



Air rail, scrolling multi-timer, 12 functions, 2 sensors and flow unit

Function

Intended for experimental study, physics laboratory and carrying out physics experiments: Kinematics. Referential, position, movement and trajectory. The mobile. Trajectory and displacement. The difference between displacement and distance traveled. The Cartesian frame of reference in the plane, Cartesian plane. Scalar magnitude. Vector greatness. The rectilinear and uniform movement - MRU. Uniformly Varied Rectilinear Motion - MRUV. Dynamics. The fundamental law of dynamics, Newtons second law, force and acceleration. undulatory. Determination of the elastic constant of a mass and spring system, simple harmonic motion. Combining Newtons second law with Hookes law. The position, velocity and acceleration of the oscillating mass. The oscillation amplitude, angular velocity and phase. Determining the period and frequency of oscillation in a spring-mass oscillator. Dynamically determining the equivalent spring constant of the associated helical springs. Energy conservation. Coefficient of restitution, momentum and kinetic energy in an inelastic collision. Coefficient of restitution, momentum and kinetic energy in an elastic collision, etc.

Knowledge areas

Physics

Level

Graduation - Technical education - High school

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