



Datasheet

RS PRO Sub-Miniature Pushbutton Switches

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

EN



The picture above is for reference only.

Specifications:

RATING : 16A 250/125VAC.

CONTACT RESISTANCE : 50 m Ω max. @ 1A 12VDC (initial value)

INSULATION RESISTANCE : 100 M Ω min. at 500VDC

DIELECTRIC STRENGTH : 1,500V RMS @ sea level

OPERATION TEMPERATURE : -25°C to 85°C

MECHANICAL LIFE : Momentary 1,000,000 cycles

Latching 500,000 cycles

ELECTRICAL LIFE : 16A /125&250VAC 50,000 CYCLES

OPERATION PRESSURE : 3.5 \pm 1.5N

TRAVEL : About 3.2mm

INGRESS PROTECTION : IP67, IK08(Stainless)

TORQUE: 1~3Nm.

RS Part no.

RS Pro MPN	Packs of 1	Packs of 20
MW19-A0F0000-A1ZB	1759001	1758363
MW19-A0F0000-A1TB	1759038	1758365
MW19-A0F0000-A1DB	1759054	1758367
MW19-A0F1000-A1ZB	1758736	1758040
MW19-A0F1000-A1TB	1758759	1758041
MW19-A0F1000-A1DB	1758763	1758042
MW19-A0F0E00-A1ZB	1758547	1758074
MW19-A0F0E00-A1TB	1758599	1758076
MW19-A0F0E00-A1DB	1758658	1758078
MW19-A0F0L00-A1ZB	1758613	1758106
MW19-A0F0L00-A1TB	1758685	1758108
MW19-A0F0L00-A1DB	1758755	1758110
MW19-A0F1E00-A1ZB	1758442	1758031
MW19-A0F1E00-A1TB	1758517	1758033
MW19-A0F1E00-A1DB	1758574	1758035
MW19-A0F1L00-A1ZB	1758498	1758063
MW19-A0F1L00-A1TB	1758557	1758065
MW19-A0F1L00-A1DB	1758618	1758067
MW19-A0F0E124-A1ZB	1758828	1758115
MW19-A0F0E124-A1TB	1758847	1758117
MW19-A0F0E124-A1DB	1758865	1758119
MW19-A0F0L124-A1ZB	1758626	1758097
MW19-A0F0L124-A1TB	1758699	1758099
MW19-A0F0L124-A1DB	1758461	1758101
MW19-A0F1E124-A1ZB	1758630	1758057
MW19-A0F1E124-A1TB	1758531	1758024
MW19-A0F1E124-A1DB	1758610	1758026
MW19-A0F1L124-A1ZB	1758544	1758054
MW19-A0F1L124-A1TB	1758596	1758056
MW19-A0F1L124-A1DB	1758663	1758058

Specifications:

1. Style :

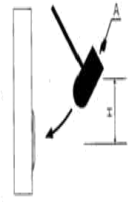
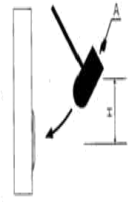
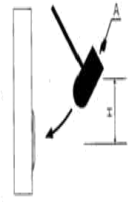
This specification describes “Metal Pushbutton Switch” , mainly used as signal of electric devices, with the general requirements of mechanical and electrical characteristic.

- ①Switch combination : INO or INC or INO INC.
- ②Enclosure material : Stainless steel.
- ③Operating Type : Momentary or Maintained.
- ④Operating Temperature Range : -25 °C~+85 °C.
- ⑤Degrees of protection provided by enclosures
IP code : IP67.
IK code : IK08. (for case :stainless steel)

2. Type of Actuation : Pushbutton Switch.

3. Test Sequence :

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
APPEARANCE	1	Visual Examination	By Visual Examination check without and out pressure & testing.	There shall be no defects that affect the serviceability of the product.
ELECTRIC PERFORMANCE	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 VDC / 100mA potential across terminals and cover for 1 minute.	100MΩ min.
	4	Dielectric Withstanding Voltage	①1500 VAC (50Hz or 60Hz) / between terminals /1minute. ②3000 VAC (50Hz or 60Hz) /between terminal and frame/ 1minute.	There shall be no breakdown or flashover.

