

# 9000 Series

## Incremental Shaft Encoder

### Features:

- Low Cost
- Short Circuit Resistant Outputs
- Rugged Design to Industry Standard
- Low Power Consumption
- Shock Resistant



### Mechanical Characteristics

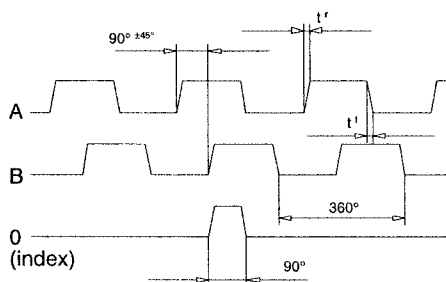
|  |  |
|--|--|
| Speed: .....                           | max. 6000 RPM                                  |
| Rotor Moment of Inertia: .....         | $15 \times 10^{-6} \text{ kgm}^2$              |
| Torque: .....                          | <0.05 Nm                                       |
| Radial Load Capacity of Shaft: .....   | 70 N (at shaft end)                            |
| Axial Load Capacity of Shaft: .....    | 35 N   |
| Weight: .....                          | Approx. 1.2 kg                                 |
| Protective System to DIN 40.050: ..... | Shaft IP66, Cover (IP50 w/ connector)          |
| Operating Temperature Range: .....     | 0° C to +50° C (-20° C to 70° C above 600 PPR) |
| Shaft: .....                           | Stainless Steel                                |

### Electrical Characteristics

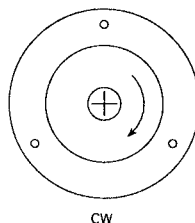
|  |  |
|--|--|
| Output Circuit: .....                                    | Push-Pull Circuit  |
| Supply Power: .....                                      | 10-30 VDC  |
| Current Consumption: (no load) .....                     | max. 50 mA (75 mA with reference )   |
| Permissible Load / Channel: .....                        | max. $\pm 30 \text{ mA}$   |
| Pulse Frequency: .....                                   | max. 20 kHz (100 kHz above 600 PPR)  |
| Signal Level High @ 30 mA: .....                         | Supply Voltage minus 2.5V (7.5 to 27.5V)   |
| Signal Level Low @ 30 mA: .....                          | max. 1.5V  |
| Signal Level Low @ 1 mA .....                            | max. .7V   |
| Rise Time: .....   | max. 1 $\mu\text{s}$   |
| Fall Time: .....   | max. 1 $\mu\text{s}$   |
| Short Circuit Proof Output: .....                        | yes  |
| Standard Pulses Per Revolution .....                     | 60, 250, 600   |
| Available Pulses per Revolution .....                    | 96, 100, 120, 125, 127, 150, 180, 200, 216, 220, 240, 250, 254, 256, 280, 300, 360, 400, 420, 450, 500, 512, 600, 625, 720, 750, 900, 1000, 1024, 1250, 1270, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000 |
| Other Pulses Per Revolution available upon request ..... | Consult Factory  |

