

# SHIMPO

**The DT-311A heavy duty, AC powered stroboscope provides the illusion of “stopped motion”:** by adjusting the strobe’s flash rate, equipment appear to be standing still or in slow motion. The DT-311A also measure rotational (RPM) or reciprocating (strokes per minute) speeds with the same precision as an electronic digital tachometer. Ideally suited for printing inspection, motion analysis, preventive maintenance and speed measurement of repetitive motion, DT-311A strobes provide timely data on vibrating parts, leaks, spray patterns and a variety of industrial and scientific operations the DT-311A strobe is extremely easy to maneuver and operate via its lightweight and compact design and simplified user interface. Its rugged metal construction provides unequaled reliability in the harshest environments.

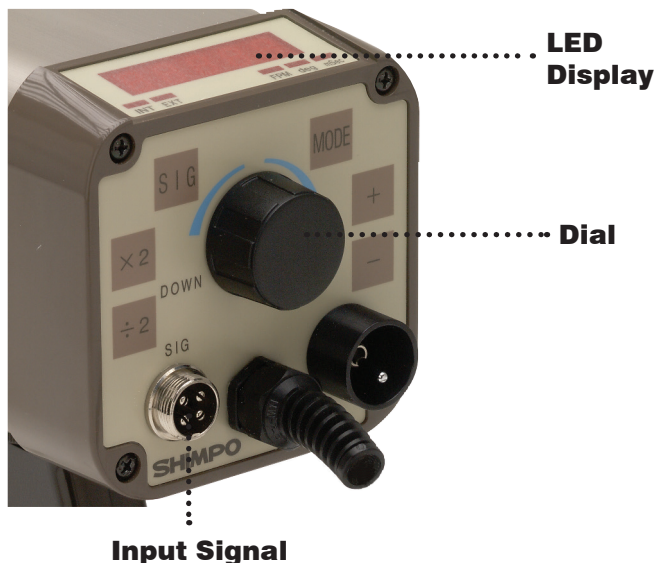
## DT-311A Heavy Duty, AC Powered Stroboscope



### Features

- Aluminum construction provides exceptional durability
- High polish and focused reflector eliminates “blind” viewing areas
- External trigger allows unit to be automatically synchronized with equipment
- Continuous duty cycle eliminates need to shut down for cooling
- Phase shift allows visual analysis of rotating/reciprocating objects
- High accuracy (  $\pm 0.01\%$  of reading ) is ideal for QC inspection and process control
- Synchronous output enables strobe to drive other strobes
- Flash timer control conserves flash tube life
- Easy tri-pod or permanent mounting with integral mounting thread

### Easy Operation Control



**SIG**

Change Operation from INTERNAL to EXTERNAL flash control

**MODE**

Internal Signal “MODE” (Flash) or External Trigger Control LED Changes to Indicate FPM (flash/min.), flash delay in degrees and flash delay in milliseconds

**X2 /  $\div 2$**

Adjust Flash Rate Settings Increase 2 times or decrease by 2 the flash rate setting when in “Internal” mode

**+/-**

Phase “SHIFT” Advance or Retard viewed motion in degrees or milliseconds



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## DT-311A Specifications

<b>Flashing Range</b>	40.0 - 35,000 fpm (flashes per minute)
<b>Accuracy</b>	±0.01 % of reading
<b>Resolution</b>	0.1 fpm: 40.0 - 5,000 fpm / 0.2 fpm: 5,001 - 8,000 fpm / 0.5 fpm: 8,001 - 10,000 fpm / 1 fpm: 10,001 - 35,000 fpm
<b>Phase Shift</b>	Use +/- push buttons (360° in 6 seconds)
<b>Display Update Time</b>	0.2 sec approx
<b>Output Signal</b>	Synchronous, 400 $\mu$ sec. Pulse output, 0 to +12 VDC amplitude(approx.), 4.7 K $\Omega$ impedance
<b>Rate Multiplier/Divider</b>	Multiply by 2, divide by 2
<b>Flashing Range</b>	0.0 to 35,000 fpm
<b>External Mode Accuracy</b>	±0.01 % ±1 digit
<b>Phase Shift</b>	0 to 359° with 1° resolution
<b>Delay Time</b>	0 to 2,000 mSec from 40 - 10,000 fpm
<b>External Trigger Input Signal</b>	LO level: 0 -0.8 VDC, HI level: 2.5 - 12 VDC or open collector (NPN), pulse width 50 $\mu$ sec min.
<b>Input Impedance</b>	4.7 K $\Omega$ to 12 V / 6.8 K $\Omega$ to 0 V
<b>Display</b>	5 digits, 0.4" (10 mm) high, LED
<b>Flashtube Power/Life</b>	Xenon, 10 W max. (100 million flashes)
<b>Flash Duration</b>	10 to 40 $\mu$ s automatically adjusts with flash rate
<b>Lux Rating</b>	8" (20 cm) Distance = 4500 lx @ 1500 fpm, 3375 lx @ 6000 fpm with 4.5" (110 mm) irradiation diameter. 20" (50 cm) Distance = 1300 lx @ 1500 fpm, 930 lx @ 6000 fpm with 10" (250 mm) irradiation diameter.
<b>Sensor Power Supply</b>	<b>12 VDC (40 mA)</b>
<b>Power Requirement</b>	115 VAC or 220 VAC ±10 % 60/50 Hz, 30 VA (specify voltage)
<b>Operating Temperature</b>	32 - 104°F ( 0 - 40°C )
<b>Product Weight</b>	2.6 lbs (1.2 kg)
<b>Package Weight</b>	3.35 lbs (1.5 kg)
<b>Dimensions</b>	7.28" L x 4.72" W x 4.72" H (185 mm x 120 mm x 120 mm)
<b>Warranty</b>	2-Year
<b>Included Accessories</b>	Handle, flash tube removal tool



**Printing  
Inspection:  
Color  
Registration**

## Ordering Details

<b>DT-311A</b>	Heavy duty, AC powered stroboscope
<b>DT-311A-230V</b>	Same as 311A but 230 VAC power
<b>NIST-STROBE</b>	NIST traceable certificate for digital stroboscopes, includes data

## Accessories

<b>CARRYING-CASE</b>	Carrying Case for DT-311A
<b>FLASHTUBE-311-2</b>	Replacement flash tube for DT-311A
<b>CABLE-311-10FT</b>	Input/output cable for DT-311A
<b>SAS-DT300</b>	Permanent mount swing arm
<b>SG-300</b>	Rubber strobe guard for DT-311A
<b>LS-S50MLR-DT311</b>	Laser sensor with NPN/PNP (NO,NC) outputs, 1.5 kHz frequency, LED indication, DT-311A Connector Cable, NEMA 6 (IP67) rating



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