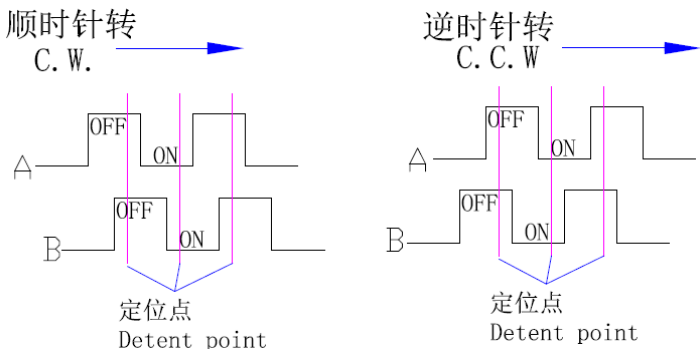
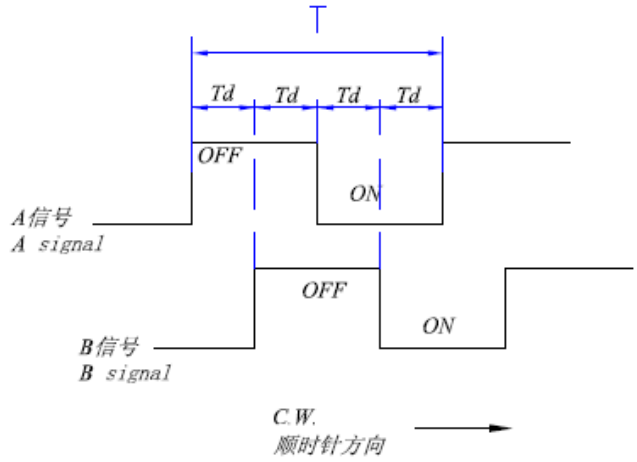





# 编码器规格书

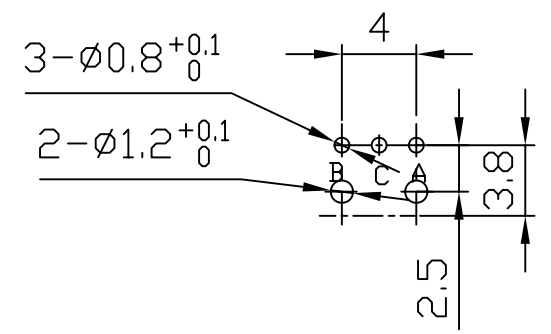
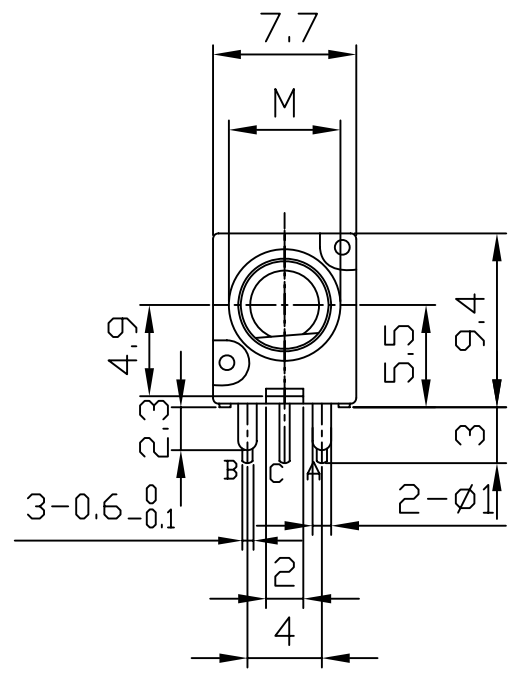
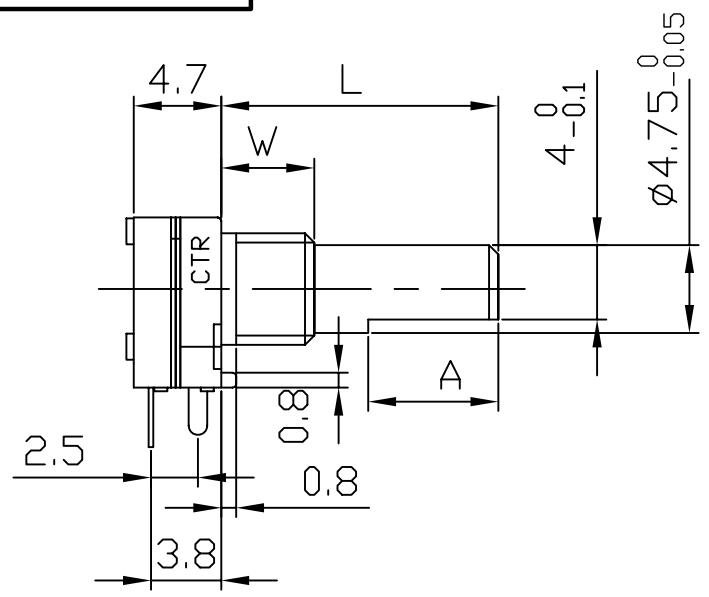
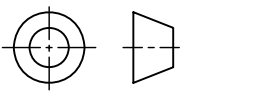
## ENCODER SPECIFICATIONS

