

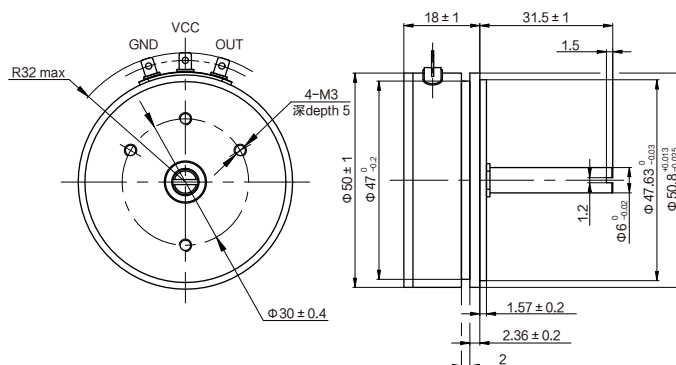
WDH50A

WDH50A 系列数字电位器 (专利产品, 仿冒必究)
WDH50A Series Contactless Potentiometer (Patented)



- ◆ 磁敏传感器 / Magnetic rotary sensor
- ◆ 经济型 / Economy version
- ◆ 侧面片式接线端 / With side lug terminal
- ◆ 内含一对精密滚珠轴承 / With one couple of precision ball bearings
- ◆ 伺服&螺丝安装 / Servo&Screw mount

标准尺寸 / Standard Dimensions



选型指导 / Selection Guide

例 / Example : WDH50A 0505 W360

WDH → 产品系列 / Series	WDH 经济型数字电位器 / Economical contactless potentiometer
50A → 外径系列 / Dimensions	50A 壳体外径 $\Phi 50$ mm / Housing diameter $\Phi 50$ mm
0505 → 工作电压 / 输出信号 Input voltage / Output signal	0505 $5V \pm 10\%$ / $0 \sim 100\% V_{CC}$ 2410 $15 \sim 30V$ / $0 \sim 10V$ 2405 $9 \sim 30V$ / $0 \sim 5V$ 2442 $15 \sim 30V$ / $4 \sim 20mA$
W → 输出方向 / Output direction	W 顺时针 / Clockwise C 逆时针 / Counterclockwise
360 → 有效电气转角 / Effective electrical angle	360 可选 360° 以内任意角度 / Any angle within 360°

注1 特殊输出幅度: 可根据客户要求, 提供标准输出幅度范围内任意幅度的信号, 如 $10\% \sim 90\%$ 等。Note1 Special output range: Any output range within $0\% \sim 100\%$ can be provided, as $10\% \sim 90\%$, etc.

注2 特殊电气转角: 可提供 360° 以内任意有效电气转角的产品, 在非有效电气区域, 可做高位保持、低位保持或两端保持, 保持角度可由客户指定。若有效电气转角小于 45° , 产品的独立线性度和分辨率都会有所下降, 具体请咨询思博。
Note2 Special electrical angle: Available for special effective electrical angle within 360° , output within non-effective electrical angle can be held on high, low and both ends. If the effective electrical angle is less than 45° , independent linearity tolerance and resolution will be influenced. For more details, please contact with SIBO.

注3 客户化定制输出特性: 输出曲线可包含最多6条不同斜率的水平或上升段, 详见“常用输出信号图”。

Note3 Customized signal output characteristic: Available to set at most 6 rising or horizontal segment, please refer to "output characteristics" for details.

