



Datasheet

RS PRO Long-Life Rotary Switches

Stock number: **175-8XXX (Details as follows)**

EN



The picture above is for reference only.

Specifications:

ELECTRICAL RATING : 0.5A 24V DC ; 0.2A 48V DC

CONTACT RESISTANCE : 100mΩ Max.

INSULATION RESISTANCE : 100MΩ min. 500V DC

DIELECTRIC STRENGTH : 500V AC for 1 minute

OPERATING FORCE : 350 ± 150 g

OPERATING LIFE : 10,000 cycles

OPERATING TEMPERATURE RANGE : - 20°C ~ 70°C

WAVE SOLDERING:

Recommended Soldering Temperature: 260 ± 5°C

※Ambient temperature of the soldered Surface of PC board. 120°C Max.

Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)

RS Part no.

175-8153	RT2-N0C1-0P1A
175-8152	RT2-N0C2-0P1A
175-8151	RT2-N0C3-0P1A
175-8150	RT2-N0C4-0P1A
175-8149	RT2-N0C5-0P1A
175-8148	RT2-N0C6-0P1A
175-8147	RT2-N0C7-0P1A
175-8210	RT2-N0C8-0P1A
175-8160	RT2-N002-0P1A
175-8146	RT2-N003-0P1A
175-8158	RT2-N004-0P1A
175-8170	RT2-N005-0P1A
175-8156	RT2-N006-0P1A
175-8155	RT2-N007-0P1A
175-8154	RT2-N008-0P1A

Specifications:

1. Style :

This specification describes "Rotary Switches" , mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

Operating Temperature Range : -20 °C~ +70 °C.

2. Electrical Rating : 0.5A/24VDC; 0.2A/48VDC

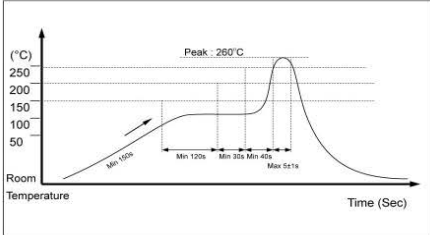
3. Type of Actuation : Rotating Switches

4. Test Sequence :

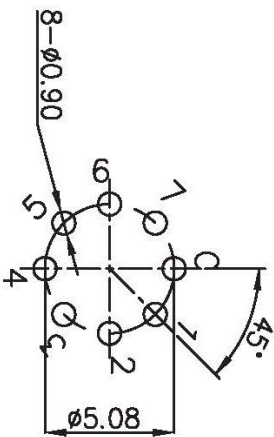
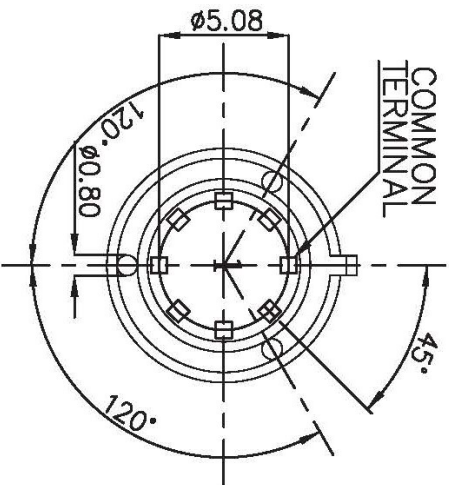
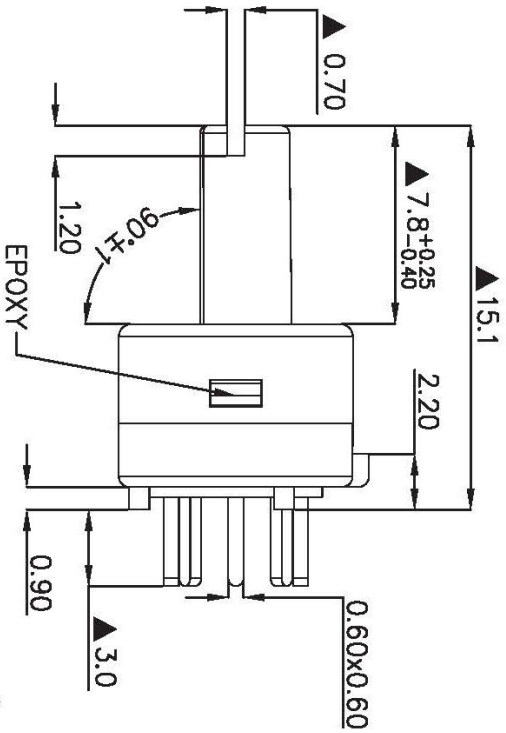
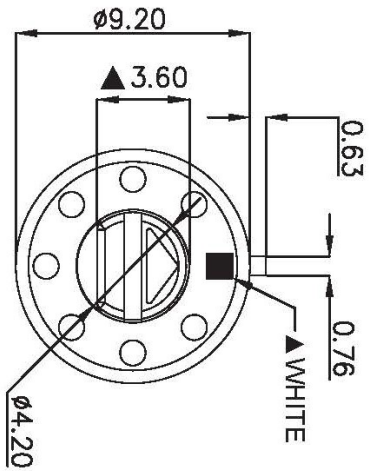
ELECTRIC PERFORMANCE	ITME	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
	1	Visual Examination	By Visual Examination check without and out pressure & testing.	There shall be no defects that affect the serviceability of the product.
	2	Contact Resistance	To be measured between the two terminals associated with each switch pole.	100mΩ Max
	3	Insulation Resistance	Measurements shall be made following application of 500 VDC/ 100mA potential across terminals and cover for 1 minute.	100MΩ min/500VDC
	4	Dielectric Withstanding Voltage	500 VAC (50Hz or 60Hz) shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
MECHANICAL PERFORMANCE	5	Actuation Force	MODEL-1305N MECHANICAL TEST 500gram · 1000gram · 2000gram.	At for test the force. Force : 350±150 gf.
	6	Operating Life	Measurements shall be made following the test forth below : ① 0.5A/24VDC ; 0.2A/48VDC Max. ② Rate of Operation : 6-8operation cycles per minute. ③ Electronics Life Test : 10,000 cycles.	As shown in item 3-4. Force : Min 200gf.
HUMIDITY RESISTANCE	7	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: ① Temperature : -20±3°C. ② Time : 96 hours.	As shown in item 2-4.
	8	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ① Temperature : 70±3°C. ② Time : 96 hours.	As shown in item 2-4.

