

MODEL

# HRS

## INCREMENTAL ENCODER



Fits shafts up to 1 (25.4mm) diameter

Up to 1200 pulses per revolution (ppr)

Optional Programmable Pulses/Rev.

Single, quadrature, and index outputs

Direction or speed indicator output options

Exclusive Anti-Jitter option

Output Circuits:

Current sinking (NPN),  
Current sourcing (PNP),  
Push-Pull,  
NPN open collector  
Differential Line Driver

ESD and short circuit protection

5 vdc, 8 to 30 vdc, and other supply voltages

Custom models available

## 1 Diameter Hollow Shaft Cube Style

The Photocraft Model HRS is an optical hollow shaft encoder that mounts directly on an existing shaft assembly. A flexible mounting bracket allows the encoder to float on the shaft without rotating. The HRS generates up to 3 square wave outputs that are either fixed at manufacture time, or based on a factory installed program and on DIP switch values set at installation time. The types of outputs are based on shaft rotation as follows:

**Pulse Output:** A Single output (A) with a specific number of pulses per revolution (ppr) of the shaft; Dual outputs (A and B) with two independent outputs and the ppr on A can be different than the ppr on B; or Triple outputs (A, B, and C) with three independent outputs.

**Quadrature:** Two pulse outputs, A and B, have the same ppr and are in quadrature relation to each other (A leads B by 90° for clockwise rotation as viewed from shaft end). Indicates distance and direction of shaft rotation to any control device that accepts quadrature inputs.

**Zero Marker Output:** Provides a zero reference or index pulse on output Z occurring once per revolution, having a pulse width approximately equal to a pulse on output A.

**Direction Output:** Indicates the direction of shaft rotation, clockwise or counter-clockwise.

**Minimum Speed Output:** Indicates when the shaft exceeds a predetermined revolutions per minute (rpm).

Single output models and any programmable model can include the **Anti-Jitter feature** designed for conveyor and web systems requiring continuous and accurate measurement of the web's movement even if the system must be stopped and restarted without reset. When the web stops, and if there is sufficient vibration or back-and-forth movement, then the encoder output could oscillate, appearing as if the web were actually moving. Anti-jitter eliminates this condition by significantly increasing the pulse hysteresis.