<b>1 一般事项</b> <b>General information</b>	
1-1 适用型号 Applicable models	ED089 系列 <双通双断> ED089 Serial
1-2 使用环境温度 Usage environment temperature	- 30℃ ~ + 70℃
1-3 保存环境温度 Storage environment temperature	- 40℃ ~ + 70℃
1-4 测试条件 Test condition	温度: 5~35℃, 湿度: 45~85%HR Temperature:5~35℃, Moisture:45~85%HR
1-5 环保要求 Environmental requisition	本产品符合 RoHS 指令 This product is compliant with RoHS Directive
1-6 耐焊接热 Soldering heat-resistance	1、手工焊接温度最高 350℃ ± 5℃, 3 秒; 2、自动焊接温度最高 260℃ ± 5℃, 3 秒; 基板表面预热温度最高 100℃, 1 分钟以内; 3、以上过程均保证在 1 到 2 次; 4、不适用回流焊。  1. Soldering iron Max ,350℃ ± 5℃ at 3 sec 2. Auto soldering 260℃ ± 5℃ max. at 3 Sec. Preheating temperature of board surface: 100℃ max. at within 1 minutes. 3. To guarantee the above process at 1 or 2 times. 4. No apply the reflow soldering.
1-7 原产地 Country of origin	中国 China
<b>2 构造</b> <b>Construction</b>	
2-1 外观 Appearance	各部件应完整, 无锈蚀、裂痕、电镀不良 Every part should finished, be not exist rust flaw crack and bad plating
2-2 寸法 Measurements	依照图面规定 Under conditions prescribed by design drawing.
<b>3 机械性能</b> <b>Mechanical characteristics</b>	
3-1 全回转角度 Total rotational angle	360°
3-2 回转力矩 Rotational torque	50~350gf.cm (旋转速度: 60° /1 秒) 50~350gf.cm (Rotational velocity : 60° /1 Sec.)
3-3 定位数 Number of detent	20 个定位 20 Detents
3-4 切换角度 Change-Over angle	18° ± 3°
3-5 轴压引强度 Pull-Push Strength of Shaft	10Kgf.cm Min.
3-6 螺母锁紧强度 Nut tightening strength	10Kgf.cm Min.
3-7 轴摇晃度 Shaft wobble	在单个轴顶端施加压力 250gf, 轴径向偏移量小于: 1*轴长 L 尺寸/30mm On the tip of the single shaft exert pressure 250gf , Shaft radial deviant be smaller than: 1*shaft long L size/30mm
<b>4 电气性能</b> <b>Electrical characteristics</b>	
4-1 额定电压 Voltage rating	DC 5V
4-2 额定电流 Current rating	1mA

