



Features

- Clear and simple user interface
- Precise and accurate measurements
- Easily identify faulty insulators
- Easy to follow test sequences
- Visual and Audible Warnings for predefined limits

Introduction:

The Micro Cross Arm Tester has been developed to identify problems on unearthed wooden poles on three phase, or single phase overhead line systems where there is a high Prospective Short Circuit Current (ISC) calculated in the pole and to indicate if it is at a potentially dangerous level. Faulty Insulators can be identified with the aid of the TX Transmitter.

Designed to comply with the relevant sections of IEC 61481-1 for use on Nominal System Voltages of 11kV and BS EN 61243-2.

Operations and Features:

The Micro Cross Arm Tester and TX Transmitter are battery operated electronic contact devices to enable faulty insulators to be identified. The Micro Cross Arm Tester will measure the Prospective Short Circuit Current (ISC) in wooden poles, and indicate if it is at an unsafe level. By using the TX Transmitter, the faulty phase can be identified, by determining the phase relationship between the Phase and the Cross Arm.

Features:

- Encoder and Button for easy menu navigation

4 LED Threshold RESULTS indicators and Buzzer

Graphic LCD Display Module 240 x 64

 - Easy to use and Lightweight
 - Built in Self-testing functionality to prove probe operation
- Fast response time
 - High Impact ABS Case
 - Indoor/Outdoor use all weathers
 - -25°C to +55°C operating temp range
 - Shock & drop resistant
 - Easy access for battery replacement



The back-lit display on the MCAT+ is bright and clear with a wide viewing angle. The results of a test can be seen here as they appear on the display.

MCAT+ Specification

System VOLTAGE	For use on 11kV – System Voltages
Frequency	For 50Hz systems
DC Response	Does NOT respond to DC
Max Cross Arm Voltage	2.7kV (above which ISC Test Inhibited)
Resistor Chain Values	2 x 10MΩ (±5%) 1 x 1MΩ(±5%)
Voltage Accuracy to 11kV	±1%
Voltage Accuracy over 11kV	±5%
Phase Measurement Accuracy	±10°
ISC	Calculated Prospective Short Circuit Current in the unearthed wooden pole
LCD Display	Graphic LCD Display Module 240 x 64
Battery Consumption	Less than 400mA on Max Momentary Load Operation
Audible Indication	Buzzer present when UNSAFE is indicated >65dB at 5 metres

WPC1000TX Transmitter:

Self Proving facility The TX module has a built in self check facility. Both RED LEDs will Flash and stay on. The TX will send a signal to the Base Unit to prove communication

• Operating Frequency – 433.9mHz



- Range – 50m in air
- Automatic alarming above threshold voltage
- Voltage Range – 11kV
- Positive Indication of phase relationship



Probe:

The Probe has a 60mm Hook and a lead to which is attached the 8 Pole connector plug and special insulated lead end.

Supply Requirements

257-U Main unit:

Battery type- 6 x 1.5Volts, IEC LR14 C Cell - alka-line

WPC1000TX Transmitter:

Battery type- 1x 9V, IEC6LR61 PP3 – alkaline

Protection and Safety

The unit is designed to comply with BSEN61010 and is CE marked.

Base Unit Dimensions

336 x 300 x 148mm

Weight

3.2kg

Probe Dimensions

850 x 45mm

Weight

1.5kg

WPC1000TX Dimensions

180 x 100mm

Weight

1kg

Temperature Range

Storage -30°C to 60°C

Operating -25°C to 55°C

Lead Set specifications

The MCAT+ is supplied with a lead set consisting of:

1x 10m Probe Connection Lead (A257-0001)

1x 3m Earth Lead terminating with a test clip (A257-0002).

Accessories

G257-0009 Earth Stake

DDM5008 60mm Hook (Probe)

CMH0297 40mm Hook (WPC1000)

DFH5039 250mm Electrode Extension (WPC1000)

DDC5025 Bowthorpe Rod Adaptor (WPC1000)

DDC5054 Universal Star Wheel Adaptor (WPC1000)

DDM5003 Polymer Cleaning Kit

Measurements		Lighting Sequence				Audio
Test	Result	mA THRESHOLD	VOLTAGE PRESENT	PHASE FAULT	SAFE / UNSAFE	
ISC (mA)	<0.3					
ISC (mA)	0.3-5					
ISC (mA)	>5					
Voltage (kV)	0.3-2.7					
Voltage (kV)	>2.7					
Phase	-30° < φ < 30°					

Optional Accessories

A257-0003: 5m Probe Lead Extension

Order Codes

257: Complete MCAT+ system

257-P: MCAT+ Probe

257-U MCAT+ Base Unit

WPC1000TX: Wireless Phase Comparator Transmitter

Note: Due to the company's continuous research programme, the information above may change at any time without prior notification. Please check that you have the most recent data on the product.
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