一般机械性能 / General Mechanical Specifications

机械转角 Mechanical angle	360° (连续旋转 Endless)
防护等级 Protection degree	IP40
旋转力矩 Operating torque	$< 1mN \cdot m$
预期寿命 Life expectancy	100,000,000
质量 Mass	Approx. 100g
外壳 Housing material	铝合金, 表面阳极氧化 Anodized aluminium alloy
轴 Shaft material	不锈钢 Stainless steel



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环境特性 / Environmental Specifications

工作温度 Operating temperature range	-40℃~+85℃	注4 Note.4
储存温度 Storage temperature range	-40℃~+85℃	
ESD ESD durability	接触放电 (Contact discharge) ±8KV, 空气放电 (Aerial discharge) ±15KV, EN61000-4-2:2009	
EMS EMS durability	10V/m (80MHz~1GHz, 1KHz80% 调幅 Amplitude modulation), EN61000-4-3:2006+A1:2010	

注4 工作温度: 如客户选择5V输入, 0~5V输出的产品时, 工作温度范围则为: -40℃~+125℃。
Note4 Operating temperature range: If the customer selects the product with 5V input and 0~5V output, the working temperature range is -40℃~+125℃.

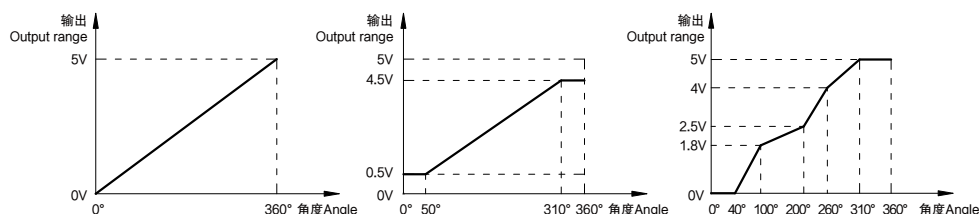
一般电气性能 / General Electrical Specifications

标准型号 Standard model	WDH50A 0505 W360	WDH50A 2410 W360	WDH50A 2405 W360	WDH50A 2442 W360
工作电压 Input voltage	5V±10%	15~30V	9~30V	15~30V
输出信号 Output signal	0~100%V _{cc}	0~10V	0~5V	4~20mA
工作电流(无负载) Current consumption (no-load)	<16mA	<25mA	<25mA	<35mA
始末端输出偏差 Output deviation of both ends	<1%·VCC	<50mV	<50mV	<0.1mA
负载电阻 Load resistance	>100KΩ	>100KΩ	>100KΩ	<600Ω
有效电气转角 Effective electrical angle	360°			
独立线性公差 Independent linearity tolerance	±0.3%			
分辨率 Resolution	4096 (12 Bit)			
更新速度 Update rate	0.3ms			
绝缘电阻 Insulation resistance	> 1000MΩ (500V.D.C)			
介质耐压 Dielectric strength	1 min (500V.A.C)			

接线说明 / Terminal Connection Instructions

端口 Port	VCC	GND	OUT
名称 Title	电源正端	电源负端	输出信号

常用输出信号图 / Output Characteristics



特殊可选规格 / Special Specifications Available

特殊模拟量信号 Special analog signals	1010: 10V输入, 0~10V输出 / 10V applied, 0~10V output 0305: 3.3V输入, 0~5V输出 / 3.3V applied, 0~5V output 双路模拟量、PWM / Dual analog signal and PWM
其他输出信号 Other output signals	增量 / Incremental, SSI, SER, SPI, RS485, RS422, CAN, USB
特殊机械转角 Special mechanical angle	带停止位 (机械转角约345°, 或270°、180°、90° 等特殊机械转角的产品, 该转角也可由客户指定) With stopper (Rotating angle becomes 345°, or 270°, 180°, 90° and other angles can be customized)
特殊力矩 Special torque	<0.5mN·m的轻力矩或<30mN·m的高力矩 / Low torque <0.5mN·m or high torque <30mN·m
特殊轴型 Special shaft	特殊轴长、特殊轴径或轴上特殊加工 (铣平面、开槽、端部打孔、侧面打孔等)。 Special length of shaft, special diameter or special machining on shaft (like shaft slotted, fattened etc.)

* 如有其他特殊要求请与思博联系。For other special requirements, please contact with SIBO.

(当产品带特殊规格时, 其一般机械/电气性能和环境性能可能发生改变, 请预先同思博确认。In case of the potentiometer with special specifications, the general mechanical, electrical specifications and environmental specifications may change. Please consult with SIBO in advance.)

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