LASER®

5263

Logic Probe DC

Troubleshooting instrument

NEW PRODUCT



Description

Simplifies troubleshooting digital circuits by combining a logic probe and pulser in one tool

- Visual and audio indications
- Powered by the circuit being tested
- Extra long leads - 147cm length.

Packaging

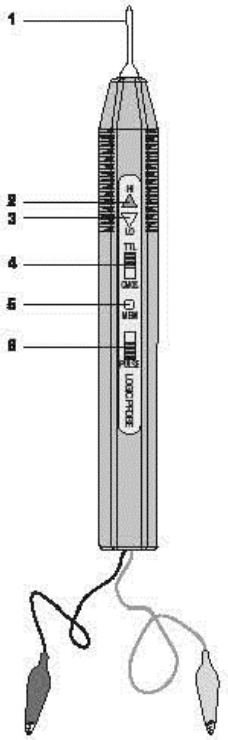
Sliding Blister

Additional Information

RoHS and CE certification

LASER Kamasa Gunson Eldon

Designed as a logic troubleshooting instrument which displays visual (LED) and audio indications for logic levels (Boolean 0 or 1) and pulses. It can also capture positive or negative events as short as 30 nanoseconds. The unit is powered by the circuit under test.



Precautions

- Do not use if the unit is damaged or operates abnormally.
- Take care not to ground yourself when using the unit.
- To avoid electric shock, do not touch any bare conductors, pins or terminals.
- Do not input more that 40V AC or DC or the unit will be damaged.
- Spark danger — do not use near explosive gas or vapour.

1: Probe
2: High LED (red)
3: Low LED (green)
4: TTL / CMOS switch
5: Yellow LED (Note: If the PULSE/MEM switch is in the MEM position and the unit captures a positive or negative pulse, the yellow LED will light and does not turn off until the PULSE/MEM switch is set to PULSE position).
6: PULSE/MEM Switch (Note: there are two positions for this switch: PULSE: normal operation mode for pulse or level detection MEM: pulse capture or memory).
7: Black clip: should be connected to ground or common of the circuit to be tested.
8: Red clip: should be connected to the Vcc of circuit to be tested.

Instructions

1. Connect the black clip to ground or common of the circuit to be tested. Connect the red clip to the Vcc of the circuit.
2. Select either TTL (transistor-transistor logic or CMOS (complementary metallic oxide semiconductor), according to the logic type to be tested. (Note: TTL level is nominal 0 to 5V DC and CMOS levels are 0 to 5-15V DC. For pulse or logic level testing, set the PULSE/MEM switch to PULSE position.
3. Touch the probe tip to the circuit point to be tested. The unit will give LED and sound indications indicating the logic level or signals. (See table.)
4. Setting the PULSE/MEM switch to MEM position allows the unit to capture a positive or negative pulse — the yellow LED will light and does not turn off until the switch is set to PULSE position.

Tip: Before use, verify the logic probe's operation by measuring known signals.

Specifications:

Input Signal	Level	LED Indication	Buzzer
Logic: 1	TTL: > 2.3V ± .02V DC CMOS: > 70% Vcc ± 10%	High: (Red) ON High: (Red) ON	Fixed tone Fixed tone
Logic: 0	TTL: < .08V ± .02V DC CMOS: < 30% Vcc ± 10%	Low: (Green) ON Low: (Green) ON	Fixed tone Fixed tone
Bad logic level or open circuit		None	No tone
Square wave	< 200Hz	High and Low blinks at frequency rate	Variable tone at frequency rate
Square wave	> 200Hz	High and low may or may not be ON	Variable tone at frequency rate
Narrow high pulse	TTL: > 2.3V ± .02V DC CMOS: > 70% Vcc ± 10%	Low blinking intensity depends on pulse duty cycle	Variable tone at frequency rate
Narrow low pulse	TTL: < .08V ± .02V DC CMOS: < 30% Vcc ± 10%	High blinking intensity depends on pulse duty cycle	Variable tone at frequency rate

Electrical Specifications:

Power Supply: 5 – 15V DC
Power Supply Protection: 20V DC / AC
Maximum Input Voltage: 40V DC / AC (duration < 15 seconds)
Maximum Input Signal Frequency: 20MHz
Input Impedance: 1MΩ
Pulse Indicator Flash Time: 500mS
Operating Temperature: 0 - 40°C (relative humidity < 80%)
Storage Temperature: -20 - 50°C (relative humidity < 85%)

Minimum Detectable Pulse Width:

Frequency	1kHz	1k ~ 20kHz	20k ~ 20MHz
Minimum Pulse Width	100ns	50ns	30ns
Pulse Amplitude ± 3V			