Approvals: CE

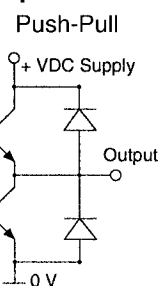
### Pulse Pattern



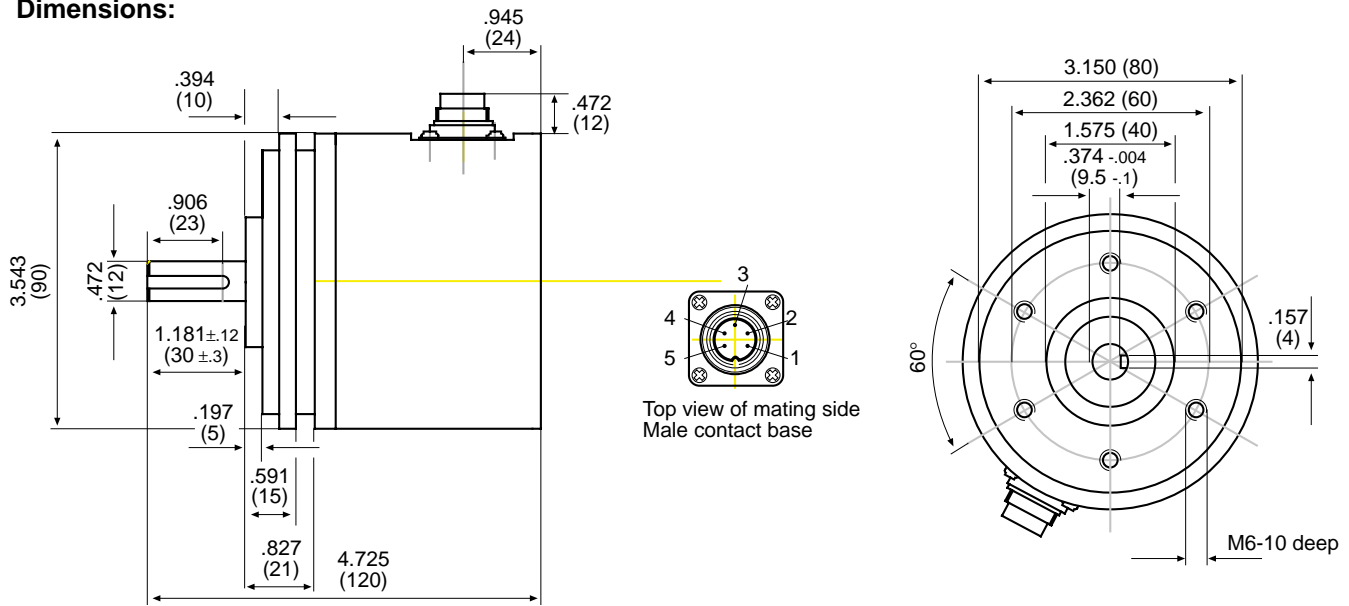
### Direction of Rotation



### Output Circuit



**Dimensions:**

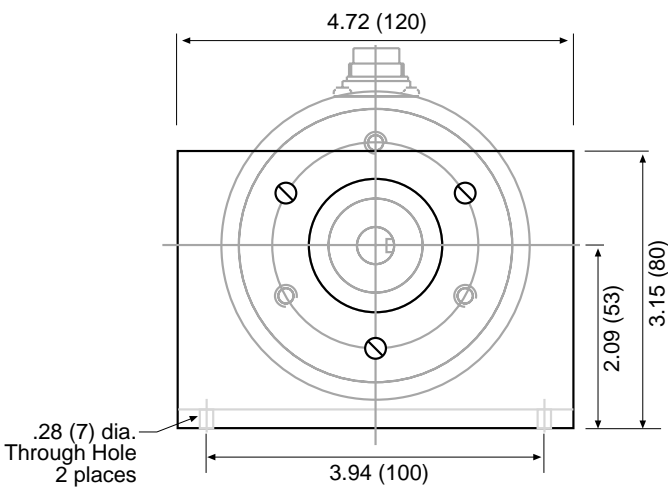


**9010AM1: Angle Bracket** dimensions are in inches (mm)

**Terminal assignment:**

| Pin# | Signal   |
|------|----------|
| 1    | 0V (-DC) |
| 2    | +DC      |
| 3    | A        |
| 4    | B        |
| 5    | O        |
| *    | Ground   |

\* Ground is connected to housing.



**How To Order:**

**Example** 9010 1 3 1 6 0250

**Series**

**Range**

1 = synchronous flange

**Shaft (D x L)**

1 = .472 x 1.18 (12mm x 30mm)

**Version**

1 = channel A

2 = channels A + O (Special Order)

3 = channels A + B

4 = channels A + B + O (Special Order)

**Type of Connection**

5 = connector radial without mating connector

6 = connector radial with mating connector

**Pulse Per Revolution**

(STD for Quick Delivery: 0060, 0250, 0600)

Price Break per PPR

0001-0250

0251-0600

0601-2000

2001-5000

**Accessories**

9010AM1= Angle Mount Bracket 4.7" x 1.6"

5810AC= Mating Connector 5810/9010

ACCESSORIES