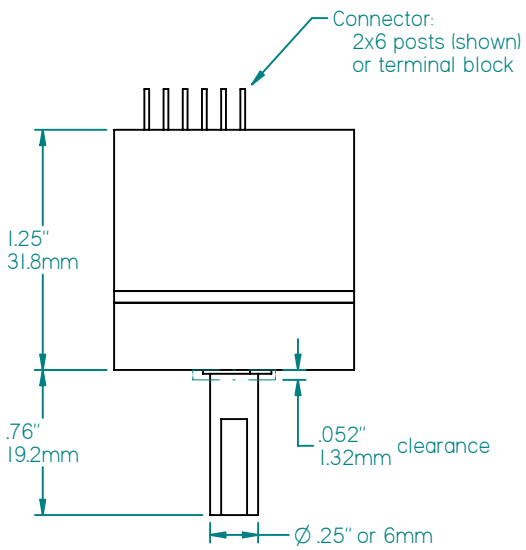
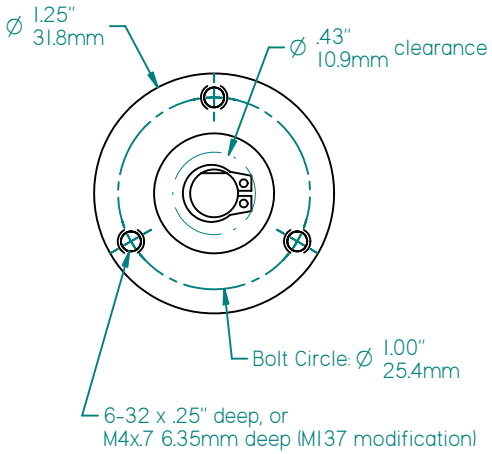
MODEL SR12 — Absolute Shaft Encoder

FEATURES

- **7, 8, or 9 bit resolution**
- **Up to 512 positions/revolution, single turn**
- **Parallel, Serial, or Analog Outputs**
- **Digital Output: Natural Binary or Gray Code**
- **Analog Output: 0-10 vdc**
- **Supply: 5 vdc (12-30 vdc for analog)**
- **1/4" or 6mm Shaft Diameters**
- **ESD Protected**
- **Custom Models Available**

DIMENSIONS





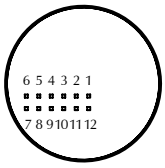
SPECIFICATIONS

Mechanical

Maximum speed: 5,000 rpm
Bearings: ball bearings, shielded
Shaft Loading: 10 lb. (4.5 kg) axial
10 lb. (4.5 kg) radial
Bearing Life: 52 x 1,000,000/rpm = hours
Weight: 1.75 oz. (50 gm)
Materials:
— Case: Aluminum, anodized
— Shaft: 303 Stainless steel
— Epoxy potting

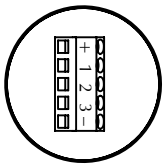
Output Configurations

Digital Parallel: 2x6 posts on .1" centers
— 5vdc with totem-pole outputs



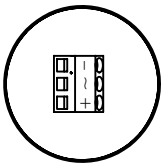
Pin	Function	Pin	Function
1	Supply	7	2^8
2	2^3	8	2^7
3	2^2	9	2^6
4	2^1	10	2^5
5	2^0	11	2^4
6	DataReady	12	Common

Digital Serial (SPI): 5 position terminal block
— 5vdc with totem-pole outputs



Terminal	Function
+	5vdc supply
1	Slave Select
2	Clock Input
3	Data Output
–	Common

Analog: 3 position terminal block
— 12-30vdc with 0-10vdc output



Terminal	Function
–	Common
~	0-10vdc output
+	12-30vdc supply

Electrical

Supply Voltages: (specify when ordering)
— 5 vdc ± 5%
— 12-30 vdc (only for analog output)
Current: 25 ma max (no load)
Operating Temperature: -40° to 70° C
Output Codes: (specify when ordering)
— Gray Code
— Natural Binary
— 0-10 vdc analog
Interrogation Rate: 1KHz (typical)
Note: This is the rate at which the code disk is sampled. Regardless of the rotational speed, this determines the maximum rate the outputs change. *Consult factory for details.*
Resolution: (specify when ordering)
— 128, 256, or 512 positions/revolution
Accuracy: ± 1/2 bit digital, ±1 bit analog
Rotation: Counts increase with clockwise rotation as viewed from shaft end.
Digital Output Logic Levels:
— Logic "0": low voltage (0.6 volts max.)
— Logic "1": high voltage (Supply - 0.7 volts min.)
DataReady Output: Normally high, goes low momentarily (7 µsec) while the outputs are changing. Stays low to indicate an error condition.
Analog Output Levels:
— Zero code error: 20mv
— Full-scale error: 125mv
— Relative accuracy: ± 20mv
Output Circuits:
— Totem-pole: 5 ma. max source and 6 ma. max sink current
— 0-10vdc analog: uses OPA251 op amp, and DAC6571 D-to-A converter

MODEL NUMBER

SR12		–			/			
Model Number	**Shaft Diameter:** blank for 1/4", **M6**=6mm		**Resolution:** 128, 256, or 512	**Output Code:** A=0-10vdc analog, G=Gray Code, N=Natural Binary		**Supply Voltage:** Analog output: 12-30vdc, Digital output: 5vdc	**Special Features:** SPI=Serial Peripheral Interface M___=Modification Number Call or see our website for more information.	**Accessories:** leave blank for no accessories. Call or see our website for more information.

Example: **SR12-512N/5** - 1/4" shaft, 512 resolution, natural binary code, 5vdc supply

OVER 30 YEARS OF MATERIAL HANDLING AND INDUSTRIAL EXPERIENCE

PHOTOCRAFT INC

602 E. North Street **630-365-7148**
Elburn, IL 60119, USA Fax: 630-365-7149
www.photocraftencoders.com