


Primary reference source VCH-1008C

 vremya-ch.com/index.php/en/products-en/telecommunic-en/vch-1008c-en/index.html



VCH-1008C Primary Reference Source on the base of Passive Hydrogen Maser is intended to be used as the first class SDH synchronization equipment of digital telecommunication networks. Full digital processing of modulation and servo loop signals is realized. Extremely high frequency stability is provided by state-of-the-art technology.

Key applications

– Digital SDH networks clock synchronization.

Specifications

Output signals:

Sine: 5 MHz; 10 MHz; 100 MHz, (1 ± 0.2) V RMS into 50 Ω load.

Pulse: 2.048 MHz (square pulse), $(1.5 \div 2.8)$ V (pp) into 75 Ω (ITU-T G.703 part15).

1Hz; 1/60 Hz, positive polarity pulse, width 100 ± 0.01 ; 10 ± 0.01 ; 1 ± 0.01 ; $0,1 \pm 0.01$ μ s, TTL level into 50 Ω , rise time: <15 ns.

Relative frequency accuracy	$\pm 3 \cdot 10^{-13}$ (factory calibration)
Accuracy (over environment)	$\leq \pm 1 \cdot 10^{-12}$
Output signals frequency corrector	resolution $1 \cdot 10^{-15}$
	retuning range $1 \cdot 10^{-10}$
Frequency stability (Allan variance at $(25 \pm 1)^\circ\text{C}$, environmental effects are excluded)	1 s $\leq 1.0 \cdot 10^{-12}$
	10 s $\leq 3.0 \cdot 10^{-13}$
	100 s $\leq 1.0 \cdot 10^{-13}$
Frequency stability (Allan variance at $(25 \pm 1)^\circ\text{C}$, environmental effects are excluded)	1 hour $\leq 3.0 \cdot 10^{-14}$
	1 day $\leq 2.0 \cdot 10^{-14}$

Time errors requirements of ITU-T G.811 / 6.1 and ETS 300 462-6 / 5.1.

	Time interval t(s)	MTIE (ns)
Maximum Time Interval Error	0,1 < t ≤ 1000	0.275t+25
	t > 1000	0.01t+290
	Time interval t(s)	TDEV (ns)
Time Deviation Error	0.1 < t ≤ 100	3
	100 < t ≤ 1000	0.03t
	1000 < t ≤ 10000	30
Manual synchronization to external 1 pps TTL signal accuracy		≤ ±50 ns
Magnetic sensitivity		≤ ±2 · 10 ⁻¹⁴ 1/Oersted

Full digital processing of modulation and servo loop signals.

Digital control and monitoring all operating parameters on LCD display.

Interface: RS-232C; USB; LAN .

Power supply: AC (100÷240) V, (50÷60) Hz; DC (38.4÷57.6) V, two inputs.

Power consumption: 80 W.

Dimensions (W×H×D): 470×200×530 mm.

Weight: 27 kg.

Warranty: 3 years (10 years extended).

Life time: 15 years.