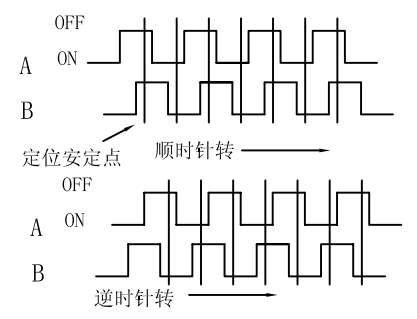
4-3 耐电压 Voltage proof	AC 300V 1 分钟以上（端子和本体之间，端子和轴芯之间） 1 Minute at AC 300V (Between terminal – case, Between terminal –shaft).
4-4 最高使用电压 Maximum operating voltage	DC 10V 或 AC50V DC 10V or AC50V
4-5 最大使用电流 Maximum operating current	2.5mA
4-6 接触抵抗 Ratings power	10 Ω Max
4-7 绝缘抵抗 Insulation resistance	DC 250V 100MΩ 以上（端子和本体之间，端子和轴芯之间） 100MΩ min. At DC 250V (Between terminal – case, Between terminal –shaft).
4-8 脉冲数 Number of pulses	旋转一周（360°）输出 20 个脉冲 Output 20 pulses of rotate one circle(360° ).
4-9 输出信号 Output signal	<p>A、B 信号，相位差的输出如下： * 备注：A 信号（A—COM 间），B 信号（B—COM 间） Output of phase difference, signals A and B, is as follows. *Remark: A signal (Between A-common) ,B signal (Between B-common)</p> 
4-10 相位差 Phase difference	<p>在没有定位的情况下 <math>T_d = T/4 \pm T/6</math> * 备注：T=周期 In no detent circumstances <math>T_d = T/4 \pm T/6</math> in case of no detent. *Remark: T= Cycle</p> 
4-11 回转寿命 Rotational life	<p>无负荷情况下每小时旋转 600 周，寿命 30,000 周，寿命后： 1、绝缘抵抗 10MΩ 以上 DC250V（端子和本体之间，端子和轴芯之间）； 2、耐电压 AC100V 1 分钟（端子和本体之间，端子和轴芯之间），绝缘阻抗无击穿； 3、回转力矩：满足第 3-2 项； 4、外观和结构无损坏。 30,000 cycles under no load circumstances by 600 r./h of rotation, afterlife cycle: 1. Insulation resistance:10MΩ min. At DC 250V. (Between terminal – case, Between terminal –shaft). 2. Withstanding voltage : AC 100V at 1 minute (Between terminal – case, Between terminal –shaft). No subversion on insulation resistance. 3. Rotational torque : Content item No. 3-2. 4. No damage on appearance and structure.</p>

<b>5 开关性能</b> <b>Switch characteristics</b>				
<input type="checkbox"/> 适用 <input checked="" type="checkbox"/> 不适用 Apply                              No apply				
5-1 开关型式 Switch type	按压式 Push type			
5-2 开关回路、 Switch configuration, Contact point	单刀单掷 S. P. S. T			
5-3 开关定格电力 Switch working angle	DC 16, 0.5A			
5-4 开关按压行程 Switch push travel	0.5+0.1/-0.2mm			
5-5 开关按压力 Switch push pressure	700±300gf			
5-6 开关接触电阻 Switch contact resistance	≤100mΩ, 寿命后≤500mΩ ≤100mΩ, afterlife cycle: ≤500mΩ			
5-7 开关按压寿命 Operating life for momentary push switch	无负荷情况下每小时按压 600 次，寿命 20,000 次，寿命后： 1、耐电压 AC100V 1 分钟（开关端子和本体之间），绝缘阻抗无击穿； 2、开关按压力：满足第 5-5 项； 3、外观和结构无损坏。  20,000 cycles under no load circumstances by 600 r/h of push, afterlife cycle: 1. Withstanding voltage: AC 100V at 1 minute (Between switch terminal – case). No subversion on insulation resistance. 2. Switch push pressure: Content item No. 5-5. 3. No damage on appearance and structure.			
<b>6 防水性能</b> <b>Waterproof standard characteristics</b>				
6-1 防水标准 Waterproof standard	<input checked="" type="checkbox"/> 不适用 No Apply  <input type="checkbox"/> 七级防水 编码器轴芯轴套置于水中 1 米深处，其它部件密封后暴露在标准大气压中，30 分钟后电位器内部未进水。 Grade -7 of Waterproof standard Encoder's Shaft and Bush in water 1M deep, after other component sealed exposed to the standard atmosphere, after 30 minutes no water into the Encoder's inner.			
<b>东莞市长泰尔电子有限公司</b> <b>DONG GUAN CHANG TAI ER ELECTRONIC CO., LTD.</b>		制 作 Designed By	审 核 Checked By	核 准 Approved By
				

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



Mounting hole detail



轴的类型:

FE Shaft Style		FF Shaft Style	
L	15 16.5 17 18 18 20 20 20.8 18	L	15 15 20 25
A	7 5.5 8 5.4 9 5.4 12 10 6	A	6.5 7 12 12

FK Shaft Style		FB Shaft Style	
L	15 15 20 25	L	15 15 16 20 25
A	6.5 7 12 12	A	6.5 7 6.0 12 12

product code	W	M
ED08905O	5	M6X0.75
ED08903O	7	
ED08901O	10	

东莞市长泰尔电子有限公司

未注尺寸公差	比例	2.5:1	版本	1.0	设计	审核	批准
L ≤ 1.0时 ±0.1	品名	ED0890□O 组立图			工程 2021.12.30 韦德爱	工程 2021.12.30 喻钊	工程 2021.12.30 彭先炎
1.0 < L ≤ 10时 ±0.3							
10 < L ≤ 30时 ±0.5							
30 < L ≤ 100时 ±1.0							
图号	ED0890□O -2D7						

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1