

Application

The SKF Stroboscope TMRS 1, can be used to allow the motion of rotating or reciprocating machinery to appear frozen, allowing the operator to perform a visual inspection of running machinery. Typical applications include, pumps, fans, electric motors, gears, belt drives and other such assets.

Description

The SKF Stroboscope TMRS 1 is a hand-held instrument that is supplied in a sturdy carrying case. It is supplied complete with a rechargeable battery pack, a 100-240Vac (50/60Hz) charging adapter with 4 different plug inserts for world-wide use and a spare flash tube.

The stroboscope can produce flashes between 40-12500 flashes per minute. When the FPM coincides with the rotational speed (RPM) or reciprocating speed (cycles per minute), the motion of the machine appears frozen. The operator can then inspect the machinery as if it was in a stationary state. The FPM can be adjusted by a rotary dial or by using the x 2 or ÷ 2 buttons for rapid adjustment.

A Phase shift mode allows for the feature of interest to be rotated to the correct position for inspection. This is useful when, for example, a particular fan blade requires inspection and is occluded from the initial view.



When using a stroboscope, do NOT touch the machinery being inspected. Danger of personal injury.



Technical data

Designation	TMRS 1
Flash rate range	40-12,500 flashes per minute (FPM)
Flash rate accuracy	+/- 0.5 FPM or +/- 0.01% of reading, whichever is greater
Flash setting resolution	100 to 9999 FPM - 0.1FPM, 10,000 to 12,500 FPM - 1FPM
Tachometer range	40 - 59,000 RPM
Tachometer accuracy	+/- 0.5 RPM or +/- 0.01% of reading, whichever is greater
Flash tube	Xenon, 10W, TMRS 1-BULB
Flash tube life	100 million flashes
Flash duration	9-15 µ sec
Light power	154 mJ per flash
Battery type	NiMH, rechargeable, removable
Battery capacity	2.6 AmpHr
Battery charge time	2-4 hours, using supplied AC adapter
Run time per charge	2.5 hours at 1600 FPM, 1.25 hours at 3200 FPM
Battery charger AC input	100-240 VAC, 50/60 Hz
Display	8 character by 2 line LCD, alphanumeric
Display update	continuous
Display resolution	100 to 9999 FPM - 0.1FPM, 10,000 to 12,500 FPM - 1FPM
Time base	Crystal oscillator, 100 ppm accuracy
Controls	Power, x 2, x1/2, phase shift, external trigger
External trigger input	0-5V TTL type via stereo phono jack
EXTL. trigger to flash delay	5 µ sec maximum
Clock output 0-5V TTL	Type signal via stereo phono jack
Colour	Grey
Housing	Impact & oil resistant polycarbonate
Weight	650 g / 1 lb, 4 oz.
Operating temperature	10 °C to 40 °C (50 °F to 104° F)
Storage temperature	-20 °C to 45 °C (-4 °F to 113 °F)

Accessories and spare parts

Designation	Description
TMRS 1	Stroboscope
TMRS 1-BAT	Spare battery pack
TMRS 1-BULB	Spare light bulb & lens cover



Epilepsy & Seizures

Stroboscopes use flashing lights, and a few people may experience epileptic seizures when using them.

Consult your physician before using the TMRS 1. Do not use this tool in conditions or circumstances if you have experienced any of the following symptoms whilst using the TMRS 1: altered vision, eye or muscle twitching, other involuntary movements, loss of awareness of your

surroundings, mental confusion and/or convulsions.

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