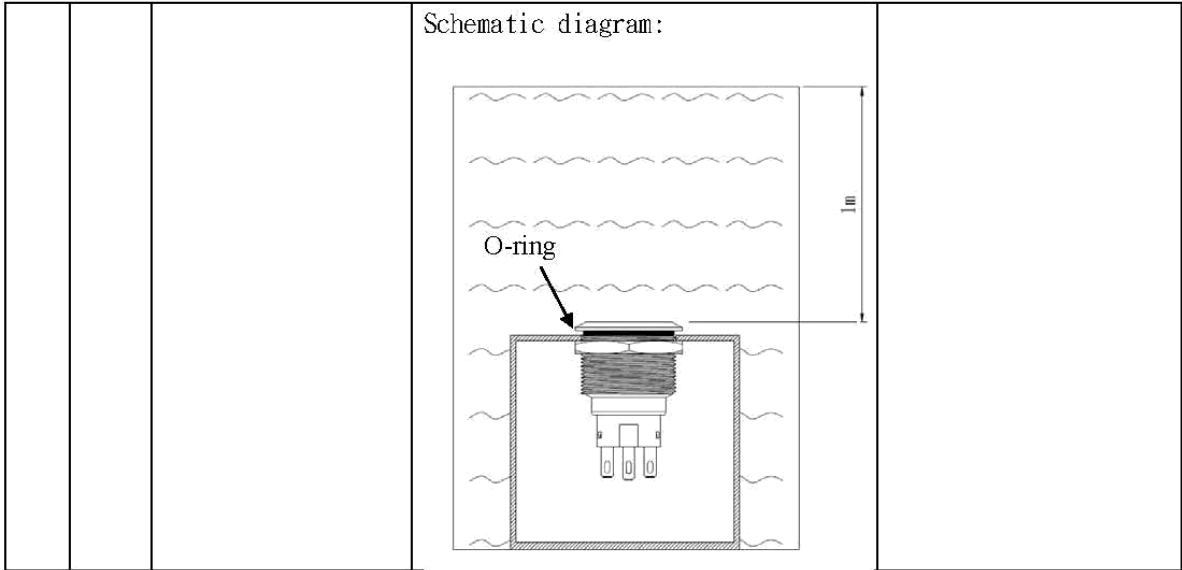
MECHANICAL PERFORMANCE	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS													
	5	Operation pressure	MODEL-1305N MECHANICAL TEST 500gram、1000gram、2000gram.	3.5 ± 1.5N													
	6	Operation Travel	Full Travel.	3.2 ± 0.3mm.													
	7	Torque	Applied to nut.	About 1~3Nm.													
	8	Panel Thickness	Applied to nut.	10mm Max.													
9	IK Code	<table border="1"> <thead> <tr> <th>IK Degree</th> <th>Weight (A)</th> <th>Original Height (H)</th> <th>Impact Energy</th> <th>Impact Diagram</th> </tr> </thead> <tbody> <tr> <td>08</td> <td>1.25 kg</td> <td>40cm</td> <td>5J</td> <td rowspan="2">  </td> </tr> <tr> <td>10</td> <td>5.0kg</td> <td>40cm</td> <td>20J</td> </tr> </tbody> </table>	IK Degree	Weight (A)	Original Height (H)	Impact Energy	Impact Diagram	08	1.25 kg	40cm	5J		10	5.0kg	40cm	20J	After three mechanical impact with corresponding grade energy at the same position of the crust, the switch has no harmful effect.
IK Degree	Weight (A)	Original Height (H)	Impact Energy	Impact Diagram													
08	1.25 kg	40cm	5J														
10	5.0kg	40cm	20J														
OPERATING LIFE	10	Operating Life	Measurements shall be made following the test forth below : ①16A/125/250VAC. ② Rate of Operation : 6-8operation cycles per minute. ③ Electronics Life Test : 50,000 cycles.	①Dielectric Strength : between terminals : 1000VAC. between terminals of opposite polarity : 1000VAC. ②Insulation Resistance : 50MΩ (at 500VDC)min. ③Contact Resistance : 100mΩ Max.													
			④Mechanical Life Test : Momentary : 1,000,000 cycles. Maintained : 500,000 cycles.														

