



ENGLISH

## Datasheet

# RS PRO Sub-Miniature Pushbutton Switches

Stock number: 820-7565



### Package Contain:

- 1x Nut
- 1x Locking Washer
- 1x Splash Proof O-Ring

### Specifications:

- Switch Type: Pushbutton
- Poles/Throws: SPST
- Switch Functions: OFF-MOM

### ELECTRICAL CHARACTERISTICS

- Contact Rating: 500 mA 48 V ac – 200 mA 50 V dc – 200 mA 250 V ac
- Electrical Life: 500,000 make-and-break cycles at full load
- Contact Resistance: 50m-ohms max.
- Insulation Resistance: 1GΩmin @ 500 V dc
- Dielectric Strength: 1500 V ac RMS
- Operating Temperature: -30°C to +85°C

# Specifications:

## 1. Style :

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

Operating Temperature Range : -30 °C ~+85°C.

## 2. Current Range :

### 2.1 Silver Plating Standard :

Plating		Rating
C=Gold over silver	Fixed Terminal : Copper alloy with silver plated over gold plate.	bushing plastic material: 400mA @32VAC Max. 100mA @50VDC Max. 125mA @125VAC Max.
	Movable contact : Copper alloy with silver plated over gold plate.	bushing metal material: 500mA @48VAC Max. 200mA @50VDC Max. 200mA @250VAC Max.

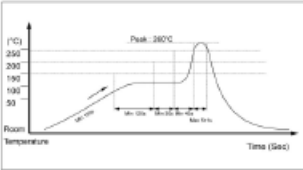
## 3. Type of Actuation : Snap-Acting Pushbutton Switches.

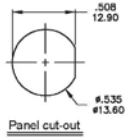
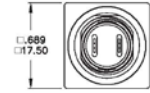
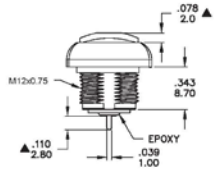
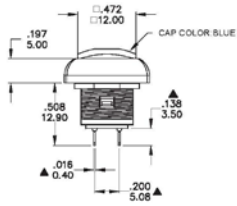
## 4. Test Sequence :

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
ELECTRIC PERFORMANCE	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.	50mΩ Max.
	3	Insulation Resistance	Measurements shall be made following application of 500 V/DC 100mA potential across terminals and cover for 1 minute.	1GΩ min/500V.
	4	Dielectric Withstanding Voltage	⊕1000 VAC(50Hz or 60Hz) shall be applied across terminals and cover for 1 minute. (for bushing plastic material ) ⊕1500 VAC for bushing metal material.	There shall be no breakdown or flashover.

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS	
MECHANICAL PERFORMANCE	5	Actuation Force	MODEL-1305N MECHANICAL TEST 500gram ~ 1000gram ~ 2000gram. OFF TO ON Total Travel	⊙At for test the force. Force : 2N-5N. ⊙Total Travel : 1.5 mm±0.25 mm
OPERATING LIFE	6	Operating Life	Measurements shall be made following the test forth below : ⊙Plastic Material : 100mA, 50VDC resistive load— gold over silver plated . ⊙Metal Material: 200mA, 50VDC resistive load— gold over silver plated . ⊙Electronics Life Test : 500,000 cycles. ⊙Rate of Operation: 6-8 operation cycles per minute. ⊙Mechanical Life Test : 1,000,000cycles.	⊙Electronics Life Test : As shown in item 3-4. ⊙Mechanical Life Test : As shown in item 2-4.
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 : ⊙Temperature : -30±3°C. ⊙Time : 96 hours.	As shown in item 2-4.

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS	
HUMIDITY RESISTANCE	8	Res T		
	9	Resistance Humidity	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 : ⊙Temperature : 40±2°C. ⊙Relative Humidity : 90-95%. ⊙Time : 96 hours.	⊙Contact Resistance : 50mΩ Max. ⊙Insulation Resistance: 1GΩ min.
	10	The Salt Testing	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 : ⊙Temperature : 35±2°C. ⊙The ratio of salt-water : 5%. ⊙The spray amount of salt-water : 1-2 ml/h. ⊙Time : 48 hours.	The testing standard based on bubble, crack, and magnifying glass with gauge.
	11	HSF	Refer RoHS Standard : The electronic electrical machinery product limits with six big chemical materials.	Cd : 100ppm Pb : 1000ppm Hg : 1000ppm Cr6+ : 1000ppm PBB、PBDE : 1000ppm
12	Test of IP 67	Upper side : Protected against the effects of temporary immersion in water. (1m below the surface of the water for a duration of 30 min)	IP67 According to EN 60529 : 1991+A1 : 2000 IEC 60529 : 2001	

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
13	Wave Soldering	<p>■ Wave Soldering :</p> <p>⊙Soldering Temperature:260±5°C.</p> <p>⊙Duration of Solder Immersion: 5 ±1 seconds.</p> <p>Temperature Profile</p>  <p>⊙PCB is 1.6mm in thicknes.</p>	<p>⊙Shall be free from pronounced backlash and falling-off or breakage terminals.</p> <p>⊙As shown in item 2-4.</p>
14	Manual Soldering	<p>■ Manual Soldering :</p> <p>⊙Soldering Temperature : 350°C max.</p> <p>⊙Duration of Solder Heated : Max 5 seconds.</p> <p>■ Precautions in Handling</p> <p>⊙Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.</p> <p>⊙Except for washable type do not wash the switch.</p> <p>⊙Please make sure that there is no flux rose over the surface of the PCB.</p>	<p>⊙Shall be free from pronounced backlash and falling-off or breakage terminals.</p> <p>⊙As shown in item 2-4.</p>



**SPECIFICATIONS**  
 Max. current/voltage rating with resistive load:  
 500mA 48VAC - 200 mA 50VDC - 200mA 250VAC.  
 INITIAL CONTACT RESISTANCE: 50 mΩ max.  
 INSULATION RESISTANCE: 1 GΩ min. at 500VDC.  
 DIELECTRIC STRENGTH: 1,500 VAC rms.  
 ELECTRICAL LIFE AT FULL LOAD: 500,000 cycles.  
 PANEL THICKNESS: 1.5 mm (.050) min. - 4 mm (.157) max.  
 TOTAL TRAVEL: 1.5 mm (.050).  
 OPERATING FORCE: 2N-5N.  
 CONTACT BOUNCE: 10 ms.  
 MECHANICAL LIFE: 1,000,000 cycles.  
 TORQUE: 1.5 Nm max. applied to nut.  
 SOLDERING: 350°C max. for 5 seconds.

**MATERIALS**  
 CASE: Diallyl phthalate (DAP)(UL94v-0).  
 CAP: Polyamide 6/6.  
 BUSHING: Glass filled nylon 6/6.  
 TERMINAL/CONTACTS: Gold over silver plated.  
 RoHS & Lead Free

Model No.	POS.1	POS.2
PAS6	OFF	MOM
Term. Comm.	OPEN	SHORT
SCHEMATIC		

**SWITCH FUNCTION**

PART NO.	PART NAME	QTY	
1	MNU-PA04	M12 X 0.75 NUT	1
2	MNU-1M09	LOCKING WASHER	1
3	FCP-A293	O-RING	1

**SCALE : 2 : 1**

**TOLERANCE :**  
 0.00 mm ± 0.25mm  
 0.0 mm ± 0.40mm  
 ANGULAR : ± 5°