



THE EASTERN SPECIALTY COMPANY

METER SITE ANALYZER

ULTRA LIGHTWEIGHT

CAT. 6330

ISSUE SOLVED

Need an all-in-one field test kit? **TESCO's Meter Site Analyzer** is the most versatile and complete tool for testing the entire functionality of transformer-rated metering installations in a convenient, portable, and ULTRA lightweight kit—*only 17.8 lbs!*

FUNCTIONALITY

As a utility, the vast majority of revenue comes from large customers who have transformer-rated services. At transformer-rated sites, the opportunity for something to go wrong is much greater than at a self-contained site. Studies have shown that at transformer-rated sites, the vast majority of issues are related to wiring, CTs, PTs and other issues. If you want to be sure that the customer is billed correctly and you are not losing revenue, you must test the whole site, not just the meter.

TESCO's all-in-one **6330 METER SITE ANALYZER** gives you the most versatile site testing tool available in a small, lightweight package. No other test system has the functionality of:

- ✓ **COMPLETE SITE VERIFICATION**
- ✓ **CT TESTING (RATIO WITH BURDEN, BURDEN, ADMITTANCE)**
- ✓ **METER TESTING**
 - ✓ **CUSTOMER LOAD TO 20A**
 - ✓ **LOAD BOX TO 5A**
 - ✓ **ACCURACY, DEMAND, TIMED REGISTER, TIMED RUN, ENERGY DELIVERY**
- ✓ **"FAST KEY" ANYTIME DATA**
 - ✓ **METROLOGY DATA**
 - ✓ **PHASOR DIAGRAMS**
 - ✓ **LIVE WAVEFORMS WITH RECORDING**
 - ✓ **HARMONICS**



**17.8 pounds with basic items needed to test in the field as listed on the next page.*



FEATURES

VOLTAGE: 50-650V, 920V peak

CURRENT: 0.1-21A, 30A peak

CONNECTIVITY:

- Ethernet Port
- 4 USB A; USB B
- Test Pulse Pickup
- 3 Probe Inputs (Current or Voltage)

LOAD BOX:

- True three phase
- Current 0-5A with full harmonics

ACCURACY:

- W, WHrs: $\pm 0.04\%$
- VA, VAHrs: $\pm 0.04\%$ (conformance to definitions)
- VAR, VARHrs: $\pm 0.04\%$ (conformance to definitions)
- Phase: ± 0.005 degrees
- Probe Channels: $\pm 0.05\%$ plus probe uncertainty
- Voltage: $\pm 0.02\%$
- Current: $\pm 0.02\%$

POWER:

- Fully battery powered
- 99.6 WHr battery
- Charge spare battery in truck or at desk
- Charge in or outside of unit from AC or DC
- Easily swap out battery
- 8+ hours continuous operation from single charge

TEMPERATURE RANGE:

- -10°F to 120°F

DISPLAY:

- 7" high resolution screen
- Direct sunlight readable
- Protected screen

PELICAN® CASE

- 18.2" x 13.9" x 6.7"
- Durable, water resistant
- Integrated GPS locator

LIGHTWEIGHT

- 17.8 pounds with basic items needed in field*



SPECIFICATIONS

STANDARD UNIT:

- 6330 TESCO Meter Site Analyzer
- B00-0001: Battery Pack, 11.1V, 8.8Ah, 99Whr battery (3s3p)
- BC1-0003: Battery Charger, 90W 19VDC output, 85-264VAC input with 6 ft. cord
- 1037-SA: TESCO Optical Pickup with 9.84 ft. cable, Next Gen compatible

ADDITIONAL ITEMS NECESSARY FOR UNIT TO FULLY FUNCTION:

SELECT A JUMPER SET:

- CJO-6330-001: Current Jumpers, 1.64 ft. terminated in Alligator Clips, set of 3, black
- CJO-6330-002: Current Jumpers, 1.64 ft. terminated in XCHL EZ-Hooks, set of 3: red, yellow, blue

SELECT A CURRENT CABLE SET:

- Three phase terminated with duckbill probes for test switches, 20A max
 - CCO-6330-002: 6.56 ft. length
 - CCO-6330-003: 9.84 ft. length
- Three phase terminated with XCHL EZ-Hooks, 20A max
 - CCO-6330-012: 6.56 ft. length
 - CCO-6630-013: 9.84 ft. length

SELECT A VOLTAGE CABLE SET:

- Three phase plus neutral, phases are fused, terminated in safety 4mm plugs, 1000V max
 - VCO-6330-002: 6.56 ft. length
 - VCO-6330-003: 9.84 ft. length

SELECT A TEST CLIP FOR VOLTAGE:

- VTO-6330-001: Test Clips, 4mm socket to Dolphin, CAT III/1000V, pack of 4: black, red, yellow, blue
- VTO-6330-002: Test Clips, 4mm socket to XCHL EZ-Hook, pack of 4: black, red, yellow, blue
- VTO-6330-003: Test Clips, 4mm socket to Crocodile, CAT III/1000V, pack of 4: black, red, yellow, blue