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ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
11	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 : $-25\pm 2^{\circ}\text{C}$. ② Time : 48 hours.	As shown in item 4. ① Insulation Resistance : $50\text{M}\Omega$ (at 500VDC)min. ② Contact Resistance : $100\text{m}\Omega$ Max.
12	Resistance High 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 : $85\pm 2^{\circ}\text{C}$. ② Time : 48 hours.	As shown in item 4. ① Insulation Resistance : $50\text{M}\Omega$ (at 500VDC)min. ② Contact Resistance : $100\text{m}\Omega$ Max..
13	Resistance Humidity	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: $40\pm 2^{\circ}\text{C}$ ② Relative Humidity: 90-95% ③ Time: 48 hours.	As shown in item 4. ① Insulation Resistance : $50\text{M}\Omega$ (at 500VDC)min. ② Contact Resistance : $100\text{m}\Omega$ Max..

HUMIDITY RESISTANCE

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
HUMIDITY RESISTANCE	14	Salt spray 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: ①Temperature:35±2°C. ②The ratio of salt-water : 5%. ③The spray amount of salt- water : 1~2 ml/h. ④Time: 24 hours.	No remarkable corrosion shall be recognized in metal part.
RoHS	15	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
SOLDER HEAT RESISTANCE	16	Manual Soldering	■ hand Soldering : ①Soldering Temperature : 300°C±5°C. ②Duration of Solder Heated : 3 seconds (Max). ■ Precautions in Handling: ①Please make sure that there is no flux rose over the surface of the PCB.	①Shall be free from pronounced backlash and falling-off or breakage terminals. ②As shown in item 2-4.
IP Level	17	Test of IP 67	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



Wiring:

