Varian 400-MR



The Varian 400-MR provides unmatched productivity for a variety of chemical applications by combining easy-to-use software with outstanding performance. The Varian MR workstation software provides enhanced capabilities within the StudyQ, Protocols and ViewPorts that make data acquisition and processing significantly more straightforward. DirectDrive™ and DirectDigital™ RF architecture and Varian shim technology ensure optimal data quality for every sample, with push-button simplicity.

In addition, the system has an extremely compact footprint and delivers outstanding cryogenic performance, resulting in improved siting and maintenance.

NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to www.agilent.com/chem.



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RF Channels	Highband	1H, 19F *
	Lowband	³¹ P - ¹⁰⁹ Ag *
	Each channel is configured with	PowerPC, 64 MB RAM, FPGA
	Waveform generator	Standard, each channel, 30 MB memory
	Timing resolution	12.5 ns
	Min. delay between modulated pulses	0
	Min. event time, phase, amplitude	50 ns
	Phase settling time	50 ns
	Phase resolution	0.044°
	Fine amplitude settling time	50 ns
	Fine amplitude control	60 dB in 4096 linear steps
	Coarse amplitude control	79 dB in 1 dB steps
	Base frequency resolution	0.1 Hz
	Min. frequency resolution, SLP	Infinitesimally small
	Highband amplifier, nominal	50 Watts pulsed
	Lowband amplifier, nominal	300 Watts pulsed
	Controller	POWERPC 64 MB RAM EPGA
Digital Receiver	Digitizer/Max oversampling rate	14 bit at 80 MHz eff. 20 bit at 10 KHz
	Maximum spectral width	5 MHz
	Data compression, digital filtering	Opthe-fly
	Ouad artifacts	None
		None
Lock	Controller	PowerPC, 64 MB RAM, FPGA
	Lock capture	Quad detection, simultaneous sampling
	Frequency	2H frequency ± 1 MHz
	Lock sample and hold	Pulse sequence controlled
PFG	Controller	PowerPC, 64 MB RAM, FPGA
	Waveform generator	Standard
	Timing resolution	12.5 ns
	Amplitude control	32,768 linear steps
	Min. gradient pulse length	2.4 µ s
Temp. Control	Standard	Ambient to 1E0 %C t
	Ontional	
	Ориона	
		400 NB
Magnet	Premium Shielded	Yes
	Drift (Hz/hr)	< 8
	Axial 5 G above floor (m)	2.1
	Radial 5 G (m)	1.0
	N ₂ refill (days)	14
	He refill (days)	270
	Full suite of 1D and 2D data acquisition experiments	
Data Acquisition and Processing Software	Full suite of data processing capabilities	
	Autoshim, Autogain, Autophase	
	Multitask, multiuser operation	
	StudyQ experiment queuing	
	Protocol driven methods	
	MAGICAL [™] II: Magnetics Instruments Control & Analysis Language	
	Flexible pulse sequence programming	
	ViewPorts for data viewing, processing	
	Database with integrated browser for tracking NMR data	
	Documented, easily accessible data format for external post-processing	
	On-line hypertext manuals	
	Computer	
Host Computer	Operating system	
	Operating system	LITUA

* See 400-MR Installation and Acceptance Manual and applicable probe specification pages for further information on tuning ranges and other details.

⁺ Upper and lower limits are defined by probe specifications and other peripherals such as ProTune™.

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