SELECT AT LEAST ONE ROGOWSKI COIL:

- P01-0040-RYB: Set of Rogowski Current Probes, 5-5000A, 40in. long, 305mm aperture, RED/YELLOW/BLUE with Calibration
 - P01-0040-R: Red only with Calibration
 - P01-0040-Y: Yellow only with Calibration
 - P01-0040-B: Blue only with Calibration
- P01-0016-RYB: Set of Rogowski Current Probes, 5-5000A, 16in. long, 120mm aperture, RED/YELLOW/BLUE with Calibration
 - P01-0016-R: Red only with Calibration
 - P01-0016-Y: Yellow only with Calibration
 - P01-0016-B: Blue only with Calibration

OPTIONAL ACCESSORIES:

- B00-0001: Battery Pack, 11.1V, 8.8Ah, 99Wh battery (3s3p)
- BC1-0001: Battery Charger, Car DC power adapter, 12VDC in, 16VDC out, 120W
- BC1-0002: Battery Charger, Dual Desktop, 80W, 17.4VDC/4.8A output
- B01-0003: Battery charger, 90W, 19VDC output, 85-264VAC input with 6 ft. cord
- 1037-SA: Optical Pickup with 9.84 ft. cable, Next Gen compatible
- 1037-ITRN-SA: TESCO Optical Pickup with 9.84 ft. cable, for meters with top pulse output, Next Gen compatible
- P02-0163-KIT: Sensorlink 8-0163 Litewire Fiber Optic Coupled Amprobe (2000A with adapter and calibration for 6330)
- BNC-0025 or BNC-0050: BNC Cable for extending P02-0163 25 ft. or 50 ft. (Mal BNC to Male BNC)
- POO-RETRO-BNC: Female BNC to 6330 adapter including calibration of customer supplied probe
- P03-0752: AEMC SR752 1000A 1mV/A Clamp-on Current Probe with termination for 6330 and calibration
- POO-RETRO-HW: Convert customer supplied current clamp to 6330 termination by replacing connector with 6330 compatible connector and calibration
- DLS: Diamond Level Support

CAT. 6330



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METER SITE ANALYZER

STANDARD ITEMS

From left to right: 6330 Meter Site Analyzer, Battery Charger, Battery Pack (pre-installed), and 1037-SA Optical Pickup



ADDITIONAL ITEMS

Clockwise from top left: Current Cable with Duckbill Probes, Voltage Cable Set, Rogowski Current Coils in Red, Yellow, Blue, Current Cables with EZ-Hook, Test Clip with EZ-Hook, Dolphin Test Clips, Rogowski Current Coils in Yellow, Vehicle Charger, and Spare Battery in Desktop Standalone Battery Charger.



*TESCO's Lightweight Kit pictured includes 6330 unit, B00-001 Battery Pack, 1037-SA Optical Pickup, CJO-6330-002 Current Jumpers, CCO-6330-002 Current Cable, VCO-6330-002 Voltage Cable, VTO-6330-001 Test Clips, and P01-0040-R Rogowski Current Probe. Total weight: 17.8 lbs.



METER SITE ANALYZER

MEASUREMENT CAPABILITIES

VOLTAGE	3 Channels 0.05 to 650 VAC isolated; for full accuracy voltage range is 50V to 650V (920V peak)
CURRENT	3 Channels 0.001 to 21 Amps fully isolated; for full accuracy current range is 0.1A to 21A (30A peak)
PROBES	3 Channels ± 0.001 to 2.0 volts peak. When use with TESCO branded Rogowski coils a dynamic range in excess of 1000:1 is achieved. Standard range for coils is 5 to 5000.
ADMITTANCE	Admittance measurement
POWER	Active Energy, Reactive Energy, Apparent Energy
HARMONICS	Harmonics to the 50th

FUNCTIONALITY

METER TEST Meter testing using site voltage and current by connecting to test switch. Customer load testing and/or Phantom load testing to comply with ANSI C12.1 FL/LL/PF.

