

# Multi-Function Telecom Cable Tester Models 1035 & 1039



The new AEMC® Digital/Analog Megohmmeters Models 1035 and 1039 are innovative in the design of multiple voltage insulation, resistance and continuity meters.

They incorporate the latest measurement technology and are specifically designed to the most recent international insulation and continuity testing standards, as well as EN 61010, 600V, Cat. III, IEC 61557 safety standards.

Their rugged construction is unique in Megohmmeters. A slip-proof and shock-proof holster is directly over-molded on the high impact polycarbonate case. The overall ergonomic shape fits

naturally into the hand and the two back case ridges facilitate a firm grip on the meter. The case is sealed against water and dust with an IP44 (Index of Protection), NEMA 2 rating.

Digital and analog features are enhanced by a third digital display, which indicates alarm set point or elapsed test time.

Both models measure insulation resistance to 20,000MΩ with 1mA of test current required by IEC 61557 at the rated test voltage. Each model incorporates a 600V voltmeter, which automatically detects and accurately displays AC/DC voltages in the test circuit in each of the insulation test

voltage ranges. Above 25V, it also provides an audible and visual signal and inhibits further tests, thus protecting the user and the meter. After an insulation resistance measurement, the megohmmeter will automatically discharge the circuit and display the remaining capacitive voltage of the test sample.

The Model 1039, ideal for telecom applications, also measures cable length to 80.0 kilometers and capacitance to 4000nF. A 400mA<sub>AC</sub> range is available for direct current measurement or it can be used with an AC current probe with a mA output.

## Features

- True Megohmmeter®
- Test voltage combinations of 50V, 100V, 250V and 500V
- Insulation measurements to 20,000M $\Omega$  (20G $\Omega$ )
- Capacitance measurement to 4000nF
- Cable length measurement to 80.0km (>264,000 ft)
- Automatic test inhibition (if live sample >25V)
- Automatic discharge for operator safety
- Multi-line 4000-count backlit digital display with analog bargraph
- Resistance, 200mA continuity and alarm functions
- Over-molded slip proof holster for rugged field use
- EN 61010, 600V, Cat. III, IEC 61557 and CE rated

## Applications

- Cable testing (including telecom)
- Telephone line resistance and capacitance imbalance
- Measure cable length and capacitance
- Line to line imbalance
- Line to line capacitance
- Off hook detection
- Center station voltage testing

