Nidec

Measuring Quality

DT-311A Heavy Duty, AC Powered Stroboscope

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 stroboscope 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.



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 (±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 / ÷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

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



Printing Inspection: Color Registration

Ordering Details

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

Accessories

CARRYING-CASE	Carrying Case for DT-311A
FLASHTUBE-311-2	Replacement flash tube for DT-311A
CABLE-311-10FT	Input/output cable for DT-311A
SAS-DT300	Permanent mount swing arm
SG-300	Rubber strobe guard for DT-311A
LS-S50MLR-DT311	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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