Nov.21.2017

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
HUMIDITY RESISTANCE	9	The Salt Testing	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made :</p> <p>① Temperature : $35\pm 2^{\circ}\text{C}$. ② The ratio of salt-water : 5%. ③ The spray amount of salt- water : 1~2 ml/h. ④ Time : 48 hours.</p>	The testing standard based on bubble, crack, and magnifying glass with gauge.
	10	HSF	<p>Refer RoHS Standard :</p> <p>The electronic electrical machinery product limits with six big chemical materials.</p>	<p>Cd : 100ppm Pb : 1000ppm Hg : 1000ppm Cr6+ : 1000ppm PBB、PBDE : 1000ppm</p>
SOLDER HEAT RESISTANCE	11	Wave Soldering	<p>■ Wave Soldering :</p> <p>①Soldering Temperature:$260\pm 5^{\circ}\text{C}$. ②Duration of Solder Immersion: 5 \pm1 seconds.</p> <p>Temperature Profile</p>  <p>③PCB is 1.6mm in thickness.</p> <p>■ Ambient temperature of the soldered Surface of PC board. 120°Cmax.</p>	<p>①Shall be free from pronounced backlash and falling-off or breakage terminals. ②As shown in item 2~4.</p>
	12	Manual Soldering	<p>■ Manual Soldering :</p> <p>①Soldering Temperature : $350\pm 5^{\circ}\text{C}$. ②Duration of Solder Heated : 3 \pm1 seconds.</p> <p>■ Precautions in Handling Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.</p>	<p>①Shall be free from pronounced backlash and falling-off or breakage terminals. ②As shown in item 2~4.</p>