## Input Connections



Model 1035



Model 1039

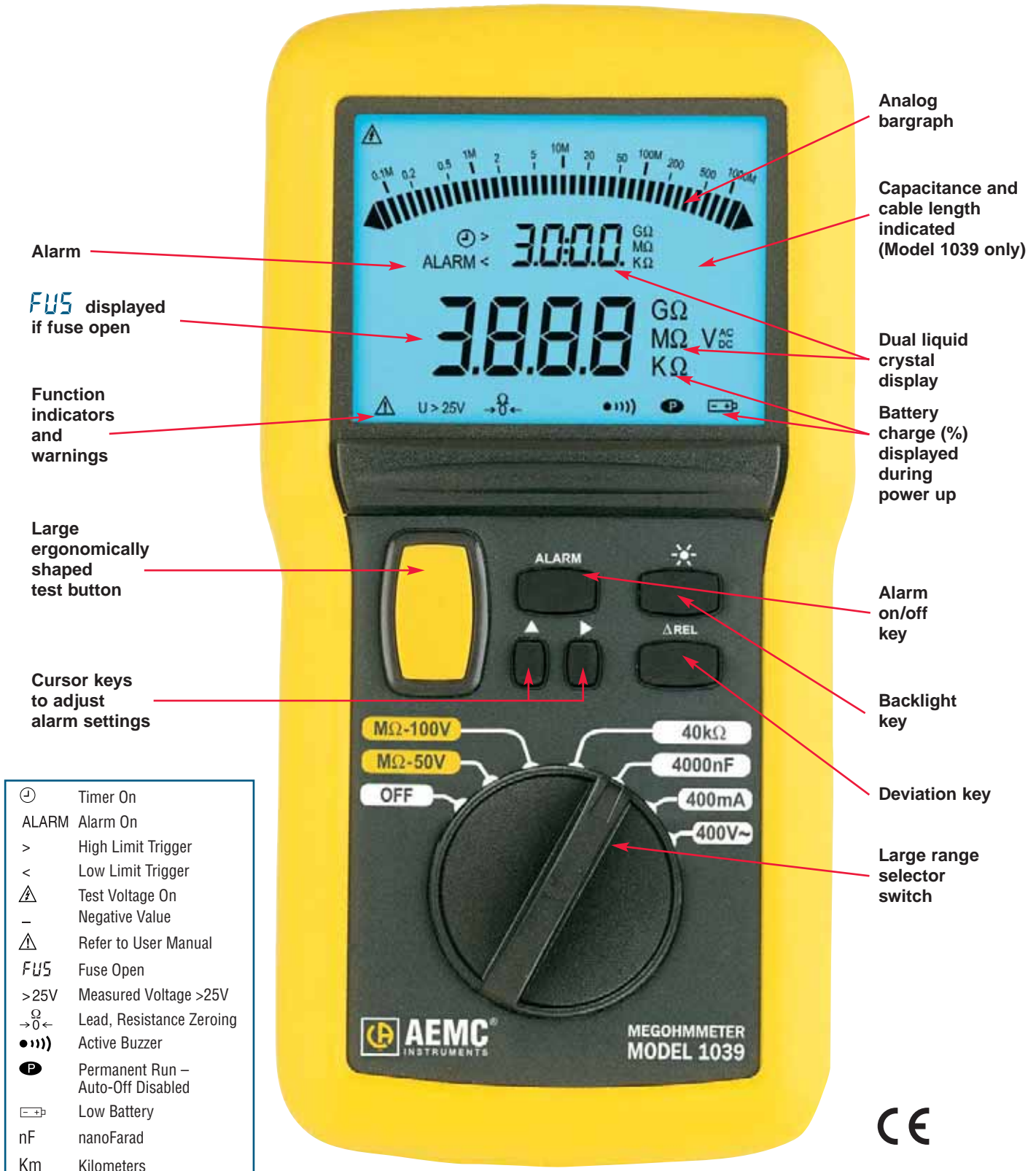


Safety rated 1000V clips provide quick and easy connection of test points for the Model 1039.

# Key Components

## Straightforward layout & intuitive operation

For telecom and low voltage, low current applications



Alarm

*FUS* displayed if fuse open

Function indicators and warnings

Large ergonomically shaped test button

Cursor keys to adjust alarm settings

Analog bargraph

Capacitance and cable length indicated (Model 1039 only)

Dual liquid crystal display

Battery charge (%) displayed during power up

⌚	Timer On
ALARM	Alarm On
>	High Limit Trigger
<	Low Limit Trigger
⚠	Test Voltage On
-	Negative Value
⚠	Refer to User Manual
<i>FUS</i>	Fuse Open
>25V	Measured Voltage >25V
→0←	Lead, Resistance Zeroing
•••••	Active Buzzer
P	Permanent Run – Auto-Off Disabled
🔋	Low Battery
nF	nanoFarad
Km	Kilometers
ΔREL	Relative Position

Alarm on/off key

Backlight key

Deviation key

Large range selector switch

Shown at actual size (backlight on)



FUNCTION	MODEL 1035	MODEL 1039
50V (400M $\Omega$ )	-	✓
50V (2000M $\Omega$ )	✓	-
100V (400M $\Omega$ )	-	✓
100V (2000M $\Omega$ )	✓	-
250V (20,000M $\Omega$ )	✓	-
500V (20,000M $\Omega$ )	✓	-
Voltage Tester/Safety Check (600VAc/dc)	✓	✓
Guard Terminal	✓	-
$\Delta$ REL	✓	✓
Resistance (400k $\Omega$ )	✓	-
Resistance (40k $\Omega$ )	-	✓
Backlight	✓	✓
AC Voltage (0 to 400VAc)	✓	✓
Capacitance (to 4000nF)	-	✓
Cable Length (80km)	-	✓
AC Current Measurement (0 to 400mA <sub>Ac</sub> Direct)	✓	-
Alarm (setpoint, <, >)	✓	✓

FUNCTION	MODEL 1035	MODEL 1039
Remote Test Probe	✓	✓
Digital Dual Display	✓	✓
Analog Bargraph	✓	✓
Auto-Off	✓	✓
Voltage Detection (>25V)	✓	✓
Safety Test Inhibitor	✓	✓
Automatic Discharge	✓	✓
Fuse Protection	✓	✓
Auto Fuse Check	✓	✓
Low Battery	✓	✓
Battery Capacity (%) Indication	✓	✓
Auto-Off Disable	✓	✓
EN 61010, 600V, Cat. III	✓	✓
Agency Approval	CE Mark	CE Mark
Optional Hands-Free Carrying Case	✓	✓
Optional Waterproof Field Case	✓	✓
Optional AC Current Probe	-	✓

