

AL Series

AL2020 / AL2020C

Digital Storage Oscilloscope

YOKOGAWA 



- Compact, User-Friendly Yet Powerful
- 150 MHz Bandwidth (-3dB)
- 25GS/Sec ET Sampling
- 125 K/Ch Record Length
- Wide Variety Of Trigger Setting
- Downloadable Supporting Software



Bulletin AL2020-E



AL2020C (150MHz)

- Go-NoGo And Auto Setup Sequence
- FFT Function
- Built-In Help Menu, Multi-Language And PC Software
- Standard Interface : USB, RS-232C, Printer Port
- Option : GPIB Interface



AL2020 (150MHz)

- 150MHz Bandwidth With Either Color Or Monochrome LCD Display
- 125k Long Memory And 12 Division Horizontal Display
- 25GS/s Sampling Rate For Repetitive Waveforms
- Advanced Trigger : Pulse Width, TV Line, Event Delay And Time Delay

Yokogawa AL2000/C series DSO have 150MHz bandwidth with color or Mono LCD display, are designed and built to meet the needs of today's engineers.

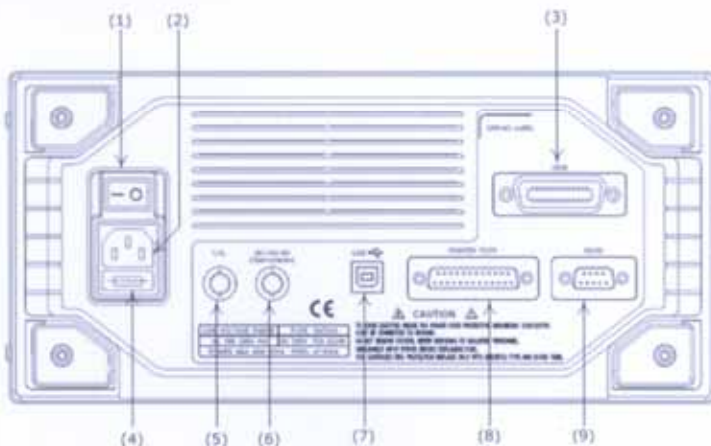
The unmatched performance, user-friendly design and versatile interface make AL2000/C a very useful equipment for most of the applications in various fields. AL2000/C series has **25G S/s ET sampling** capability and provide high resolution of 40ps for repetitive waveforms.

Longer record length (125K) gives the benefit of higher sampling rate at the same time-base.

Furthermore, this series offer an alternative to view the signal with 12 horizontal divisions, which matches long memory applications! AL2000/C has **advanced trigger functions**, such as Pulse Width, TV Line, Event-Delay, and Time-Delay, offer a very strong trigger capability that could only be found in a high-end DSO! The on-screen Help Menu tells you the operation information you need. **15 auto measurement functions** of AL2000/C give you direct readouts of most of the frequently measured parameters!

AL2000/C series provide **various kinds of interface** including USB,RS-232C and Printer Port as standard, and GPIB as optional. With USB and software, you can quickly send the signal from DSO to PC within a very short time. **The FFT function** converts a captured waveform from time domain into frequency domain. **The Go-No Go function** gives an instant view of the performance of a 15 Automatic Measurements

Rear Panel



- (1) Main power switch
- (2) AC power socket
- (3) GPIB port (option)
- (4) Fuse drawer
- (5) "SELF CAL" output BNC ((DC output :0-±2V)
- (6) "GO/NO GO" output BNC (A 10us pulse will generated, 5V Maximum/10mA TTL output.
- (7) USB connector
- (8) Printer port
- (9) RS232C Port

Specifications

DISPLAY SYSTEM

Display Device	AL2020 : Mono (320 x 240) 5.7 inch LCD
	AL2020C : Colour (320 x 240) 5.7 inch LCD
Display Contrast	Adjustable
Waveform Display Graticule	8 x 10 Divisions (8 x 12 div, when menu off)
Display Mode	Dot, Vector, Accumulate

