SPECIFICATIONS

	APOLLO 10	APOLLO 10X	APOLLO 100	APOLLO 100X
TIMEBASE Crystal Oscillator Frequency	10MHz			
Time between measurements	200ms nom.		Adjustable 200ms to 10 sec. nom. (Hold Control)	
Aging	<±5ppm/year	<±1ppm/year	<±5ppm/year	<±1ppm/year
Setability	<±0.5ppm	<±0.2ppm	<±0.5ppm	<±0.2ppm
Temperature Stability	±10ppm −10°C to +70°C Typ. ±2.5ppm +10°C to +40°C	±3ppm −10°C to +60°C Typ. ±0.5ppm 0°C to +40°C	±10ppm −10°C to +70°C Typ. ±2.5ppm +10°C to +40°C	±3ppm −10°C to +60°C Typ. ±0.5ppm 0°C to +40°C
INPUT A Bandwidth/Sensitivity	<5mV DC − 10MHz		10MHz range 100MHz range	<5mV DC − 10MHz <10mV 1MHz-50MHz <30mV 50MHz-100MHz
Coupling and Input Impedance	DC @ 1MΩ//30pF; AC @ 1MΩ//30pF; 50Ω			
Low Pass Filter	Coupling DC; cut-off frequency 50kHz nom.; switch selectable			
Maximum Input Voltage	AC Coupling: 50V DC or 250V rms @ 50Hz decreasing to 5V rms @ >70kHz; DC Coupling: 300V DC			
Triggering	Level adjustable, + ve or − ve edge; L.E.D.'s indicate when triggered			
Attenuator	x1, x10 switchable			
INPUT B Bandwidth/Sensitivity	<5mV DC − 2 MHz			
Coupling and Input Impedance	DC @ 1MΩ//30pF; AC @ 1MΩ//30pF; 50Ω			
Low Pass Filter	Coupling DC; cut-off frequency 50kHz.; switch selectable			
Maximum Input Voltage	AC Coupling: 50V DC or 250V rms @ 50Hz decreasing to 5V rms @ >70kHz; DC Coupling: 300V DC			
Triggering	Level adjustable, + ve or − ve edge; L.E.D.'s indicate when triggered			
Attenuator	x1, x10 switchable			
FREQUENCY A Gate Times	0.01 sec.; 0.1 sec.; 1 sec.; 10 sec.			
	RANGE	RESOLUTION	RANGE	RESOLUTION
Ranges/Resolution	DC − 10MHz	(1 ÷ Gate Time) Hz	1MHz − 100MHz	(10 ÷ Gate Time)Hz
			0.1Hz − 10MHz	(1 ÷ Gate Time)Hz
	PSC ÷ 10	(10 ÷ Gate Time) Hz	Multiplier 6Hz − 100kHz (<5 sec. settling time)	((0.1 ÷ Gate Time)Hz
	PSC ÷ 100	(100 ÷ Gate Time) Hz	Multiplier 14Hz − 10kHz (<5 sec. settling time)	((0.01 ÷ Gate Time)Hz
Accuracy	±(1 count + timebase accuracy)			
FREQUENCY RATIO A TO B Frequency Maximum	Input A: 10MHz; Input B:2 MHz			
Ratio Averaged Over	1, 10, 100, 1000 cycles of Input B			
Resolution	1 ÷ no. of cycles of Input B			
Accuracy	±1 count			
PERIOD A Measurement Type	Single Cycle and Multiple Period Average			
Period Range	500ns − 10 sec.			
Display	µs			
Period Averaged Over	1, 10, 100, 1000 cycles			
Resolution	100ns ÷ no. of cycles averaged			
Accuracy	±(timebase accuracy + resolution + [trigger error* ÷ no. of cycles averaged])			
TIME INTERVAL A TO B Range	250ns − 10 sec.			
Display	µs			
Minimum Pulse Width	250ns			
Maximum Frequency	2 MHz			
Time Interval Averaged Over	1, 10, 100, 1000 Intervals			
Resolution	100ns ÷ no. of intervals averaged			
Accuracy	±(timebase accuracy + resolution + [trigger error* ÷ no. of intervals averaged])			

	APOLLO 10	APOLLO 10X	APOLLO 100	APOLLO 100X
COUNT A Count Maximum	10^8-1			
Input Frequency	10MHz max.			
Resolution	1 count			
Reset	External reset Input		Manual (reset button) or External reset Input	
Gating	Input B		Manual (stop/start button) or Input B	
STOPWATCH Display			Seconds	
Times to			10^8 sec. (>11 days)	
Resolution			10ms	
Accuracy			±(timebase accuracy + 10ms)	
Reset			Manual (reset button) or External reset Input	
Gating			Manual (stop/start button) or Input B	
RPM A Display			1000's RPM	
Range			1 to 10^{11} RPM	
Gate Time			0.06 sec.; 0.6 sec.; 6 sec.; 60 sec.	
Resolution			(60 ÷ Gate Time) RPM	
Accuracy			±(timebase accuracy + 1 count)	
EXTERNAL TIMEBASE OSCILLATOR	External oscillator in/Internal oscillator out; switch selectable; TTL compatible			
Calibration Frequency	10MHz			
Input Frequency Range	100kHz nom. min. to 10MHz			
Input Voltage Range	0V to +5V max.			
Input Load	1 HCMOS Input			
Output Frequency	10MHz			
Output Drive	Sink 5mA, source 5mA			
EXTERNAL RESET INPUT	Active low; TTL compatible; Input Voltage range ±20V max.			
POWER REQUIREMENTS	Mains operation only. 100−120V, 220−240V AC 50−60Hz; 24VA			
DISPLAYS	8 Digit 7-segment 0.5" bright L.E.D.'s; automatic decimal point; leading zero suppression Unit Indicators for MHz, kHz, sec., µsec., KRPM; overflow indicator; gate indicators			
ANCILLARY CONTROLS			Display Hold: adjustable 200ms to 10 sec. nom. Trigger Hold-off: adjustable 5 to 500ms nom. Single Measurement.	
General Environmental Operating Range	0°C to +40°C (10% − 80% RH non-condensing)			
Case	Custom-moulded, sturdy, lightweight ABS, with tilt stand			
Size	219mm x 240mm x 98mm (product only) 321mm x 352mm x 174mm (packed)			
Weight	2.2Kg (product only) 2.9 Kg (packed)			
Supplied Accessories	Mains Lead, Instruction Manual, Spare Fuse			
Optional Accessories	Passive Probes, BNC Cable Assemblies, Service Manual			
Rear Panel facilities	Power on/off; spare fuse; External reset Input; External timebase			

*Typical Trigger Error = $\frac{1.6}{\text{Slope (V/us)}}$ ns

MAXIMUM INPUT VOLTAGES