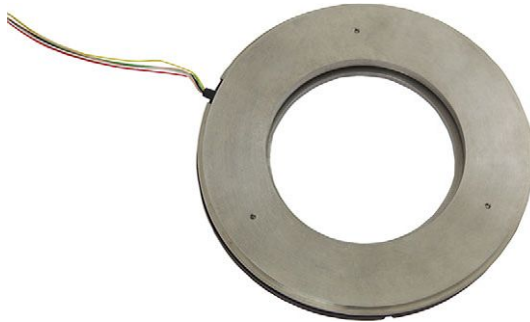


## 绝对值，磁性编码器元件 $\phi$ 90mm

### Rotational Absolute Magnetic Kit Encoder Version 90 mm Displacement Sensor


**特性 FEATURES**


- 霍尔效应原理 Hall effect principle
- 尤其适合于恶劣环境，抗振动、冲击等等 (vibrations, shocks, CEM, ...)
- 不受外部磁场和温度的影响 Not sensitive to external magnetic fields and temperature
- 不受湿度和污染环境的影响 Not sensitive to moisture and pollution
- 即插即用 Plug and play
- Small error due to misalignment
- 高精度:  $\pm 0.0055^\circ = 16$  bits (VHP)
- 保护专利: patent 专利 EP 2711663
- 材料分类认证: 认证规格和体系 (compliance), 产品标签说明, 详细见 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

**ADDITIONAL RESOURCES 三维设计文件**


QUICK REFERENCE DATA	
传感器类型	旋转角度传感器,磁性霍尔技术原理
信号输出	导线和线缆 Wires or cables
应用市场	工业 Industrial
尺寸公制	外圆直径 $\phi$ 90mm, Diameter 90 mm

电气参数 ELECTRICAL SPECIFICATIONS		
PARAMETER		
供电压 Voltage supply		5 V $\pm$ 0.25 V
供电流 Current supply		$\leq$ 200 mA max. at 5 V
信号输出接口 Output		SSI
信号输出连接 Connection		Ultra-flex 超柔性AWG32导线 (屏蔽线缆和插头, 可定制要求)
有效测量角度 Useful electrical angle		360° (single turn 单圈)
绝对精度 Absolute accuracy 在 -40 °C ~ +85 °C		标准: $\pm 0.0055^\circ = 16$ bits
分辨率 Resolution		19 bits (524 288 点 points) (20 bits 可定制 on request)
启动时间 Startup time		$\leq$ 20 ms
刷新时间 Refresh time		$\leq$ 100 $\mu$ s
恢复时间 Latency time		$\leq$ 200 $\mu$ s
采样频率 Sampling rate		10 kHz $\pm$ 5 %

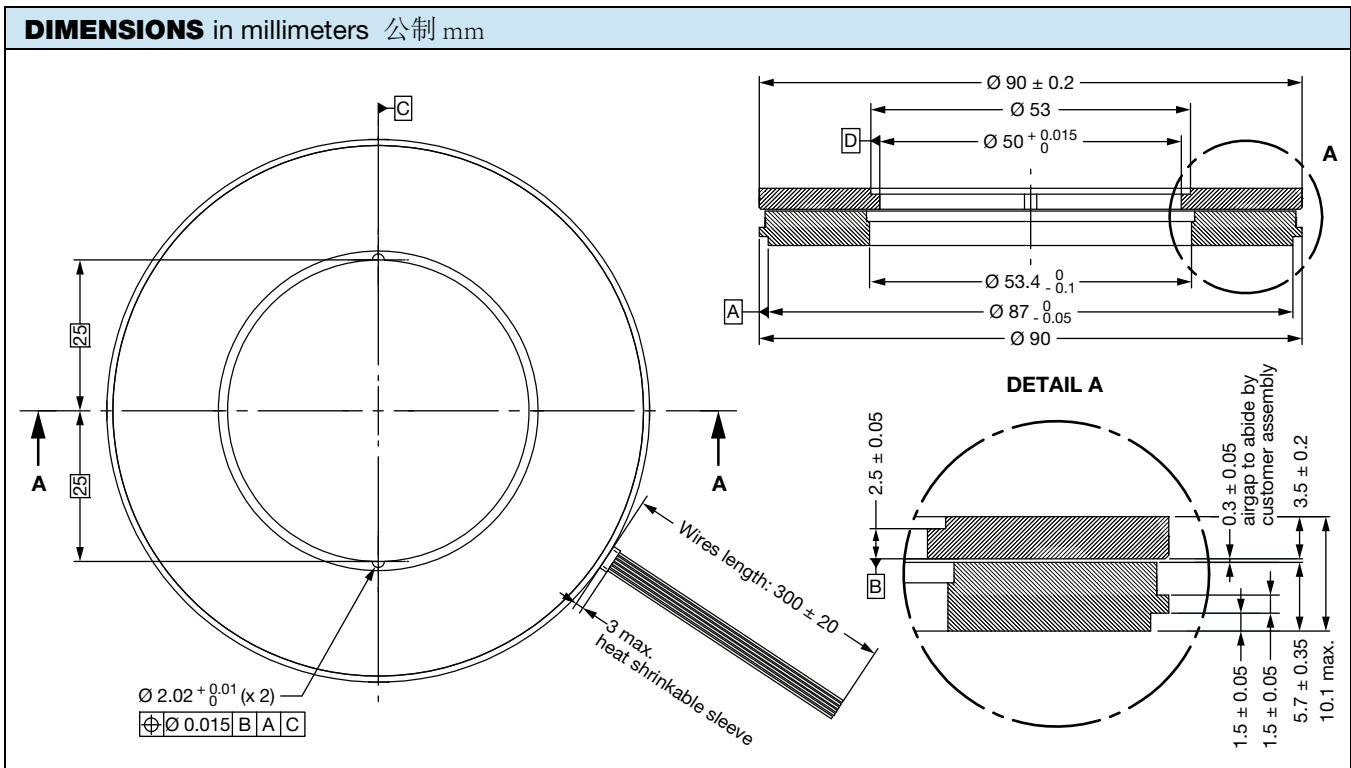
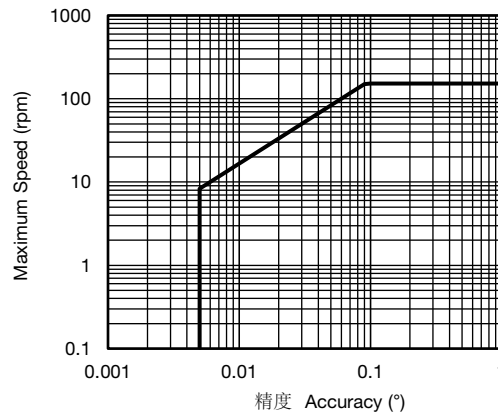
机械参数 MECHANICAL SPECIFICATIONS		
PARAMETER		
机械角度 Mechanical angle		360°
最大转速 Maximum speed rotation		8 rpm (可达 150 rpm 会减小精度 with decreasing of accuracy, 参见速度与精度曲线 "Maximum Speed vs. Accuracy" chart)
重量 Weight		185 g $\pm$ 20 %

