

# SHIMPO INSTRUMENTS

## High-Intensity, Battery Powered LED Stroboscopes.

The DT-365 High-Intensity, Battery Powered LED Stroboscopes are velocity analyzing and measuring devices that are ideal for machinery process inspection. The DT-365 Stroboscopes are capable of flashing their LED lights in a synchronous frequency to the operating machinery, creating the illusion of viewing slowed or frozen images. Utilizing this phenomenon of slowing or stopping the motion with the adjusted flash rate of its LED lights, machine parts and processes may be inspected for defects, aiding in preventative maintenance programs. This LED technology extends operation due to the low energy requirement of the light diodes compared with xenon lit stroboscopes. Proper operation is assured as concern of light failure during usage, common with xenon bulbs, is eliminated. The light output (Lux) of the LED's is far brighter than xenon powered stroboscopes with the DT-365 outshining all comparable stroboscopes on the market from its array of 18 LED's.

The operation panel is a vibrant red LED display that is ideal for viewing in dark locations. The simple to use keypad plus rate adjustment dial aids in making quick changes of the flash rate to coincide with changes in the speed of your process. The dial allows fine-tune altering of the flash rate while the  $\times 2/\div 2$  keys enable large spanning over the entire flash range.

The DT-365 has the added feature of modifying the flash duration or on time which aids in picture clarity often necessary in printing processes. The phase shift function is ideal for rotating equipment where the user needs to change the focus on different blades, gears, or section of the machinery. These stroboscopes are also capable of being synchronized with an input signal. To complete the system, the DT-365 has a power output to supply an input sensor if desired. The robust aluminum housing is NEMA-4X (IP65) protected allowing usage in harsh plant environments. The DT-365's array of 18 LED's allows continuous operation from 2 to 5 hours depending on user settings. Typical applications for the DT-365 are to determine speeds, inspect rotors, meshing gears, motors, textile equipment, printing production lines, conveyors, industrial fans, pump operation, vibration equipment diagnostics and many more.

## Easy Operation Control



## Measuring Quality

## DT-365 LED Portable Stroboscopes



## Features

- Extraordinary durability with extruded aluminum, NEMA 4X (IP65) construction
- Bright LED display and simple controls aid in user operation
- Long Lasting, quick-charge NiMH rechargeable battery provides exceptional usage reliability
- Phase shift (in degrees of delay time) enables visual analysis of rotating or reciprocating objects through all points of motion/time/angle
- Flash controller dial permits accurate adjustments to the flash rate
- LED technology greatly extends operation life and eliminates need to replace burned out bulbs
- Capable of being synchronized with input signal from sensor or controller

### LOAD

Store and retrieve 5 flash setting values

### SIG

Change Operation from INTERNAL to EXTERNAL flash control

### MODE

Select between Flash Mode or Flash Duration and phase shift settings

### $\times 2/\div 2$

Multiply or divide Flash Rate Setting by  $\times 2$  or  $\div 2$

### UNIT

Select between degrees or ms in phase shift mode, select between degrees and  $\mu s$  in flash duration mode

## DT-365 Specifications

<b>Range FPM (RPM)</b>	60-120,000; From Input Signal 40-35,000
<b>Accuracy</b>	±0.02% of reading
<b>Lux Rating (Approx.)</b>	6000 FPM & 3.6° (100 $\mu$ s): Distance 8" (20 cm) 18,400 lx with 10" (250 mm) irradiation dia., Distance 20" (50 cm) 6200 lx with 13.5" (350 mm) irradiation dia. 1500 FPM & 3.6° (400 $\mu$ s): Distance 8" (20 cm) 15,000 lx with 10" (250 mm) irradiation dia., Distance 20" (50 cm) 6000 lx with 13.5" (350 mm) irradiation dia.
<b>Lamp Lifetime</b>	Typ. 50,000 hours. Varies depending on usage.
<b>Display</b>	6 digit Red LED
<b>Resolution</b>	Internal Mode 1 FPM. External Mode 0.1 FPM
<b>Flash Duration</b>	0.1 to 3.6° (0.14 $\mu$ sec to 400 $\mu$ sec)
<b>Phase Shift</b>	0 to 999 msec; 0 to 359°
<b>Power Requirement</b>	100 to 230 VAC to included AC power adapter
<b>Battery</b>	NiMH battery requires approximate 2.5 hour recharge time
<b>Battery Life</b>	Approx. 2 hrs. with flash duration set to 3.6° & 5 hrs. with duration set to 1.0°
<b>Synchronization Input Signal</b>	H level: 2.5 - 12V; L level: 0 - 0.4V
<b>Input Signal Range FPM (RPM)</b>	40 - 35,000
<b>Input Signal Flash Delay FPM (RPM)</b>	60-10,000
<b>Input Signal</b>	12V pulse input
<b>Power Supply Output</b>	DC12V 40mA for sensor input
<b>Temperature Limits</b>	32 to 95°F (0 to 35°C)
<b>Humidity Limits</b>	35 to 85% RH
<b>Protection Class</b>	NEMA 4X (IP65)
<b>Product Weight</b>	4.6 lbs (2.1 kg)
<b>Package Weight</b>	6 lbs (2.72 kg)
<b>Approvals</b>	RoHs
<b>Warranty</b>	2 year
<b>Included Accessories</b>	AC power adapter, Input signal connector, flash-light style attachable handle

## Ordering Details

<b>DT-365</b>	High Intensity Portable LED Stroboscope with Rechargeable Battery
<b>SAS-360</b>	Flexible swing arm for DT-361, DT-365, DT-365E LED Stroboscopes
<b>SAS-360BASE</b>	SAS-DT360 Mounting base
<b>CABLE-361-10FT</b>	Daisy chain syncing cable for DT-361 and DT-365 stroboscopes with Connectors, 10 ft length
<b>NIST-STROBE-IN</b>	NIST traceable certificate of calibration for stroboscopes

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