

编码器规格书

SPECIFICATIONS

适用型号 : ED10313O-FE17C8.0-A16-1004
APPLICABLE MODELS: ED10313O-FE17C8.0-A16-1004

1 一般事项

General information

- 1.1 适用范围: 本规格书适用于车载机器、AV 机器、收音机、通讯设备用之 10 型金属轴编码器。
Applying range: This specification is applied to 10mm size metal shaft type encoder used in vehicle, audio-visual, radio and communication equipment.
- 1.2 使用温度范围 $-10^{\circ}\text{C}\sim+60^{\circ}\text{C}$
Storage temperature range $-10^{\circ}\text{C}\sim+60^{\circ}\text{C}$
- 1.3 试验的状态 温度 $5\sim35^{\circ}\text{C}$ 、 $45\sim85\%RH$
Test condition As our standard condition: temperature $5\sim35^{\circ}\text{C}$ 、Moisture: $25\sim85\%RH$

2 外观尺寸

Appearance and dimensions

- 2.1 外观 外观无锈蚀,电镀不良,破裂和明显变形。
Appearance No harmful rust, cracks, scratches and poor under functioning
- 2.2 尺寸 见附图
Dimensions Refer to attached drawing

3 额定参数

Electrical ratings

- 3.1 定格电压 DC 10V
Rated voltage DC 10V
- 3.2 定格电流 1 mA
Rated current 1 mA
- 3.3 最大使用电流 2 mA
Max. operating current 2mA

4 电气特性

Electrical characteristics

项目 Items	规格 Specifications	条件 Condition
4.1 接触抵抗 Contact resistance	接触抵抗: 1Ω 以下 Contact resistance 1Ω max	$1\text{KHz}\pm 200\text{Hz}$ 、电压 20mV 以下、电流 5mA 以下测定 $1\text{KHz}\pm 200\text{Hz}$ 、20mV below、5mA below
4.2 耐电压 Dielectric strength	绝缘材料无击穿 No subversion on insulation material	AC250V 1minute 施加位置: 所有端子与接地(外壳)间 Applied position: Between all terminals and ground(frame)
4.3 绝缘电阻 Insulation resistance	$100\text{M}\Omega$ 以上 $100\text{M}\Omega$ MIN	DC500V 1min \pm 5S 施加位置: 所有端子与接地(外壳)间 Applied position: Between all terminals and ground(frame)

型号 Model	ED10313O-FE17C8.0-A16-100	版本 Edition	1.0	CT-QR2215	页码 Page	1/3
-------------	---------------------------	---------------	-----	-----------	------------	-----

5 机械特性 Mechanical characteristics				
项目 Items	规格 Specifications		条件 Condition	
5.1 定位点力矩 Detent torque	200~450gf.cm			
5.2 回转止档强度 Rotational stopper strength	4Kgf.cm			
5.3 定位点数(300°) Number of detents	16 detents			
5.4 全旋转角度 Total rotational angle	300° ±5° endless			
5.5 端子强度 Terminal strength	<p>端子焊接部位无松动、损坏、脱落。试验后,端子可能弯曲,但是应满足第4项规定的电气参数要求。 .</p> <p>Shall be free from terminal looseness damage and breakage of terminal soldering position. terminals may be bent after test. But electrical performance requirements specified in item 4 shall be satisfied.</p>		<p>在端子前端的垂直方向施加4.9N(0.5kgf)的静止荷重 15 秒钟。(每个端子 1 次)</p> <p>A static load of 4.9N(0.5kgf) shall be applied to the tip of terminal for 15S in a desired direction. The test shall be done once per terminal</p>	
5.6 操作强度 Operation Strength	<p>1: 轴推、拉力强度: 98N(10Kgf), 时间 15S</p> <p>2: 轴侧向承受力强度: 98N(10Kgf), 时间 15S</p> <p>Axial pull/push: 98N (10kgf) 15S</p> <p>Lateral push strength: 98N min (10kgf) 15S</p>		<p>静止荷重</p> <p>Static load</p>	
5.7 轴偏摆 Shaft wobble	安装长度 Installation Length	测定位置 Measure Position	转轴偏摆 Shaft Wobble	<p>在转轴侧推力 4.9N(0.5Kgf)测定.</p> <p>The shaft side bending torque 4.9N(0.5Kgf) for measurement.</p>
	15mm	10mm	0.17 mm 以下	
	20	15	0.25	
	25	20	0.35	
	30	25	0.42	
35 以上	30	0.50		
5.8 耐焊接热 Soldering Heat Resistance	<p>不应有外观及操作异常发生, 电气性能符合规格第4项要求。</p> <p>NO abnormalities shall be observed in appearance and operation. The electrical performance requirements specified in item 4 shall be satisfied.</p> <p>被浸入表面均匀的焊锡涂层, 应达到 75% 以上。</p> <p>A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed.</p>		<p>焊锡温度: 230±5℃</p> <p>焊锡时间: 3±0.5 秒</p> <p>Solder temperature: 230±5℃</p> <p>Solder dipping time: 3±0.5S</p>	

型号 Model	ED10313O-FE17C8.0-A16-100	版本 Edition	1.0	CT-QR2215	页码 Page	2/3
-------------	---------------------------	---------------	-----	-----------	------------	-----

