


Multichannel Frequency Comparator VCH-315

 vremya-ch.com/index.php/en/products-en/freq-comparators-en/vch-315-en/index.html



Frequency comparator VCH-315 is intended for precise phase and frequency instability measurements. It contains eight identical measuring channels and performs high precision phase and frequency comparison.

Key applications

- verification of metrological parameters of precision frequency signals sources;
- time and frequency etalon systems;

- computed control measystem;
- scientific research measurements.

Manual for VCH-315

- Hardware Operational Manual (Software Operation Manual) download
- User Guide download

Specifications

Input signals: 5 or 10 or 100 MHz nominal frequency, (0.8÷1.2) V into 50 Ω load.

Input impedance: 50 Ω.

Noise passband: 10 Hz.

Maximal measured relative frequency difference: $\pm 5.0 \cdot 10^{-9}$.

Averaging time range: from 1 s up to 10^6 s.

Metrological characteristics are given in the table:

	Averaging time, (τ)	Allan deviation noise floor
	1 s	$\leq 1.5 \cdot 10^{-13}$
	10 s	$\leq 2.0 \cdot 10^{-14}$
	100 s	$\leq 3.0 \cdot 10^{-15}$
Main measurement error *(Frequency instability, inserted by noises of measurement channels)	1000 s	$\leq 5.0 \cdot 10^{-16}$
	1 day	$\leq 1.0 \cdot 10^{-16}$

* Specified under condition: ambient temperature changing rate $< 1^\circ\text{C}/\text{hour}$.

Interface: RS-232; USB.

Application software

- runs under Microsoft Windows 2000, XP, Vista, 7;
- calculates phase changing and frequency difference for each signals pair, two-samples Allan deviation, N-samples Allan deviation;
- represents measurement results as tables and plots, stores information in files.

Operating temperature range: $+5^\circ\text{C}$ to $+40^\circ\text{C}$.

Interface: RS-232; USB.

Power supply: AC(198÷242)V, (50÷60)Hz.

Power consumption: ≤ 40 V·A.

Dimensions (W×H×D): 483×133×370 mm.

Weight: 8 kg.

Warranty: 3 years.

Live time: 15 years.

