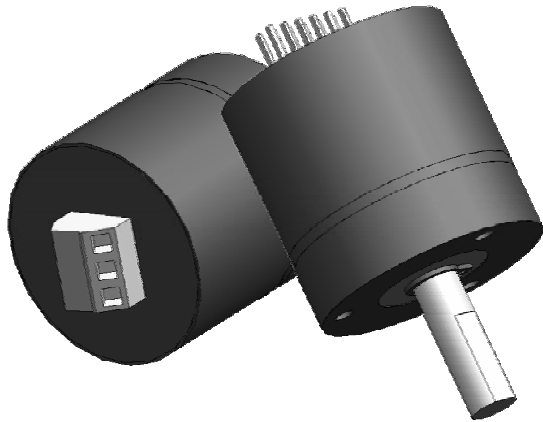


MODEL **SR12** ABSOLUTE ENCODER



Actual Size

- **Miniature size: 1.25" diameter**
- **9-bit resolution**
- **512 counts/revolution, single turn**
- **Exact shaft position available even after power interruption**
- **Parallel or serial outputs**
- **Gray code, natural binary or 0-10vdc analog formats**
- **Rugged aluminum housing**
- **1/4" or 6mm stainless steel shaft**
- **Precision ball bearings**
- **5 vdc supply voltage**
- **TTL compatible outputs**
- **Low Cost**

9 bit resolution in a miniature, low cost package

The Photocraft SR12 is a full function, 9-bit, single-turn, absolute position encoder intended for applications requiring miniature size, low cost, and up to 512 uniquely identifiable positions per revolution. The low cost and small size make it ideal for applications previously limited to using precision potentiometers. The SR12 has the advantage of longer life because of the non-contact optical construction, and it requires fewer external parts since the outputs can directly interface to a computer, PLC, or other digital equipment without the need for A/D converters.

The SR12 is based on a patented, cost saving technology that significantly reduces the size and complexity over conventional absolute encoders without any loss of functionality. Its construction consists of an infrared LED that provides a uniform, dependable light source, and is used to read one of up to 512 unique codes precisely imprinted on a code disk. The intensity of the LED is dynamically adjusted to counteract the effects of

temperature or aging. A linear array sensor and an integrated microcontroller read and interpret the code disk at a rate of 1000 samples per second generating absolute position information accurate to within 1/512th of a rotation. The position is then converted to either a natural binary or a gray code number and output as a 9-bit digital number in either parallel or serial format. The position can also be converted to a 0-10vdc analog voltage.

Use of an absolute code disk guarantees that the SR12 provides correct positional information when power is first applied, without rehomming, even if the system is moved while power is off.

A DataReady output indicates when the parallel outputs are changing. This can be used, for example, as a signal to an external system, or to clock an external latch.