

## DVMP Care Plan

### Direct Voltage Maintenance Program for Fluke 732 and 734 DC Reference Standards

## Technical Data

#### NVLAP accredited program yields better than NIST uncertainty<sup>1</sup>

Traditional calibration services require you to send your measurement standards to a higher level laboratory for calibration in order to maintain traceability. But with this traditional process, the actual performance of the standard within the customer's laboratory cannot be determined, and the processes used to make measurements are not evaluated. Also, the valuable standard is out of production for days or weeks and runs the risk of shipping damage. The first step toward getting around this shortcoming was the development of a Measurement Assurance Program (MAP) by NIST several years ago. The disadvantage of this type of program is cost (several times that of a typical calibration).

Now, through its own Josephson Array Voltage Standard (J-Junction), Fluke can provide users of Fluke 732A and 732B Solid State Standards with a calibration accredited by the National Voluntary Laboratory Association Program (NVLAP) at the user's site. The Fluke DVMP Care Plan can save customers virtually 100 % downtime, shipping costs and potential damage, while achieving measurement uncertainty about half that offered by NIST's normal cal program<sup>1</sup>. Standards such as the Fluke 732 Series and 734 series can be certified to an uncertainty as low as 0.1 ppm (NIST's MAP Service offers performance at 0.2 ppm to 0.8 ppm)<sup>1</sup>. This on-site service also demonstrates the competency and proficiency of the user making the measurements.

#### Benefits of the Fluke DVMP Care Plan

- About half the NIST uncertainty<sup>1</sup>
- Virtually zero downtime
- One program can support multiple standards
- Fluke writes and maintains the calibration procedure and historical data
- All statistical evaluation is done by a Fluke metrologist
- Full warranty coverage available
- Additional standards can be added at 50 % of the base Fluke DVMP Care Plan price (DVMP-201)



The Fluke DVMP Care Plan offers traceability to its own 10 V Josephson Array, an intrinsic standard of voltage, and to national standards.

#### Bonus feature:

After you have participated in the DVMP Care Plan just three times, Fluke provides a special "Characterization and Projection Report" depicting projected uncertainties over time particular to your standard. Commercial labs do not normally offer this service, but it is a standard feature of the Fluke DVMP Care Plan<sup>2</sup>. Customers who have used Fluke's DVMP in the past may enjoy this added feature with the first DVMP Care Plan they purchase.

#### Traceability

Traceability to the legal volt is the principal objective of the Fluke DVMP Care Plan. The Fluke Primary Standards Laboratory in Everett, Washington (U.S.A.), maintains traceability through its Josephson Array Voltage Standard, using processes and procedures that are accredited by NIST's NVLAP.

<sup>1</sup> According to NIST Web Site for "Measurement Assurance Program Service." 6/3/2002

## How the program works

When you purchase a Fluke DVMP, you will be grouped with two other customers in the "Round Robin." A Fluke-owned 732, with all necessary connecting cables and clear operating instructions, will be sent to your site for comparison with your reference standard. You make and record a series of readings over a period of three days and forward the Fluke-owned 732 to the next company in the "Round Robin." You send your data to Fluke for evaluation at the Fluke Primary Standards Laboratory. After the Fluke-owned 732 is received at Fluke, it is once again compared to the J-Junction. A value is then assigned to your 10 volt standard, relative to the volt as maintained by the Fluke Primary Standards Laboratory using its J-Junction, and a report of calibration is sent to you.

Normally in a MAP, the calibration uncertainty is applicable only at the time of measurement. But in this program, Fluke provides you with projected uncertainties, which are established with repeated participation in the DVMP<sup>2</sup>, in a "Characterization and Projection Report." For more information regarding projecting uncertainties, and other important metrological information, please visit the Fluke Web Site: [www.fluke.com](http://www.fluke.com).

This calibration program exemplifies the effective use of metrology resources by making the capabilities of a major world class primary standards laboratory available to smaller customer labs.

## More than one standard?

With Fluke's DVMP Care Plan, you can calibrate multiple standards at your own site as well. Just request a 732A-201 or 732B-201 to be added to your order for each additional 732 you wish to include.

## Ordering information

Proper timing and coordination of the activities between Fluke and your firm are essential to successful delivery of a 732A or 732B under power. Following receipt of an order for the Fluke DVMP Care Plan, Fluke factory personnel will contact you. For this reason, the following information must be included with each order:

- The quantity of 10 volt standards being calibrated
- The exact and complete address where the shipment will be received
- The name and phone number of the person who will be responsible for receiving the shipment, and responsible for connecting it to power immediately when it arrives
- The name and phone number of an alternate responsible person if the first designated person is unavailable
- Any restrictions on hours of the day during which deliveries can be made

Fluke guarantees arrival of the instrument under power (U.S.A. only). If it is delayed, Fluke or the carrier will pay the shipping charges for return of the instrument to Fluke for recalibration.

### Refer to the following models when ordering:

#### For single Round Robin:

- |          |  |
|----------|--|
| 732B-200 | for the first dc reference standard being calibrated |
| 732B-201 | for each additional standard being calibrated        |

#### For three-year DVMP:

- |          |  |
|----------|--|
| DVMP-200 | for the first dc reference standard being calibrated |
| DVMP-201 | for each additional standard being calibrated        |

<sup>2</sup> Although the calibration is accredited, the projected uncertainties are not.

**Fluke.** *Keeping your world up and running.*

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