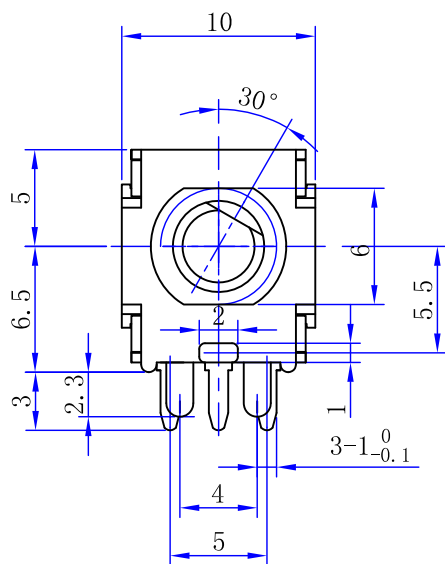
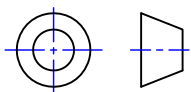
5.9 可焊性 Solderability	方式 Method	温度(°C) Temp. (°C)	时间(秒) Time (S)	满足各项电气性能 Satisfy all the electric characteristics.
	自动焊 Auto-soldering	260±5	5±1	
	手工焊 Hand-soldering	300±5	3±1	

**6 耐久性
Durability**

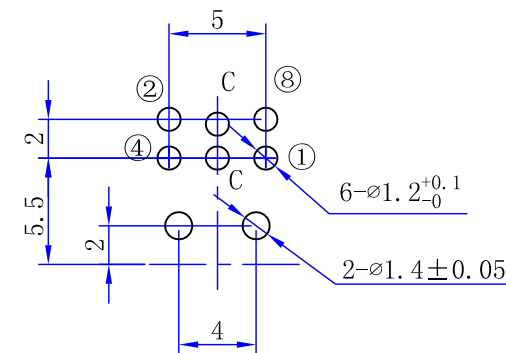
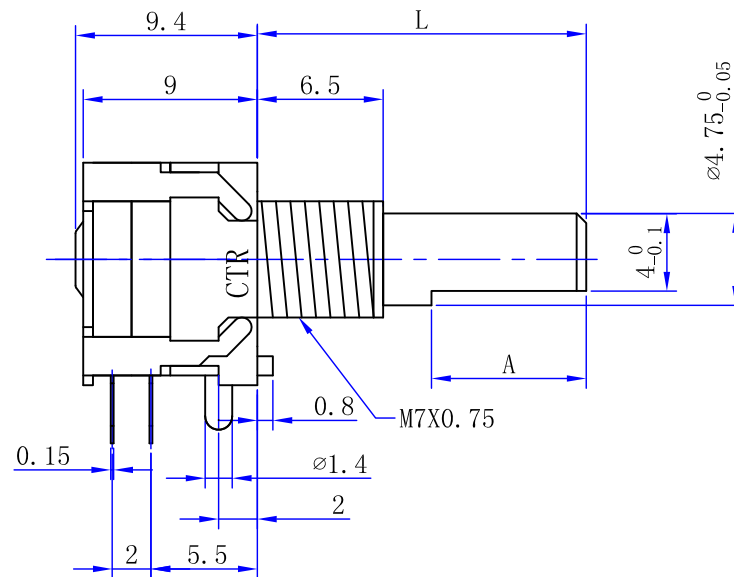
项目 Items	规格 Specifications	条件 Condition
6.1 旋转寿命 Rotational life	10,000 cycles	无负荷，速度：600周/小时。 at 600 cycles /H without load after which measurement shall be made.
6.2 耐寒性 Cold resistance	接触抵抗：1Ω以下 绝缘电阻：10MΩ以上	(-20±2) °C 96小时试验后、常温常湿中放置1小时后、在1小时内测定。 Test the part within (-20±2) °C for 96H, and remove the part for 1H. After all, then do the measurement within 1H.
6.3 耐热性 Heat resistance	耐电压：AC100V 1分钟 绝缘无损伤 外观无异常、各项电气性能满足参数要求 Contact resistance: 1Ω below Insulation resistance : Above 10MΩ	(70±2) °C 96小时试验后、常温常湿中放置1小时后、在1小时内测定。 Test the part within (70±2) °C for 96H, and remove the part for 1H. After all, then do the measurement within 1H.
6.4 耐湿性 Humidity resistance	Voltage resistance: AC100V for 1 minute, no deformation of insulation part, no broken of appearance, and every electric characteristics is fully compliant with parameter requirement.	(40±2) °C、湿度 90~95%RH, 96小时试验后、常温常湿中放置1小时后、在1小时内测定。 Test the part within (40±2) °C & 90~95%RH environment for 96H, and remove the part for 1H. After all, then do the measurement within 1H.

东莞市长泰尔电子有限公司 DONG GUAN CHANGTAIER ELECTRONIC CO.,LTD	制作 Designed By	审核 Checked By	核准 Approved By
			

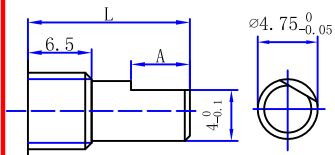
型号 Model	ED10313O-FE17C8.0-A16-100	版本 Edition	1.0	CT-QR2215	页码 Page	3/3
-------------	---------------------------	---------------	-----	-----------	------------	-----



Shaft shown Full.c.c.w position



FE Shaft Style



L	15	16.5	17	18	18	20	20	21	20.8	15.6
A	7	5.5	8	5.4	9	5.4	12	9	10	7

旋转方向	C.W															
编码	C.W															
引出端	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
⑧-C	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
④-C	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
②-C	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0
①-C	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0

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	A1.2	设计	审核	批准
L ≤ 1.0时 ±0.1	品名	ED103130安装尺寸图			工程部 2020.12.07 谢敏	工程部 2020.12.07 喻钊	工程部 2020.12.07 彭先炎
1.0 < L ≤ 10时 ±0.3	图号	ED103130-					
10 < L ≤ 30时 ±0.5							
30 < L ≤ 100时 ±1.0							