

34172B-01

Modification Recommended Service Note

Supersedes:
NONE

34172B Calibration Short for Digital Multimeter

Serial Numbers: ALL

The Problem – Intermittent Ohm measurement failure when using shorting block.

Parts Required:

P/N Description Qty.

NONE

ADMINISTRATIVE INFORMATION

ACTION	X ON SPECIFIED FAILURE	STANDARDS			
CATEGORY:	<input type="checkbox"/> AGREEABLE TIME	LABOR:	0.5 Hours		
LOCATION	X CUSTOMER INSTALLABLE	SERVICE:	<input type="checkbox"/> RETURN	USED	<input type="checkbox"/> RETURN
CATEGORY:	<input type="checkbox"/> ON-SITE (active On-site contract required)	INVENTORY:	<input type="checkbox"/> SCRAP	PARTS:	<input type="checkbox"/> SCRAP
	<input type="checkbox"/> SERVICE CENTER		X SEE TEXT		X SEE TEXT
	<input type="checkbox"/> CHANNEL PARTNERS				
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL:	8 th August 2019		
	<input type="checkbox"/> Calibration Required	PRODUCT LINE:	GM		
	X Calibration NOT Required	AUTHOR:	WY		

ADDITIONAL INFORMATION:

Situation:

Insufficient soldering at the shorting block causes intermittent failure during Ohm measurement after calibration.

Verification:

1. Install the 34172B Calibration Short on the front panel input terminals.
2. Select the Front input terminals with the Front/Rear switch.
3. Configure 4-wire Ohms function and range in order shown in the table below corresponding to the DMM model number.
4. Compare measurement results to the test limits shown below.

Values for 34460A DMM							
Input	Function ^[1]	Range	Quick Check	Error from Nominal			
				24 hours	90 days	1 year	2 years
Short	4-wire Ohms	100 Ω		± 6 mΩ	± 7 mΩ		
		1 kΩ		± 8 mΩ	± 10 mΩ		
		10 kΩ	Q	± 50 mΩ	± 100 mΩ		
		100 kΩ		± 500 mΩ	± 1 Ω		
		1 MΩ		± 10 Ω			
		10 MΩ		± 100 Ω			

Values for 34461A DMM							
Input	Function ^[1]	Range	Quick Check	Error from Nominal			
				24 hours	90 days	1 year	2 years
Short	4-wire Ohms	100 Ω		± 3 mΩ	± 4 mΩ		
		1 kΩ		± 5 mΩ	± 10 mΩ		
		10 kΩ	Q	± 50 mΩ	± 100 mΩ		
		100 kΩ		± 500 mΩ	± 1 Ω		
		1 MΩ		± 10 Ω			
		10 MΩ		± 100 Ω			

Values for 34465A DMM							
Input	Function ^[1]	Range	Quick Check	Error from Nominal			
				24 hours	90 days	1 year	2 years
Short	4-wire Ohms	100 Ω		± 3 mΩ	± 4 mΩ		
		1 kΩ		± 5 mΩ			
		10 kΩ	Q	± 50 mΩ			
		100 kΩ		± 500 mΩ			
		1 MΩ		± 5 Ω			
		10 MΩ		± 100 Ω			

Values for 34470A DMM							
Input	Function ^[1]	Range	Quick Check	Error from Nominal			
				24 hours	90 days	1 year	2 years
Short	4-wire Ohms	100 Ω		± 3 mΩ	± 4 mΩ		
		1 kΩ		± 5 mΩ			
		10 kΩ	Q	± 50 mΩ			
		100 kΩ		± 500 mΩ			
		1 MΩ		± 5 Ω			
		10 MΩ		± 100 Ω			

Solution/Action:

If the Ohm measurement fails, remove the casing of the shorting block and ensure sufficient solder at these 4 points.



Contact the nearest Service Center for repair if similar failure persists after adding solder to the shorting block.

Revision History:

Date	Service Note Revision	Author	Reason for Change
7 August 2018	01	Wan Yee	As Published