

## CSI 555 Vibration Strobe Light



*The CSI 555 Vibration Strobe Light provides accurate phase analysis results.*

- *Determine the speed of the machine while aiding in more accurate vibration analysis results*
- *Visually inspect high speed rotating machinery with freeze motion*
- *Determine phase and perform balancing through TTL output*
- *Interface to the CSI 2130 Machinery Health™ Analyzer for speed and phase information*
- *Lightweight and self-contained for portable field usage applications*

### **Visually Inspect Machinery Without Impacting Production**

The CSI 555 Vibration Strobe Light allows for phase measurement without stopping the machine to install reflective tape. Built for rugged and portable applications, the CSI 555 provides accurate results and can be operated anywhere in the plant.



*User interface consists of an easy-to-read digital display of RPM and mode with simple keypad buttons for selecting different modes, operations, or views.*

Through freeze motion, operations and maintenance personnel can visually inspect high-speed rotating machinery with no stoppage to production.

The Filter Bandwidth Selector provides the ability to optimize the signal in the tracking mode, while the Relative Phase Adjustment allows for position of the reference mark. Unique "Tracking Filter" maintains phase lock to input pulse.

The self-contained CSI 555 weighs only 1.9 lbs (0.852 kg) and is battery-powered, making it easy to hold or mount on a tripod. The Xenon lamp ensures the CSI 555 is bright enough for use in fully-lighted areas.

### **Precise Synchronization to the CSI 2130**

The CSI 555 is uniquely designed to provide precise, instantaneous synchronization with the CSI 2130 for speed and phase information.

A vibration transducer provides the vibration signal to the CSI 555 and CSI 2130 through an interconnect cable. The CSI 555 then provides the phase referenced tachometer signal (output), which is used as an input to the CSI 2130 for triggering.

This capability makes the CSI 555 different from general purpose strobe lights.

### **Typical Operation with the CSI 2130:**

1. Dial in RPM to stop motion of rotor (INT. Mode).
2. Select LOCK/TRACK Mode (strobe locks to external vibration signal from accelerometer).
3. Select Filter (wide tracks changes better, narrow provides stabilization).
4. Adjust Relative Phase to view reference mark.

## Specifications

### Flash Range

- 30-50,000 FPM (Flashes/Minute)  
0.5-830 FPS (Flashes/Sec. or Hz)

### Accuracy

- $\pm 0.002\%$  of setting  $\pm$  least significant digit

### Digital Adjustment Knob

- 36 detents per revolution and blinking decade selection

### Flash Rate Resolution (Internal Triggering)

- 0.01 to 1.0 FPM (Menu Selectable)

### Indicators

- Battery Level, On Target, Time, Auto, Alt, Tach, Lock, and EXT icons

### Operating Time

- 2 hours typical @1800 FPM (operates continuously on AC power)

### Phase Delay - Degrees

- 0.1 to 359.9 degrees

### Tracking Filter

- Selectable Wide and Narrow Bandwidths.  
Filter may not lock below 100 FPM

### Time Delay

- 0.01 to 1000 msec.

### Virtual RPM (Slow Motion)

- 0-200 VRPM

### Flash Energy (Typical)

- 230 mJoule up to 3450 FPM

### Flash Duration (Typical)

- 8-20 microseconds

### Average Power - Watts

- 11 Watts @ 3000 FPM; >13 Watts @ 3450 FPM

### Tachometer Mode

- 5-250,000 RPM from external trigger

### External Input (1/8" phone plug)

- Input Pulse - 0.5 usec min, TTL to 24V max (1/8" phone plug)

### Trigger Output/Remote Sync (Typical)

- 3.3V TTL Compatible 40 usec pulse-Positive/Negative

### Power

- Internal rechargeable NiMH batteries

### Weight

- 1.9 Lbs. (0.852 kg) including batteries

## Features

- Flash rates from 30 to 50,000 flashes per minute, adjustable in 1 FPM increments. The all digital, crystal controlled microprocessor keeps readings rock steady.
- Selectable tracking filter allows for solid phase reading.
- Individual in and output TTL jacks provide signal to the CSI 2130 from accelerometer.
- Relative Phase Adjustment is user selectable, allowing reference mark to be positioned at a convenient visual location.
- Backlit alphanumeric LCD display shows flash rate in flashes per minute.

## Ordering Information

The CSI 555 package includes:

CSI 555, CSI 2130 interface cable, fast recharger, and spare lamp – all in a latching carrying case.

Model	Description
A0555-30	CSI 555 package for 110/220V
D251999	CSI 2130 interface cable



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