METER TEST MODES

1. Accuracy using pulse output of meter
2. Timed Run
3. Timed Register
4. Demand
5. Energy Delivery

CT TEST

Ratio testing with continuously variable added burden up to 8 ohms

Ratio testing with applied burden up to 8 ohms

Burden only testing with continuously variable added burden up to 8 ohms

Admittance testing

Demag

OTHER

Harmonic analysis up to 50th

Voltage, Current, Power Factor, VA, VAR, Watts, Vah, VARh, kWh, THD, Frequency, Phase Rotation

Waveform Recording

Phasor Diagrams



THE EASTERN SPECIALTY COMPANY

CAT. 6330

ACCURACY

VOLTAGE	$\pm 0.02\%$ (50V TO 650V)
CURRENT	$\pm 0.02\%$ (0.1A TO 21A)
PHASE	± 0.005 DEGREES
W, WHrs	$\pm 0.04\%$
VA, VAHrs	$\pm 0.04\%$ (conformance to definitions)
VAR, VARHrs	$\pm 0.04\%$ (conformance to definitions)
PROBE CHANNELS:	$\pm 0.05\%$ plus probe uncertainty

PHYSICAL

CASE	Pelican AIR 1485 case, 18.2" x 13.9" x 6.7" Water resistant
WEIGHT	17.8 lbs. with basic items needed in the field
FRONT PANEL	Membrane
DISPLAY	7" super high contrast, 1000nit color display with bonded glass optical filter/protector
I/O	Ethernet 4X USB 2.0 Type A (peripherals such as key board, mouse, memory stick, barcode scanner) 1X USB 2.0 Type B (connection to PC) Pulse Pickup/Optical Communications/Pulse In/Pulse Out Connector DB9M 3X Probe Inputs with auto-recognition, auto read of calibration Safety 4mm sockets for VA, VB, VC, Neutral Locking connector for three 20A current channels
POWER	99.6WHr Battery, no power from site needed even in load box mode Easily replaceable battery/swap out quickly Greater than 8 hours continuous operation on a single charge
AUX POWER	15VDC to 19.2VDC Rapid charging using AC or 12V power
GPS	Integrated GPS locator
CABLES	Designed to remain connected at all times





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METER SITE ANALYZER TEST SCREENS

CAT. 6330

METER TEST RESULTS

10:12 PM 08/24/2020

TEST PARAMETERS
 TAG: _____ ITERATION: _____ TEST STATUS: **TEST FINISHED**
 PULSES: PRESET: _____ ACTUAL: _____ REMAINING: _____ WHrs: _____

TEST RESULTS

TEST	ITR	TAG	WHrs	%ERROR	REG	P/F	W	Va
0	0	CL LOAD	5.402	-0.03	99.97	PASS		120.00
0	1	CL LOAD	5.400	0.00	100.00	PASS		120.00
0	AVE		5.401	-0.01	99.99	PASS	1.00	120.00
ALL	WAVG			-0.01	99.99	PASS		

CANCEL REDO SAVE

PHASORS

12:37 PM 08/25/2020

	PHASE A	PHASE B	PHASE C
V:	119.9788	119.9859	120.0191
$\theta(V)$:	0.000	240.009	119.998
I:	1.0000	1.0000	0.9997
$\theta(I)$:	359.989	240.015	119.999
$\Delta\theta$:	-0.011	0.006	0.000
PI:	19.6477	19.8249	19.8983
$\theta(PI)$:	0.046	239.858	119.970
$\Delta\theta(P)$:	-0.056	0.157	0.028
PF:	1.000	1.000	1.000

PHASE ROTATION: ABC

PRIMARY HOLD

HARMONICS

1:01 PM 08/25/2020

Va

% AMPLITUDE

HARMONIC INDEX

LOG SHOW FIRST POINTS VB HOLD

WAVEFORMS

1:03 PM 08/25/2020

VOLTAGE

CURRENT

HIDE V HIDE I 4 CYCLES PHASE A HOLD

CT RATIO WITH BURDEN RESULTS

9:52 PM 08/24/2020

B	CT #1	CT #2	CT #3
0.00	0.432	0.361	0.241
0.05	0.610	0.536	0.385
0.10	0.589	0.547	0.400
0.15	0.774	0.537	0.349
0.20	0.902	0.870	0.630
0.35	0.925	0.975	0.755
0.50	1.134	1.313	1.239

ACCURACY CLASS: 0.3

BURDEN CLASS: 0.20

USER-DEFINE LIMITS: 1.50x

CT#1 AC: 0.3 BC: 0.2 CT#2 AC: 0.3 BC: 0.2 CT#3 AC: 0.3 BC: 0.2

FAILED PASSED PASSED

CT #1 OVERRIDE RATIO PARALLELOGRAM SAVE

CT RATIO WITH BURDEN RESULTS

9:44 PM 08/24/2020

B	CT #1	CT #2	CT #3
0.00	0.432	0.361	0.241
0.05	0.610	0.536	0.385
0.10	0.589	0.547	0.400
0.15	0.774	0.537	0.349
0.20	0.902	0.870	0.630
0.35	0.925	0.975	0.755
0.50	1.134	1.313	1.239

ACCURACY CLASS: 0.3

BURDEN CLASS: 0.20

USER-DEFINE LIMITS: 1.50x

CT#1 AC: 0.3 BC: 0.2 CT#2 AC: 0.3 BC: 0.2 CT#3 AC: 0.3 BC: 0.2

FAILED PASSED PASSED

CT #1 OVERRIDE RATIO ERR CURVES SAVE

