

Frequency Selective Voltmeter



Aplab Frequency Selective Voltmeter incorporates Digital Signal Processing based design to provide high accuracy and stability. It is designed for level measurement of selected frequencies. It also provides functionality of AC and DC voltage measurements.

The purpose of Frequency Selective Voltmeter FSV-02 is to make adjustments, control measurements and inspections on both audio frequency track circuits of types FTGS 46, FTGS 917 and GLS 9/15 and axle counters type AZS350, AZSM 350, AZS(M). Its compactness and battery operation render the unit particularly suitable for portable applications in maintenance and for level measurement in communication systems.

Features

- Selective Measurement Incorporating Digital Signal Processing
- Multi-Mode Support - FTGS / GLS / UNI Mode
- AC/DC Voltage Measurement
- Frequency Measurement
- Auto Ranging
- Battery Operated, Most Suitable for Field Operations
- Built-in Overload Protection
- LCD Display with Backlit Auto-OFF Facility

Technical Specifications

A. FTGS / GLS MODE

Voltage Measuring Range	: 40mV rms - 200V rms.
Range Selection	: Automatic with range hold facility.
Accuracy	: $\leq 2\%$ (For Umeas $\geq 100\text{mV}$).
Adjacent Channel Rejection	: $>36\text{dB}$ (Each related to channel mean frequency).
Rejection with 2-Channel Spacing	: $>46\text{dB}$.
Measurable Frequencies	
FTGS MODE	:
Band-I (3dB BW - 240Hz)	: 4.75KHz, 5.25KHz, 5.75KHz, 6.25KHz.
Band-II (3dB BW - 480Hz)	: 9.5KHz, 10.5KHz, 11.5KHz, 12.5KHz, 13.5KHz, 14.5KHz, 15.5KHz, 16.5KHz.
GLS MODE	:
Band-I (3dB BW - 480Hz)	: 9.5KHz, 10.5KHz, 11.5KHz, 12.5KHz, 13.5KHz, 14.5KHz.
Input Protection	: 300Vrms AC max. / 300V DC max. (dc+ac peak should be less than 450V).

B. ZP 43 MODE

DC Voltage Measuring Range	: 280mV - 280V.
Range Selection	: Automatic with range hold facility.
Accuracy	: $\leq 1\%$ (For Umeas $\geq 100\text{mV}$).
AC Voltage Measuring Range	: 40mV rms - 200V rms.
Range Selection	: Automatic with range hold facility.
Accuracy	: $\leq 1\%$ (For Fmeas = 43KHz $\pm 10\%$, Umeas $\geq 50\text{mV}$).
Frequency Measuring Range	: 00.10KHz to 99.99 KHz.
Accuracy	: $\leq 0.5\%$ (For Fmeas = 3KHz, Umeas $\geq 30\text{mV}$).
Wideband AC Measuring Range	: 300mVrms to 160Vrms.
Wideband AC Frequency Range	: 40Hz to 56KHz, 2.8V range 40Hz to 10KHz, 28V range 40Hz to 8KHz, 280V range.
Range Selection	: Automatic with range hold facility.
Accuracy	: $\leq 2\%$.

C. UNI MODE

DC Voltage Measuring Range	: 280mV - 280V.
Range Selection	: Automatic with range hold facility.
Accuracy	: $\leq 1\%$ (For Fmeas $\geq 100\text{mV}$).
Mains voltage Measuring Range	: 17V rms to 260V vrms.
Accuracy	: $\leq 2\%$ (At 50..60 Hz mains frequency).
Frequency Measuring Range	: 00.10KHz to 99.99KHz.
Accuracy	: $\leq 0.5\%$ (For frequency above 3KHz, Umeas $\geq 30\text{mV}$).

D. GENERAL

Input resistance	: $>200\text{K OHMS}$.
Display	: LCD display with Backlit.
Power	: Internal Rechargeable Battery (Charger provided).
Charger	:
Input	: 230V AC $\pm 10\%$.
Operating Temperature	: 0°C to 50°C .
Storage Temperature	: -25°C to 60°C .
Connections	: Two 4-mm laboratory safety sockets for single measuring lines with 4 mm (safety) split plugs.

E. ACCESSORIES

5mm to 2mm Pin Test Leads (2 mtrs.)	- 1 Pair
Charger	- 1 No.
Instruction Manual	- 1 No.

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