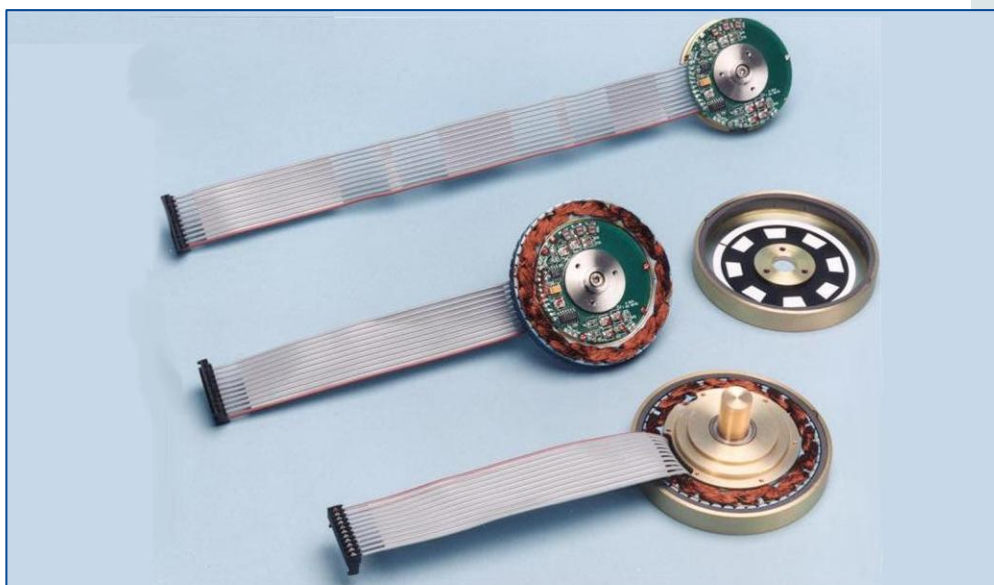




## Twin Optical Encoders With High Torque D.C. Motor

### 90BME104 Specification

Motor Type	3 Phase Brushless		
Winding Type	Single Channel		
Commutation Sensor	Encoder		
Rotation	360 Degrees		-
Rated Speed Range	100 to 1530 rpm		-
Rated Torque	0.17Nm		-
Peak Torque	0.43 Nm		-
Rotor Moment of Inertia	250 x 10 <sup>-6</sup> kg.m <sup>2</sup>		
Actuator working temperature	Continuous	-40°C to 80°C	- 40 to +176°F
	10% of life	120°C	248°F
Supply from switchedmode transconductance amplifier	40 Vdc Max		
	5 A Max		
	2 A Nominal		
Resistance phase/phase at connector	2.25Ω		
Insulation resistance between windings and windings to at 500V	10MΩ		
Weight	g		



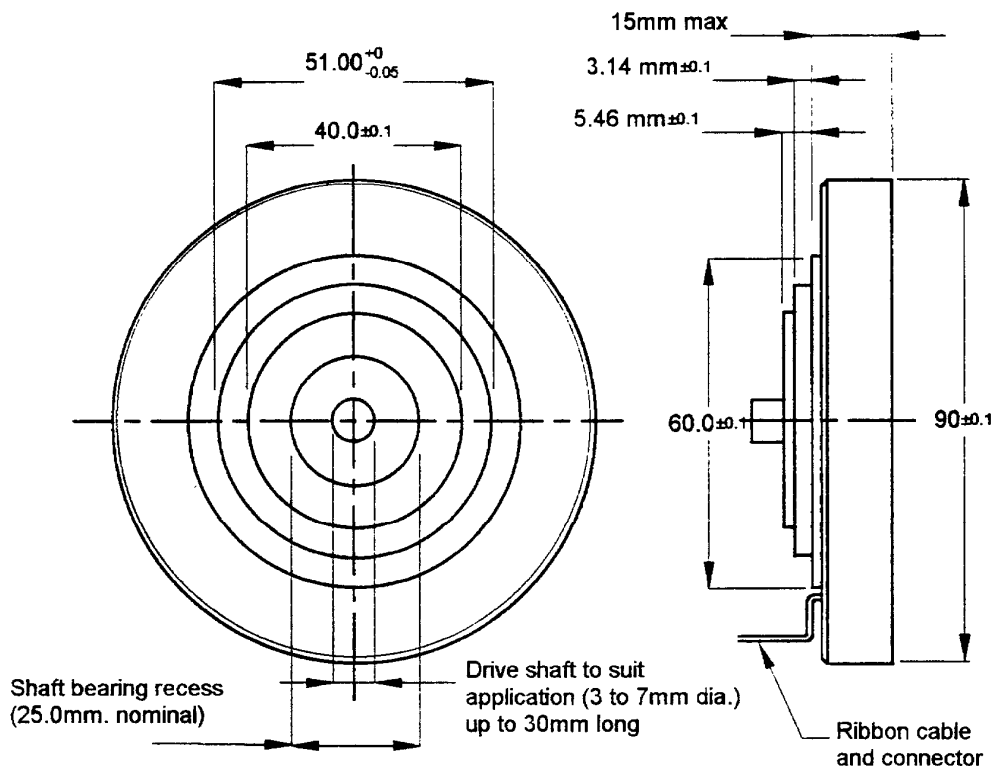
## Twin Optical Encoders With High Torque D.C. Motor

### Description:

Designed for variable speed drives, the external rotor brushless DC motor is the ideal solution for archival data storage machines. This product, the **90BME104**, incorporates modern materials including a cost saving moulded multi pole NeFeBo magnet, and the manufacturing technologies of both brushless DC motors and optical encoders to achieve an integrated product in a breathtakingly small overall envelope.

The motor encoder product is ideally suited for both speed control and position control applications where stability and position accuracy is paramount. With 1000 lines on each of two incremental quadrature tracks and an index marker the encoder can provide direction of rotation and positional resolution of  $<0.1^\circ$ .

The three phase motor is constructed with a machine wound skewed stator stack to reduce cogging to meet the exacting demands - both in accuracy and audible noise, typically for office equipment application environment's. Running at 20V the motor provides 0.09Nm/Amp torque. This innovative and ground-breaking product is just one of many motion control solutions developed by Muirhead in the pursuit of customer satisfaction.



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