



SPSR-115/230

- Common Applications:**
- Vibration Studies
  - Fans/Blades
  - Engines/Motors
  - Balancers
  - Tach Input
  - Data Acquisition

The unique SPSR Series of Self-Powered Sensors provide a TTL compatible pulse output from any of three input sensors (see page 9 for details):

- A visible optical red LED light source (ROS-P)
- An infrared light source (IRS-P)
- An amplified magnetic sensor (MT-190P)

See Page 9 for detailed sensor specifications

The TTL compatible pulse output is switch selectable as either positive going 0-5V pulses or negative going 5-0V pulses provided on a BNC connector. Internal rechargeable batteries provide 40 hours of operation between charges. For continuous operation, all SPSR configurations can be powered by 115Vac, 230Vac or 9-15Vdc.

Self-powered sensors are a critical element for providing one pulse per revolution for vibration analyzers, spectrum analyzers, stroboscopes, data acquisition equipment, tachometers, balancers, waveform analyzers and magnetic tape recorders.



1 SPSR-IM with PSC-1U

Remote Optical Sensor (ROS-P)



Magnetic Trigger Sensor (MT-190P)



Infrared Sensor (IRS-P)



### How to Select your custom SPSR and sensor

- 1 Begin with the SPSR-IM Interface Module and PSC-1U
- 2 Select the sensor(s) best suited for your application

**Ordering Information**  
 SPSR-115/230 includes: SPSR-IM, PSC-1U, ROS-P and 12 inches of reflective tape  
 SPSR-IM includes: PSC-1U, 115/230 Vac power supply/re-charger (USA, AUS, UK and EURO plugs).  
 CA-DCSPSR: Cigarette Lighter DC Power adapter with 6 foot cable



Cigarette Lighter DC Power adapter with 6 foot cable (optional)

Specifications	SPSR Series
Range (RPM)	Same as sensor
Output Signal	TTL compatible pulse, 0-5V or 5-0V
Pulse Width	Determined by size of target and rotational speed
Output Connector	BNC
Power	Built in rechargeable battery pack (NiMH), 4.8Vdc



**Smart Laser Sensor** is an internal battery-powered optical speed sensor utilizing a visible Class 3R Laser for a TTL pulse output. Operating range up to 65 feet (19.8 m) with reflective tape and up to 3 feet\* (1 m) from contrasting color targets, keyways, bolt heads or blades.

- "Smart" auto gain provides best performance in picking up target reflections.
- "On Target" indicator
- TTL pulse output signal inverter switch
- Manual sensitivity knob provides dynamic fine tuning of sensor response
- Signal/Pulse/RS232 Output DIN connector port
- External DC power or recharger port
- Tripod mounting bushing (1/4 - 20 UNC)
- Optional RS232, DB9 Pin connector with tinned wire leads



\* performance subject to intensity of ambient light irradiation.

Specifications	Smart Laser Sensor
Optical:	Class 3R (per IEC 60825-1) visible laser 650nm @ 3 mW peak power
Operating Range:	up to 65 feet (19.8 m) from T-5 reflective tape
Speed Range:	1-500,000 RPM
Output Signal:	TTL 5-0 VDC (user selectable polarity), RS232
Operating Temp:	32° to 104°F (0° to 40°C)
Dimensions:	5.41(L) x 2.35(W) x 2.14" (H) (13.74 x 6.43 x 5.43cm)
Mounting:	1/4 - 20 UNC bushing for tripod



**Ordering Information**  
 SLS-115/230  
 Smart Laser Sensor with 115/230 VAC PR Universal recharger, SLS-CA-BNC cable and 12 inches of Reflective Tape.