N0C1~N0C8



P.C.B. LAYOUT

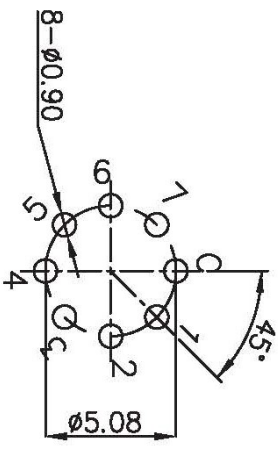
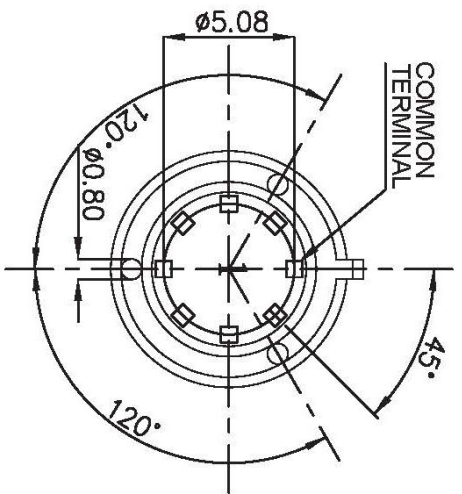
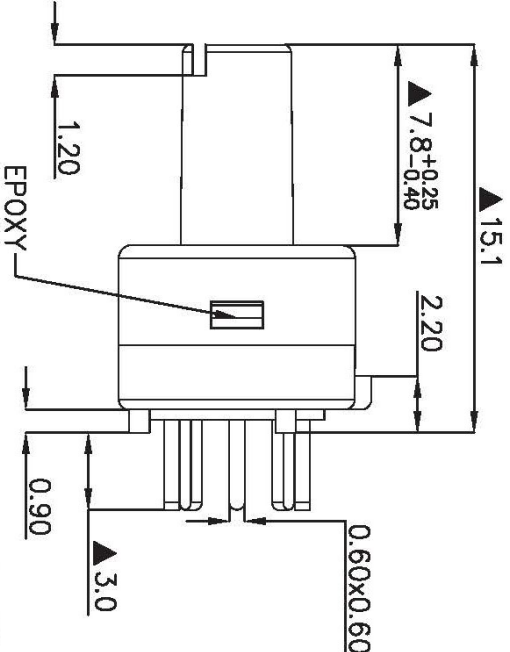
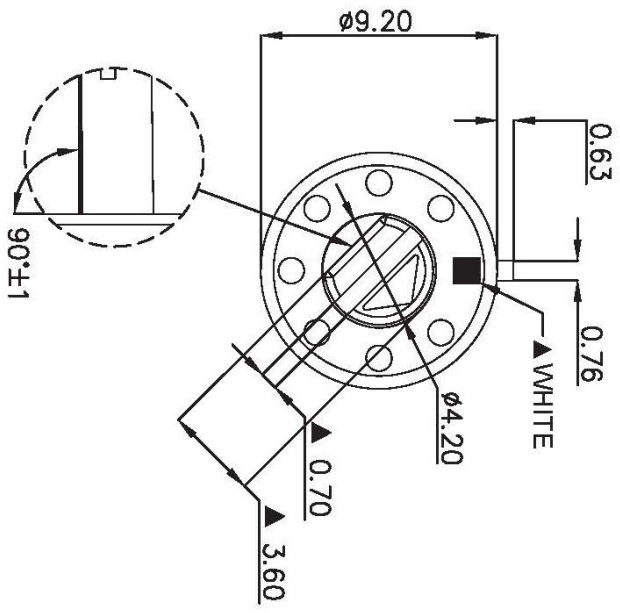
TRAVEL	SWITCH POSITION
0°	C-C(OFF)
45°	C-1
90°	C-2
135°	C-3
180°	C-4
225°	C-5
270°	C-6
315°	C-7

SPECIFICATIONS
 ELECTRICAL RATING: 0.5A 24VDC; 0.2A 48VDC
 CONTACT RESISTANCE:100 mΩ MAX.
 INSULATION RESISTANCE:100 MΩ MIN. 500VDC
 DIELECTRIC STRENGTH:500VAC for 1 minute
 OPERATING FORCE: 350±150g
 OPERATING LIFE: 10,000 cycles
 OPERATING TEMPERATURE RANGE : -20°C ~ 70°C

MATERIAL
 HOUSING: NYLON 6/6
 BASE: NYLON 4/6
 ACTUATOR: POM
 TERMINAL: Brass gold plating.
 RoHS & Lead Free

TOLERANCE (公差) :
 0.00 mm ± 0.25mm
 0.0 mm ± 0.40mm
 ANGULAR : ± 5°

N002~N008



TRAVEL	SWITCH POSITION
45°	C-1
90°	C-2
135°	C-3
180°	C-4
225°	C-5
270°	C-6
315°	C-7
0°	C-C(OFF)

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