



PRESS RELEASE

GEEPLUS LAUNCH MINIATURE ROTARY ACTUATOR RANGE

A range of small rotary actuators designed to suit the actuation of small shutter mechanisms has been launched by Geeplus.

Perfect for the control of small shutter mechanisms where the mass of moving elements is small, and is balanced about the axis of rotation, the actuators are generally used to move a small 'flag' to block or pass a light beam, or of a small mirror to deflect a light beam down another path. Speeds of up to (<2ms) are possible for small angles and loads

Brushless with a fixed coil and moving magnet rotor, they do not exhibit the wear and reliability concerns associated with brushed motors, and can endure high pulse currents without damage for high torque / fast

operation. Bistable operation allows the device to be driven from open to closed position or vice versa with a short excitation pulse, and then to hold this end position without power being applied which considerably reduces power consumption in battery powered systems.

The actuators generate little heat, making them ideal for applications such as thermal imaging where potential disturbance of the sensors in the imaging system is reduced and by balancing the moving elements about the axis of rotation, the mechanism can be made highly resistant to linear shock. Friction can be minimised with inexpensive bearings.

The most widely used actuators are moving magnet galvanometers or bistable rotary solenoids, where a permanent magnet rotor is supported within a coil. When the coil is energised, the rotor tries to turn to align itself with the field developed by the coil, creating a torque proportional to the excitation current. An iron case helps concentrate the magnetic field, and reduces susceptibility to disturbance by external fields.

By modifying the shape of this case, the device can be made bistable, so that it turns away from the centre position towards either end position without power applied – the bistable rotary solenoid is an extreme example of this where proportionality is sacrificed for better efficiency and bistable function.

The devices are produced in sizes from 7mm diameter to 50mm diameter as standard. Other sizes may be possible for high-volume applications.



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