SAP 订购信号说明 SAP PART NUMBERING GUIDELINES									
TYPE	MODEL	DESIGN	SIZE (mm)	TYPE	FUNCTION	ACCURACY (BITS)	分辨率 (BITS)	输出接口	PACKAGING
R = rotational	AM	K = kit	090	M = hard conditions	1	16	19	J = SSI CCW	B = box
						16	20 <sup>(1)</sup>		

**Note**

(1) With design 4 ears

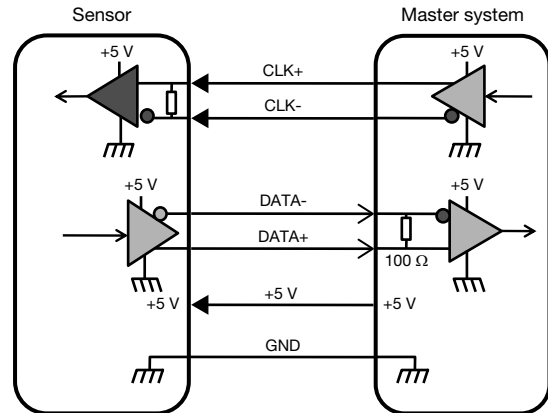
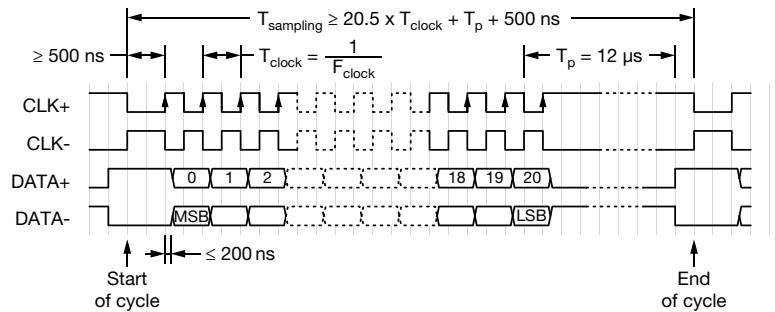
PERFORMANCE		
PARAMETER		
工作温度	Operating temperature	-40 °C ~ +85 °C (-55 °C ~ +105 °C 可要求 on request)
贮藏温度	Storage temperature	-40 °C ~ +105 °C (-55 °C ~ +105 °C 可要求 on request)
振动	Vibration	0.05 g <sup>2</sup> /Hz, 20 Hz to 2000 Hz for 1 h along the three major axis
冲击	Shock	180 g, 14 ms, 1/2 sine
EMC		MIL-STD-461F - CS114: conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz table VI army ground level common mode injection and differential mode on positive - RS101: magnetic susceptibility, magnetic field, fig. RS101-2 from 30 Hz to 100 kHz - RS103: radiated susceptibility, electric field, 2 MHz to 18 GHz (level: 50 V/m) - RE102: radiated emissions, electric field, fig. RE102-4 - navy mobile and army - 10 kHz to 18 GHz
Magnetic protection		No influence up to 0.5 mT