## Specifications

MODELS	1035	1039	
<b>ELECTRICAL</b>			
<b>INSULATION TESTS</b>			
Test Voltage	50V 100V 250V 500V	0.01M $\Omega$ to 2000M $\Omega$ (2G $\Omega$ ) 0.02M $\Omega$ to 2000M $\Omega$ (2G $\Omega$ ) 0.05M $\Omega$ to 20,000 (20G $\Omega$ ) 0.1M $\Omega$ to 20,000 (20G $\Omega$ )	0.01 to 400M $\Omega$ 0.02 to 400M $\Omega$ - -
Short Circuit Current	$\leq$ 3mA	$\leq$ 3mA	
Accuracy	$\pm$ 3% of Reading $\pm$ 5 cts	$\pm$ 3% of Reading $\pm$ 5 cts	
Automatic Discharge	Yes, with voltage display	Yes, with voltage display	
Voltage Test/Safety Check	0 to 600VAc/dc	0 to 600VAc/dc	
Voltage Warning Indicator	>25V	>25V	
Test Inhibition	Yes >25V	Yes >25V	
Guard Terminal	Yes	-	
<b>RESISTANCE TESTS</b>			
Measurement Range	0.0 to 400k $\Omega$	0.0 to 40.0k $\Omega$	
Test Voltage	7 to 9V	7 to 9V	
Test Current	600 $\mu$ A < 400 $\Omega$ ; 6 $\mu$ A > 40 $\Omega$	600 $\mu$ A < 400 $\Omega$	
Accuracy	$\pm$ 3% of Reading $\pm$ 1ct (>400 $\Omega$ )	$\pm$ 3% of Reading $\pm$ 1ct (>400 $\Omega$ )	
<b>VOLTAGE TESTS</b>			
Voltage Range	-	0 to 400VAc	
Accuracy	-	$\pm$ 3% of Reading $\pm$ 1ct	
<b>CURRENT TESTS</b>			
AC Current	-	0.00 to 400mA (240A with probe option)	
Capacitance	-	0.0 to 4000nF	
Cable Length	-	0.000 to 80.0km	
<b>DISPLAY</b>			
Display Size	2 x 3" (54.3 x 73mm)	2 x 3" (54.3 x 73mm)	
Digital Display	4000-count	4000-count	
Analog Bargraph	34-segments	34-segments	
Backlight	Blue Electroluminescent	Blue Electroluminescent	
<b>GENERAL</b>			
Power Source	6 x 1.5V AA (NEDA 15A) Capable of performing >3500 5 sec tests	6 x 1.5V AA (NEDA 15A) Capable of performing >3500 5 sec tests	
Dimensions	8.30 x 4.25 x 2.36" (211 x 108 x 60mm)		
Weight	1.81 lbs (830g)		
Index Protection	IP44	IP44	
Patent Pending	Yes	Yes	
<b>SAFETY</b>			
Safety Rating	EN 61010, 600V, Cat. III, EN 61557	EN 61010, 600V, Cat. III, EN 61557	
CE Mark	Yes	Yes	

# Accessories



Model 1039 Field Kit, Catalog #2115.43



Field Case for use with all models  
Catalog #2118.98

Model 1035  
Field Kit,  
Catalog  
#2115.42



Remote Test Probe  
for use with Models 1035 & 1039  
Catalog #2118.97



Test Leads for Model 1035  
Catalog #2119.41



Soft Carrying Case  
included with  
standard  
megohmmeter  
models  
Catalog #2119.02



Hands-Free  
Carrying  
Case  
for use with  
all models  
Catalog  
#2118.99



Test Leads for Model 1039  
Catalog #2119.40

ORDERING INFORMATION	CATALOG NO.
<b>Megohmmeter Model 1035</b> (Digital, with Analog Bargraph, Backlight, 50V, 100V, 250V, 500V, 400k) . . . . .	<b>Cat. #2116.90</b>
<b>Megohmmeter Model 1039</b> (Digital, with Analog Bargraph, Alarm, Timer, ΔRel, Backlight, 50V, 100V, mA, nF, km) .	<b>Cat. #2116.91</b>
All models include a soft carrying case, two color-coded leads, black test probe, two alligator clips, batteries and user manual	
<b>Megohmmeter Field Kit Model 1035</b> , Includes megohmmeter, field case, three color-coded leads, black test probe, three alligator clips, two grip probes, remote test probe, batteries and user manual . . . . .	<b>Cat. #2115.42</b>
<b>Megohmmeter Field Kit Model 1039</b> , Includes megohmmeter, field case, two color-coded leads, black test probe, two alligator clips, two grip probes, remote test probe, AC current probe, batteries and user manual . . . . .	<b>Cat. #2115.43</b>
<b>Accessories (Optional)</b>	
Remote Test Probe . . . . .	Cat. #2118.97
Field Case (Waterproof) . . . . .	Cat. #2118.98
Hands-Free Carrying Case . . . . .	Cat. #2118.99
AC Current Probe Model MN211 (Lead - 1mA/A - 240A max) . . . . .	Cat. #2115.73

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