

MODIFICATION RECOMMENDED –
CORRECTS MANUFACTURING OR DESIGN DEFECTS

E4416A-06

S E R V I C E N O T E

Supersedes:
NONE

Agilent E4416A EPM Peak & Average Power Meter

Serial Numbers: GB00000000 / GB41292320

Compatibility Issue With Long Power Sensor Cables

To Be Performed By: Agilent-Qualified Personnel or Customer

Parts Required:

P/N	Description	Qty.
E4416-60004	Measurement Assy (New)	1
OR		
E4416-69003	Measurement Assy (Refurb)	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS: LABOR: 1.0 Hours	
LOCATION CATEGORY:	<input checked="" type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT	USED PARTS: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: 28-Jan-2007	
AUTHOR: FC PRODUCT LINE: PN			
ADDITIONAL INFORMATION: The Service Inventory is low, and this compatibility issue is rare, so boards need not be returned for rework - use stock till gone. Service Centers will return Used Parts via the standard BOP/Exchange processes.			

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Situation:

Some 30.5m (11730E) and 61m (11730F) power sensor cables have been found to be incompatible with the E4416A power meter, when used with E-Series sensors. When this problem occurs, the E4416A generates the following error message:

“-310 EEPROM Error”

This incompatibility is related to the stray capacitance/inductance properties of the cable; these are unspecified parameters, and can vary from cable to cable. These variations do not impact the measurement integrity of the equipment, but they can cause problems with the data line connecting the E4416A to the EEPROM in the E-Series sensor.

This EEPROM data line is terminated by a passive network, the purpose of which is to clean-up the received signal. An investigation found that the CR time constant of this network, when combined with the stray properties of these long cables, borders on the operational limits of the receiving circuitry. By changing a resistor value in this passive network, the CR time constant can be lowered, speeding up the rise time of the EEPROM data edge, and allowing normal data recovery.

Solution/Action:

If any of the units listed above are received at the service center and are exhibiting this fault, then perform the following procedure:

- Remove and replace the Measurement Assembly. Details of this procedure can be found in the Service Manual.
- Verify that all of the Built In Self Test tests pass.
- Perform the Instrumentation Accuracy (Normal) and Instrumentation Accuracy (Average) tests, and check that the results meet published specifications. Details of this procedure can be found in the Service Manual.
- The repair and verification process is now complete.