft dry cloth. Do not use moisture, abrasives, solvents, or detergents, which can be conductive.

4.2 Repair & Service
There are no user serviceable parts in this unit other than those that may be described in section 3. Return to Martindale Electric if faulty. Our service department will quote promptly to repair any fault that occurs outside the guarantee period.

Before the unit is returned, please ensure that you have checked the unit.

2. PRODUCT SPECIFIC SAFETY INFORMATION

Measurement Category III (CAT III) is applicable to test and measuring equipment connected to the distribution part of the building's low-voltage MAINS installation.

2.1 Precautions
This product has been designed with your safety in mind, but please pay attention to the following warnings and cautions before use.

⚠ Warning
Before use check the unit for cracks or any other damage. Make sure the unit is free from dust, grease and moisture. Also check any associated leads and accessories for damage. Do not use if damaged.

⚠ Warning
Always verify the unit is functioning correctly on a known correctly-wired live socket before and after use. Do not use the unit if the unit does not give the correct indications.

⚠ Warning
The socket tester does not test whether the earth is voltage-free. Before using the socket tester, test by other means that the earth contacts are voltage-free. If there is voltage on the earth, switch off immediately (disconnect at the fuse). The socket tester must not be used in this case.

⚠ Warning
The socket tester is not intended to determine if circuits being tested are dead. The correct testing methods should be used to do this.

⚠ Warning
If the indicators do not illuminate, this does not necessarily mean all three phases under test are dead. Two phases and the earth/neutral could be open circuit, but one phase could still be live.

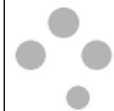
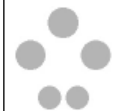
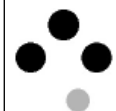
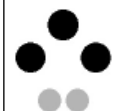
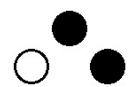
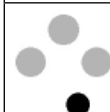
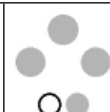
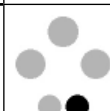
⚠ Caution

Avoid severe mechanical shock or vibration and extreme temperature.

3. OPERATION

3.1 Testing a 3-Phase Socket

Plug the PC104/PC105 into the socket to be tested and refer to the table below, or the front decal of the unit, to determine the wiring condition of the socket under test.

PC104 Indication	PC105 Indication	Wiring Condition
		**Socket is wired correctly. Phase sequence is L1, L2, L3. PE & Neutral are present.** L1, L2 & L3 flash green in a clockwise direction. PE & N illuminate green.
		**Phases wired incorrectly. Phase sequence is L1, L3, L2.** L1, L2 & L3 flash red in an anti-clockwise direction.
		**Phase L1 is missing** L2 & L3 flash red.
		**Phase L2 is missing** L1 & L3 flash red.
		**Phase L3 is missing.** L1 & L2 flash red.
		**PE is missing.** PE illuminates red (PC104). PE extinguished (PC105).
NA		**Neutral is missing.** N illuminates red.