



常州宇豪电子有限公司
CHANGZHOU YUHAO ELECTRONIC CO., LTD.

承认书

APPROVAL SHEET

☆ 产品型号/Mode number: EC11-1S-D7*6.5-L20KQ-BC 20P 20C

☆ 客户型号/CustomerP/N:

☆ 公司名称/Customer: _____

☆ 日期: 2016-12-10

出图/Issued By:	
客户检验/Customer inspection:	
客户核准/Customer approval:	

EC11系列规格书/EC11 Series Specification

客户名称	
型号规格	EC11-1S-D7*6.5-L20KQ-BC 20P 20C
客户型号	
客户料号	

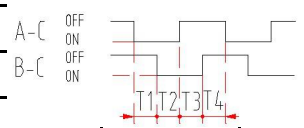
一. Mechanical Characteristics 机械性能

ITEM 项目	SPECIFICATION 规格
Total Rotational Angle 全程旋转角度	360°
Rotational Torque 旋转力矩 (无定位产品)	□ 20~200gf.cm
Click pull-out Torque 定位脱出力矩	■ 20~150gf.cm
Shaft push-pull Strength 轴推拉强度	8.0kgf-8.0kgf Min at 8sec
Shaft Wobble Strength 轴的晃动	0.7xL/30 mm P-P max L:shaft length(轴长)
Number of Click(定位数)	■ 20 clicks Step Angle:18° ±2°
	□ 30 clicks Step Angle:12° ±2°
Bushing-nut tightening strength(螺纹锁紧强度)	7.0kgf.cm Min
Shaft rotational gap 轴旋转间隙	0.4mm Max
Shaft play in rotational wobble 轴的回转方向摆动	5° Max

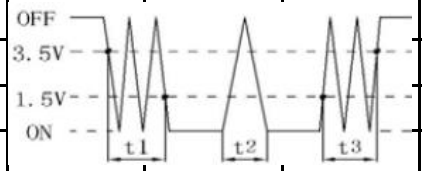
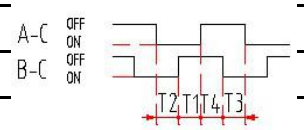
二. Electrical Characteristics 电气性能

ITEM 项目	SPECIFICATION 规格
Power rated 额定功率	DC 5V, A、B lead 5mA Max, C lead 10mA Max
Output signal 输出信号	A、B 2 signals
Resolution 分解能力	AC 先通
	□ 20 pulses/360°
	□ 15 pulses/360°
	BC 先通
	■ 20 pulses/360°
	□ 15 pulses/360°
Contact resistance between pins 端子间接触电阻	1 Ω Max
Phase difference 相位差	T1、T2、T3、T4 ≥ 0.08T
Rotation noise 滑动杂音	t1, t3 ≤ 3mS t2 ≤ 2mS
Insulation resistance 绝缘阻抗	100MΩ Min at DC 250V
Dielectric 耐电压	1 minute at AC 300V

顺时针旋转输出信号



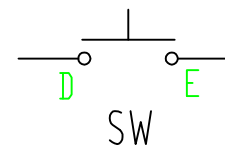
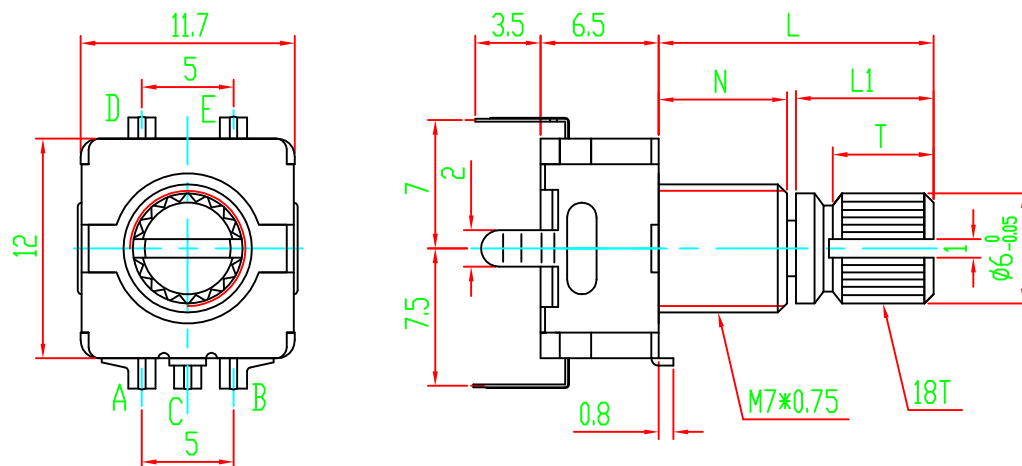
顺时针旋转输出信号



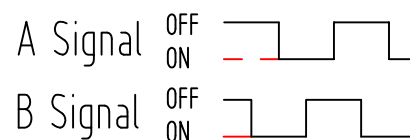
三. Endurance characteristics 耐久性能

ITEM 项目	SPECIFICATION 规格
Rotational life 旋转寿命	□ 30,000 ± 200 cycles ≤ 100gf.cm
	□ 15,000 ± 200 cycles ≥ 100gf.cm
Storage temperature range 储存温度	-40°C ≈ +85°C
Operating temperature range 使用温度	-30°C ≈ +80°C
Soldering characteristic 焊锡温度	dipping in soldering ≤ 206°C ± 5°, within 3S
	solder by hand: ≤ 300°C ± 5°, within 3S

Shaft Shown in Full
C.C.W. Position



CW →



← CCW

P.C.B MOUNTING DETAIL

L	15	17	20	✓
L1	7.5	9.5	12.5	✓
T	5.5	6	9	✓
N	7	7	7	✓

02				05			
01				04			
	DATE	REVISION	APPROVED	03			
徐长笑 2016.12.10	毛志平 2016.12.10	宋继鹏 2016.12.10	MODEL: EC11-1S-D7*6.5-L20KQ-BC 20P 20C				
DRAW	CHKD	APPD	DRAWING NO:				
			常州宇豪电子有限公司				
			CHANGZHOU YUHAO ELECTRONIC CO.,LTD.				