VERTICAL SYSTEM

Bandwidth	150MHz (-3dB)
Channels	2
Vertical Resolution	8-Bit
Vertical Sensitivity	2mV/div ~ 5V/div
Vertical Accuracy	± 3%
Rise Time	< 2.3ns
Input Coupling	AC, DC, Ground
Input Impedance	1MΩ ± 2%, ~ 22pF
Polarity	Positive & Negative
Maximum Voltage Between Signal & Common At Input BNC	300V (DC + AC peak), CATII
Waveform Signal Process	CH1 + CH2, CH1-CH2, FFT
Offset Range	2mV/div ~ 50mV/div : ±0.5V; 100mV/div ~ 500mV/div : ±5V; 1V/div ~ 5V/div : ±50V
BW Limit	20MHz (-3dB)

HORIZONTAL SYSTEM

Time Base Range	1ns/div ~ 10s/div; Roll : 250ms/div ~ 10s/div
Time Base Mode	Main, Window, Window Zoom, Roll, X-Y
Time Base Accuracy	± 0.01%
Delay Range	Pre-Trigger : 20 div maximum; Post-Trigger : 1000 div

SIGNAL ACQUISITION SYSTEM

Real-Time Sample Rate	100MS/s maximum on each channel
Equivalent Sample Rate	25GS/s E.T. maximum on each channel
Record Length	125k/CH
Peak Detection	10ns (500ns/div ~ 10s/div)
Acquisition Mode	Sample, Peak Detect, Average
Average	2, 4, 8, 16, 32, 64, 128, 256

TRIGGER

Trigger Source Mode	CH1, CH2, Line, Ext Auto Level, Auto, Normal, Single, TV, Time Delay, Event Delay, Edge, Pulse Width
Coupling	AC, DC, HF, LF, Noise Reject
Sensitivity	DC ~ 30MHz : 0.5div or 5mV; 30MHz ~ 150MHz : Approx 1.5div or 15mV

X-Y MODE

X-Axis Input / Y-Axis Input	Channel 1 / Channel 2
Phase Shift	± 3° at 100kHz

CURSOR & MEASUREMENT

Auto Voltage Measurement	V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min}
Auto Time Measurement	Freq, Period, Rise Time, Fall Time, Positive Width, Negative Width, Duty Cycle
Cursor Measurement	Voltage Difference Between Cursors (ΔV), Time Difference Between Cursors (ΔT), Frequency Difference Between Cursor ($1/\Delta T$)

FREQUENCY COUNTER

Readout Resolution	Max. 6 Digits
Frequency Range	AC Coupled, 10Hz Minimum To Rated Bandwidth
Signal Source	All Available Trigger Source Except The Pulse Width & Video Trigger Mode

EXTERNAL TRIGGER

Range	±15V
Sensitivity	DC ~ 30MHz : ~50mV; 30 ~ 150MHz : ~100mV
Input Impedance	1MΩ ± 2%, ~ 22pF
Maximum Input	300V (DC + AC Peak), CATII

CONTROL PANEL FUNCTION

AutoSet	"Autoset" Can Adjust Vertical (Volt/div), Horizontal (Sec/div) and Trigger Level Automatically
Save / Recall	Up To 15 Sets Of Measurement Conditions Can Be Saved And Recalled
Waveform Trace Save / Recall	2 Sets Of Waveform Can Be Saved And Recalled

INTERFACE

USB	Standard
RS-232C	Standard
Printer Port	Standard
GPIO	Option

POWER SOURCE

100V ~ 240V AC 48Hz ~ 63Hz, Auto Selection

ACCESSORIES

Power Cord x 1, Operation Manual x 1,
GTP-150A Probe (10:1/1:1) x 2

DIMENSION & WEIGHT

254D x 142H x 310W (mm), Approximately 4.1Kg

AL2020 / AL2020C

Model Numbers & Suffix Codes

Model	Suffix Code	Description
366710	-----	AL2020 150MHz Digital Oscilloscope (Monochrome)
366720	-----	AL2020C 150MHz Digital Oscilloscope (Color)
Power Source	- AC	Power Source 100V ~ 240AC (48 ~ 63Hz)
Power Cable	- B	No.11 (S/100V) -- Taiwan & Japan
	- D	No.12 (UA/120V) -- USA & Canada
	- F	No.14 (EU/230V) -- Europe
	- R	No.17 (SAA/230V) -- Australia
	- J	No.18 (E/230V) -- England & Singapore
Option	/C1	GPIO - Option

Related Products



For detailed specifications, visit our homepage at

<http://www.yokogawa.com/sg>

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