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## 1. Rotary Motion Sensor

This 8 range sensor is a must for every Physics department. It is highly accurate with an extremely low friction pulley capable of measuring a variety of motions including: pendulum, angular, linear (pulley) and linear (using the linear rack accessory). The sensor can be used on its own or coupled with the linear rack and another SmartQ sensor, such as light level, to investigate the inverse square law and Young's slits. If this sensor is used for measuring motion, it is best used with the dynamics system.

The optional accessory kit (LOG3489 see below) widens even further the range of investigations this sensor can achieve.

#### Ranges:

- 41mm pulley ±200mm distance
- 31mm pulley ±2000mm distance
- 49mm pulley ±2000mm distance
- Angular position 0 to 360°
- Angular velocity ±40 rads per sec, ±4 revs per sec

#### When used with the Accessory Kit:

- Conservation of angular momentum
- Moments of inertia
- · Pendulum investigations
- Gravitational rotational energy
- Frictional torque
- Rotational collisions
- Rotational inertia
- · Newton's second law in its rotational form
- Tracking movement in a circle
- Linear displacement of an object

Biology & Chemistry when used with the Accessory Kit:

Linear movement of gas syringe plunger

Applications include:

#### Physics:

- Motion with kinetics trolley
- The study of pendulum motion
- Simple harmonic motion

Code	Pack	Price
L0G3249	Each	£163.00

## 2. Rotary Motion Accessory Kit

This is an optional accessory kit that comprises of:

- Pendulum with two adjustable masses
- A 250mm plastic rack which allows for the accurate measurement of linear displacement. It can be used with a light level sensor and the laser module to accurately measure distance moved in Young's single and double slit experiments. Similarly, attaching a magnetic field sensor, an accurate plot of field strength versus distance can be obtained
- Two discs for studying angular momentum

Applications Include:

### Physics:

- Pendulum studies
- · Conservation of angular momentum
- Rotational inertia using the discs
- · Circular movement using the discs
- Linear motion using the linear rack and light sensor e.g. inverse square law

#### Chemistry and Biology:

· Linear movement e.g. gas syringe plunger movement

Code	Pack	Price
L0G3489	Each	£86.00