**MAXIMUM SPEED VS. ACCURACY CHART 最大速度对精度的曲线**


**电气接口描述 ELECTRICAL INTERFACE DESCRIPTION - SSI 接口 INTERFACE**

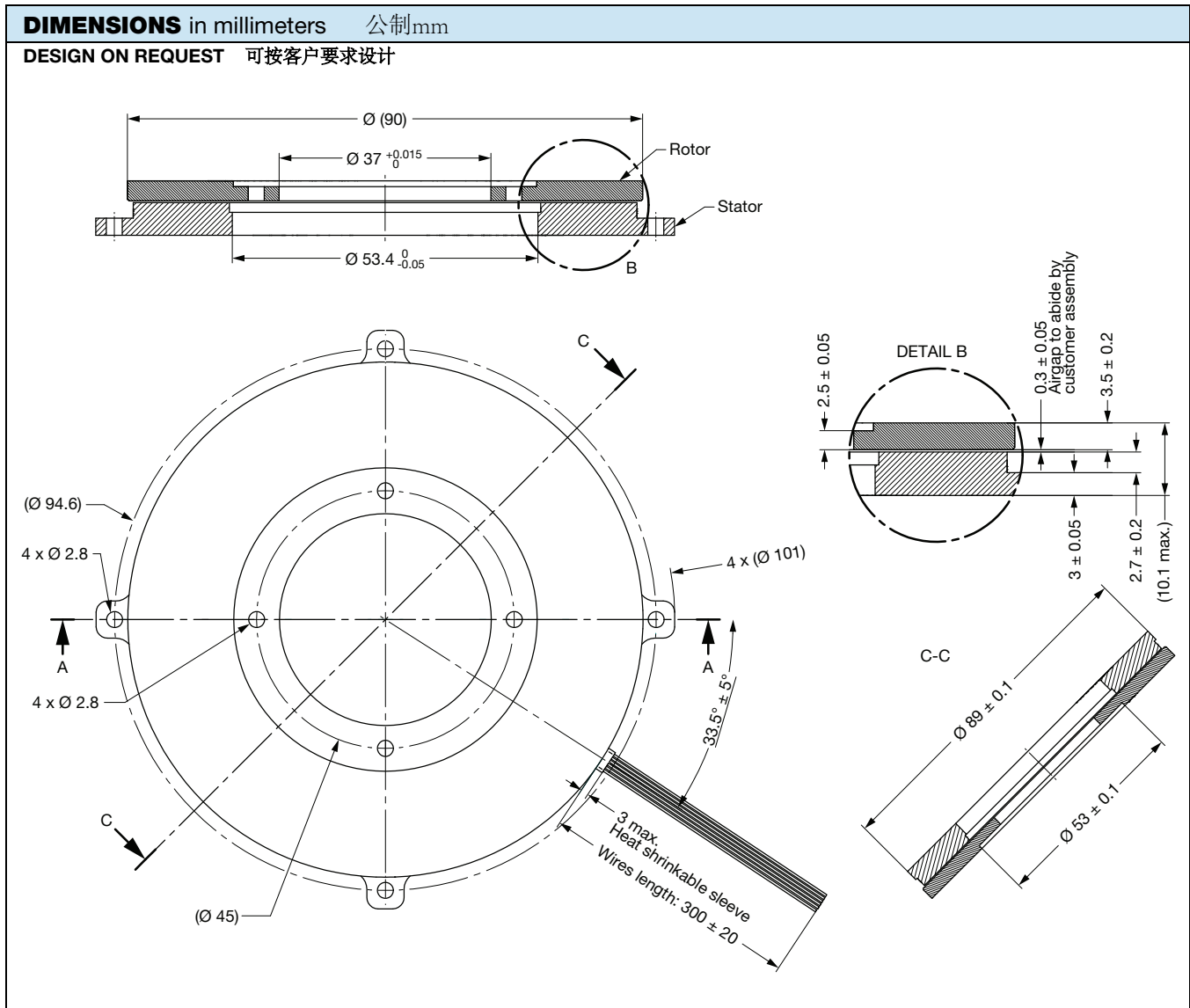
6 线连接 WIRES CONNECTIONS	
NAME	WIRE COLOR
GND	Black
+5 V	Red
CLK+	White
CLK-	Clear
DATA+	Green
DATA-	Yellow

SSI 接口参数 PARAMETERS	
Output code	Binary
Data differential interface	RS422 according to EIA-RS422
CLK differential interface	RS422 according to EIA-RS422
Minimum clock frequency	300 kHz
Maximum clock frequency	4 MHz
Data bit (n)	21 bits


**Timing Diagram 时序图**


## OPTIONS

- Other design on request (mechanical interfaces, electrical interfaces, ...)





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