

RISHI STROBOSCOPE

MODEL: HD220

*THE NEW WAY FOR STROBOSCOPIC
OBSERVATION:
STATIONARY IMAGES ARE ALWAYS OBTAINED
WITH A HIGH BRIGHTNESS
AT ANY SPEED OF THE OBSERVED OBJECT*



- **FREQUENCY RANGE UP TO 30.000 FLASHES/MIN (RPM) WITH LCD DIGITAL SPEED READOUT**
- **INNOVATIVE MICROPROCESSOR CIRCUIT TO DEVIDES FLASH FREQUENCY AUTOMATICALLY**
- **HIGH BRIGHTNESS FLASHES REGARDLESS OF EXTERNAL TRIGGER INPUT FREQUENCY**
- **RANGE UP TO 128.000 INPUT/MIN FROM EXT TRIGGER: PROBLEMS OF OVER-RANGE AND OVER-HEATING DUE TO FLASH SYCNHRONIZATION OF FAST SPEED ARE TOTALLY ELIMINATED**
- **FLASH CONTROL BY INTERNAL OSCILLATOR AND BY EXTERNAL TRIGGER**
- **PHASE SHIFTER CIRCUIT TO SHIFT THE ANGLE OF OBSERVATION ON 360°**
- **FAN-COOL EQUIPPED FOR LONG TIME CONTINUOUS USE**
- **SUITABLE FOR FIXED MOUNTING OR PORTABLE USE**
- **RUGGED, RELIABLE, COMPACT, FULLY COMPLIES WITH CE DIRECTIVES**

INNOVATION IN STROBOSCOPIC OBSERVATION:

With the new **HD220** stroboscope it is possible to obtain stationary images of an object always with a high flash brightness at any movement speed, thanks to an innovative microprocessor circuit that automatically divides real frequency each time a certain limit has been overcome: stopped image happens at submultiple frequencies of the real frequency, while flash brightness is always with high intensity. Functionality and reliability of instrument will be particularly appreciated: a high flash brightness is always available for constant optimal observation and the problems of over-range and over-heating due to flash synchronization of fast speed by external trigger are totally eliminated. Moreover a "direct readout" function is available to directly measure the real speed of an object: flash frequency is not divided by microprocessor and it is possible to observe and to measure the real speed of an object in a precise way.

DESIGN AND OPERATION:

The HD220 stroboscope is a professional instrument with high performances and reliability, suitable to observe and to measure fast motions with a high brightness flash lamp. The synchronization of the flash lamp occurs by means of external trigger (with tachimetric function) such as the internal oscillator with coarse and fine regulation for a quick and precise adjustment. Revolution readout in RPM and Hz is easy thanks to a large dot matrix LCD display.

High brightness internal lamp with STROBE function permits constant optimal observation: when fast movement are observed with external trigger synchronization, problems of over-range and over-heating are totally eliminated, long time observations are possible always with high brightness flash lamp. Additional separated lamps are available, to further increase the intensity of flash lamp and illuminated area. The phase shifter circuit permits an image shifting on 360°, to obtain the angle of observation into the most favourable position. Instrument is equipped with a fan-cool to permit a long time use, and of a standard 0-5V TTL output, to connect external devices. The HD220 stroboscope is suitable for a fixed mounting near the object to be illuminated, such as for a portable use. The instrument is encased in a rugged, high-impact plastic housing, with handle for the best portability.

APPLICATIONS:

The HD220 stroboscope is always used in all Production and Maintenance Industries, wherever motion sequences have to be analysed or rotation speeds have to be measured. observation on textile and printing machines – quality control – observation of mechanical deformations – packaging – laboratories – etc

TECHNICAL CHARACTERISTICS:

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|------------------------|--|
| FREQUENCY RANGE | : 200 – 30.000 flashes/min (external signal up to 128.000 impulse/min are accepted) |
| DIRECT USE | : flash frequency 200 - 30.000 flashes/min |
| AUTOMATIC DIVISION USE | : flash frequency 200 - 4.000 flashes/min (automatic flash division set at 4.000 flashes/min) |
| DIVIDER FREQUENCY | : automatic flashing division :2 :4 :8 :16 :32, on external signal and internal oscillator |
| FLASH CONTROL | : by internal oscillator not devided - by internal oscillator devided - by external signal devided |
| INTERNAL OSCILLATOR | : coarse and fine adjustment of flash frequency |
| EXTERNAL TRIGGER | : electric signal >1Vpp - inductive sensor - photocells - microswitch - (with tachimetric function) |
| DISPLAY | : by means of dot matrix LCD display in RPM |
| RESOLUTION | : 1 RPM |
| DELAY TIME | : adjustable from 0,1 a 60 ms. approx |
| LAMP | : long life xenon white light tube |
| FLASH ENERGY | : 40 – 300 mWs/flash (in Automatic Flashing Division Use flash energy is always max) |
| POWER SUPPLY | : 220Vac - 50/60 Hz |
| DIMENSION | : 160 x 140 x 230 mm - WEIGHT 1,000 kg |

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