

Product Brief

# VIAVI

## PSD90-1C

### AC/DC Fuel Capacitance Test Set

An easy to operate test set that provides multiple functions for calibration and troubleshooting.

The PSD90-1C Universal AC/DC Capacitance Test Set will test any AC or DC capacitive fuel, water, LOX/engine oil, or other AC capacitance system. The test set includes features that allow the user to better troubleshoot and isolate fuel system problems. Rugged in design, the unit can be used anywhere troubleshooting is required. Capable of being operated with external power, the PSD90-1C is ideal for shop or Depot Level repair of fuel system components.



#### Key Features

- Closed box calibration using front panel controls – performed annually
- Lightweight/portable
- Rechargeable battery or externally powered
- Percent of battery capacity displayed
- Self-test on power-up
- Measures DC voltage
- Manual or auto ranging
- 2 and 3 wire megger

#### Advanced Features

- Manual Megger/DC Cap Ranging Mode. Allows user to manually select range to speed up troubleshooting and assist in finding intermittent faults
- Low Voltage/Low Current Mode. To assist user in isolating intermittent connections that other test sets may mask (fritting)
- REV DC (DC+) Mode. Measures capacitance from the DC+ side of the tank unit for testing and troubleshooting DC+ circuits
- Distance-to-Fault (DTF) Mode. Measures capacitance between the center conductor and shield of any coaxial or shielded wire, thereby determining the “length” of the wire or the approximate distance to a break in the wire or shield

## Specifications

Capacitance Measurement		
Range	0.000 pF to 39.99 KpF	
Accuracy	Greater of $\pm 0.1\%$ of reading or 0.05 pF	
<b>Range</b>	<b>Measurement Range</b>	<b>Resolution</b>
Extra Low*	0.000 pF - 19.999 pF	0.001 pF
Low	0.00 pF - 199.99 pF	0.01 pF
Medium	200.0 pF - 1,999.9 pF	0.1 pF
High	2,000 pF - 19,999 pF	1 pFz
Extended	20.00 KpF - 39.99 KpF	10 pF
Capacitance Simulation		
Accuracy	Greater of $\pm 0.3\%$ of reading or 0.3 pF from 300 Hz to 9,600 Hz	
<b>Mode</b>	<b>Simulation Range</b>	
TU	0 pF - 11,990 pF	
COMP	0 pF - 1,190 pF	
AUX	10 pF - 11,990 pF	
Resistance Measurement		
Accuracy	Greater of $\pm 2\%$ of reading or 0.1 $\Omega$ High Extended and Mhos $\pm 20\%$	
<b>Range</b>	<b>Resistance Range</b>	<b>Resolution</b>
Low Voltage*	0.000 $\Omega$ - 19.999 $\Omega$	0.001 $\Omega$
Low Ohm	0.00 $\Omega$ - 199.99 $\Omega$	0.01 $\Omega$
Medium Ohm	200.0 $\Omega$ - 1,999.9 $\Omega$	0.1 $\Omega$
High Ohm	2.000 K $\Omega$ - 19.999 K $\Omega$	1 $\Omega$
Extended Ohm	20.00 K $\Omega$ - 199.99 K $\Omega$	10 $\Omega$
Low Mohm	200.0 K $\Omega$ - 1,999.9 K $\Omega$	100 $\Omega$
Medium Mohm	2.000 M $\Omega$ - 19.999 M $\Omega$	1 K $\Omega$
High Mohm	20.00 M $\Omega$ - 199.99 M $\Omega$	10 K $\Omega$
Extended Mohm	200.0 M $\Omega$ - 1,999.9 M $\Omega$	100 K $\Omega$
High Ext. Mohm	2,000 M $\Omega$ - 19,990 M $\Omega$	10 M $\Omega$
Mhos*	0.0000 nS - 1.9999 nS	.0001 nS
DC Voltage Measurement		
Range	$\pm 50$ VDC	
Accuracy	Greater of $\pm 1\%$ of reading or 0.02 VDC	
Resolution	0.01 VDC	
DTF (Distance-To-Fault) Measurement		
Range	0 pF - 39.99 KpF	
Accuracy	Greater of $\pm 0.2\%$ of reading or 1 pF	
<b>Range</b>	<b>Measurement Range</b>	<b>Resolution</b>
Low	0 pF - 19,999 pF	1 pF
High	20.00 KpF - 39.99 KpF	10 pF

\* Manual Mode Only

## Specifications continued

Temperature	
Operating	-40° to +55°C
Storage	-51° to +71°C
Altitude	
Operating	15,000 ft (4600 m) maximum
Power Requirements	
Input	100 - 230 VAC @ 45 - 440 Hz
Battery, NSN: 6140-01-213-0199	1 Rechargeable 12 VDC Sealed Lead Acid
Operation	12 hours continuous at 25°C
Charge Time	8 hours max
Physical Characteristics	
Size	10.6" x 14" x 6.5" (26.9 cm x 35.6 cm x 16.5 cm)
Weight	13 lbs (5.9 Kg)

## Test Set Compliance

- Compliant with Boeing Spec 10-61959 Rev H
- MIL-STD-810 Method 511.4 certified
- Traceable to NIST



Large selection of aircraft specific interface cables available

## Versions, Options and Accessories

Order Number	Description
877*	PSD90-1C/60-110 AC/DC Capacitance Test Set (110 V) NSN: 4920-01-510-5628 Designed for F-16 fleet
878*	PSD90-1C/61-110 AC/DC Capacitance Test Set (110 V) NSN: 4920-01-528-2230 Designed for universal non-F-16 fleet

Aircraft specific interface cables are required and must be purchased separately. Contact VIAVI for your application.

### Standard Accessories

57934	CBL PSD90-1C charger 110 V
57939	CBL PSD90-1C charger 230 V
75538	Operations Manual PSD90-1C
38647	Connector BNCF Rev. Polarity
38648	Connector BNCM Rev. Polarity
57929	Ground cable
57947	Interface 472844 F-16 Simulator (standard with order number 877 only)

### Optional Accessories

853	Precision Transfer Standard PTS-1 NSN: 6625-01-497-5942
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### Extended Warranty

84388	36 months with scheduled calibration
84389	60 months with scheduled calibration

\* This product is subject to the Export Administration ("EAR") (15 CFR 730-774) and may not be exported, re-exported or otherwise transferred to a foreign person, or outside the United States without authorization from the U.S. Department of Commerce.



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