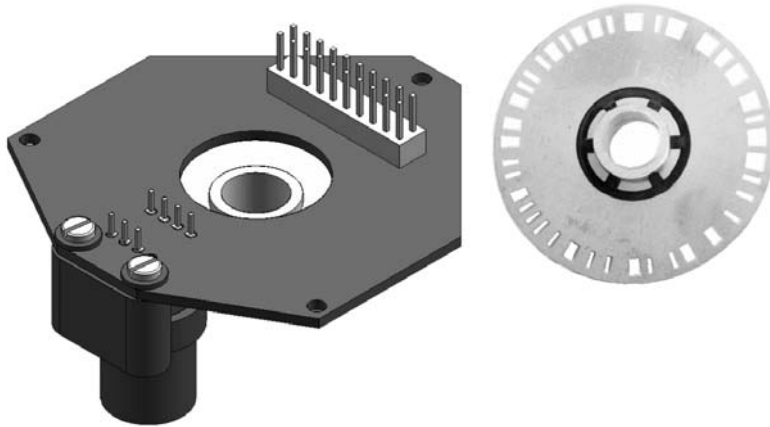


MODEL **MR30** ABSOLUTE ENCODER



- Low Cost
- Easy Installation
- Up to 10-bit Resolution, single turn
- Up to 1024 Counts/revolution
- Outputs precise shaft position even after power interruption
- Gray Code, Natural Binary and Custom output codes
- Parallel output
- 5vdc Supply Voltage
- For shaft sizes up to 3/8", 10mm
- Optional mounting base, enclosure and DB25P connector
- Readily Available

10 Bit Modular Absolute Encoder

The **MR30** is a full function 10-bit, single-turn, digital, absolute position encoder for applications requiring up to 1024 uniquely identifiable codes per revolution. It uses a patented, cost saving technology that relaxes the precise alignment tolerances typically required by conventional absolute encoders by an order of magnitude without sacrificing accuracy. This makes possible a low cost, modular encoder that can be easily assembled by the user.

The MR30 was designed for direct mounting on a shaft, accommodating $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ ", 8mm, and 10mm shaft sizes. The basic configuration consists of a circuit board containing all the electronic components, including the optical sensor and infrared light source, and an 10-bit code disk. An optional mounting base to support the circuit board, and optional enclosure with connector are available.

Its construction consists of an optical receiver and infrared light source that are used to read one of up to 1024 unique codes from a code disk. A proprietary bar code pattern

encodes the absolute position information. This unique code results in characteristics identical to conventional gray code based absolute encoders, that is, completely unambiguous position information is always available.

A segment of the bar code that is read by the sensor is interpreted by an onboard microcontroller into unique positional information. The position is then translated to an output code, such as natural binary or gray code, and output on the 10 parallel output lines. The process repeats 1K or 3K times per second.

An LED indicator on the circuit board confirms correct alignment of the circuit board and code disk, and indicates the zero position of the code disk.

To simplify interfacing to the MR30, a DataReady signal indicates when the outputs are changing. It can be used, for example, to clock an external latch or interrupt a microprocessor.