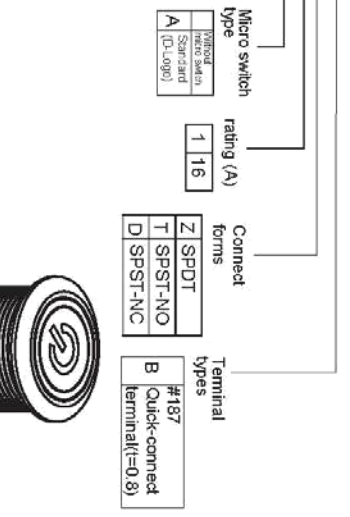
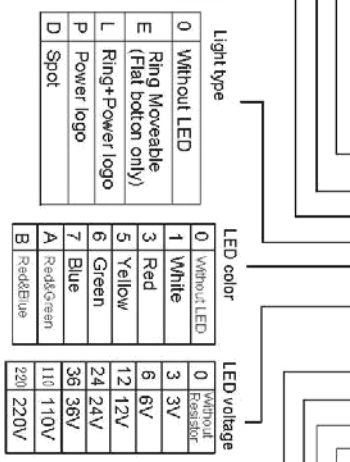
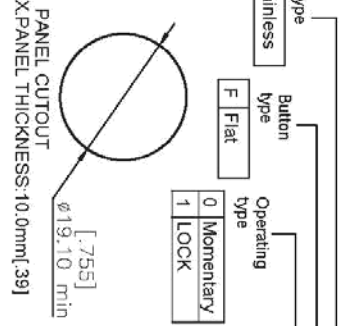
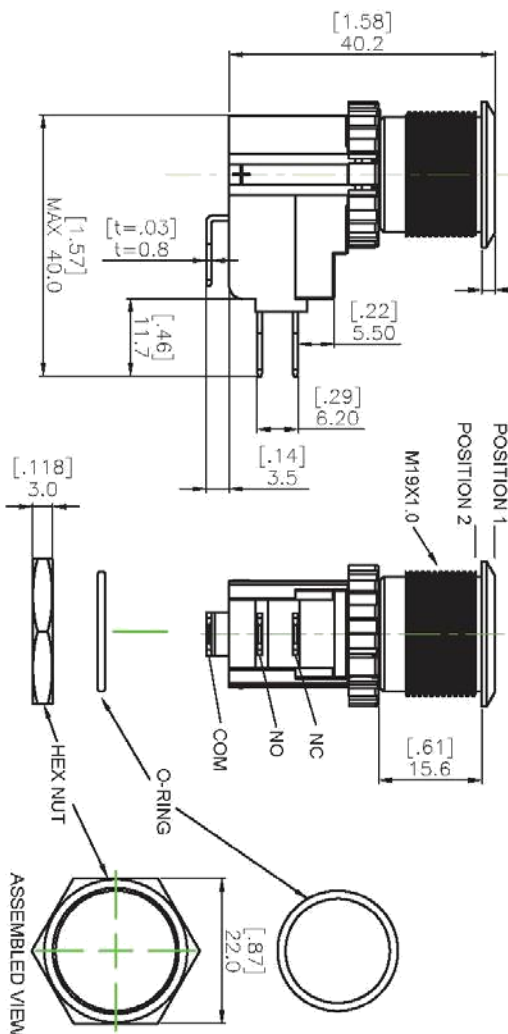
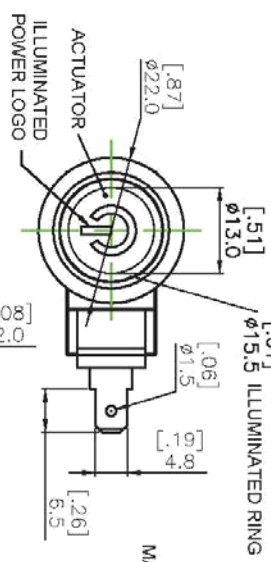
1. Solder the terminals using a 60W soldering iron at 300°C within 3 seconds.
(Sn-Ag-Cu type solder is recommended.)
2. When soldering, be sure to keep the soldering iron as far away from the housing as possible.
3. Also ensure that no tensile force is applied to the terminal. Do not bend the terminal or apply excessive force to the terminal.

4. LED Specifications : (LED Without resistor)

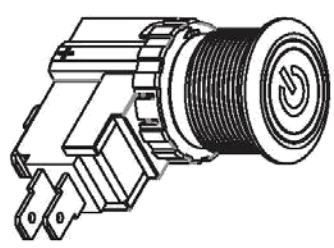
Color	VF(v) Min.	VF(v) TYP.	VF(v) MAX.	IF(MAX)
White	2.8	3.3	3.8	20mA
Red	1.8	2.1	2.5	20mA
yellow	1.8	2.1	2.5	20mA
Blue	2.8	3.2	3.8	20mA
Green	2.8	3.2	3.6	20mA

MW19-XXXXXXXX - XXXX

MATERIAL:
 BUSHING: Stainless Steel
 BASE: PBT(UL 94-V0) ; PC(UL94-V2) ; PA6T(UL94-V0)
 ACTUATOR: PC(UL 94-V2);Stainless Steel.
 INNER ASSEMBLY: POM/PA66
 SPRING: Steel.
 SEALING: Silicone.
 O-Ring: Silicone.
 TERMINAL/CONTACT: Brass, Silver plated.
 HEX NUT : Nickel plated brass.
 ROHS



Body type	A0 Stainless
Button type	F Flat
Operating type	0 Momentary 1 LOCK
Light type	0 Without LED E Ring Moveable (Flat button only) L Ring+Power logo P Power logo D Spot
LED color	0 Without LED 1 White 3 Red 5 Yellow 6 Green 7 Blue A Red&Green B Red&Blue
LED voltage	0 Without Resistor 3 3V 6 6V 12 12V 24 24V 36 36V 110 110V 220 220V
Micro switch type	Without Standard (D-Logo) A (D-Logo)
rating (A)	1 16
Connect forms	Z SPDT T SPST-NO D SPST-NC
Terminal types	B #187 Quick-conned Terminal(=0.8)



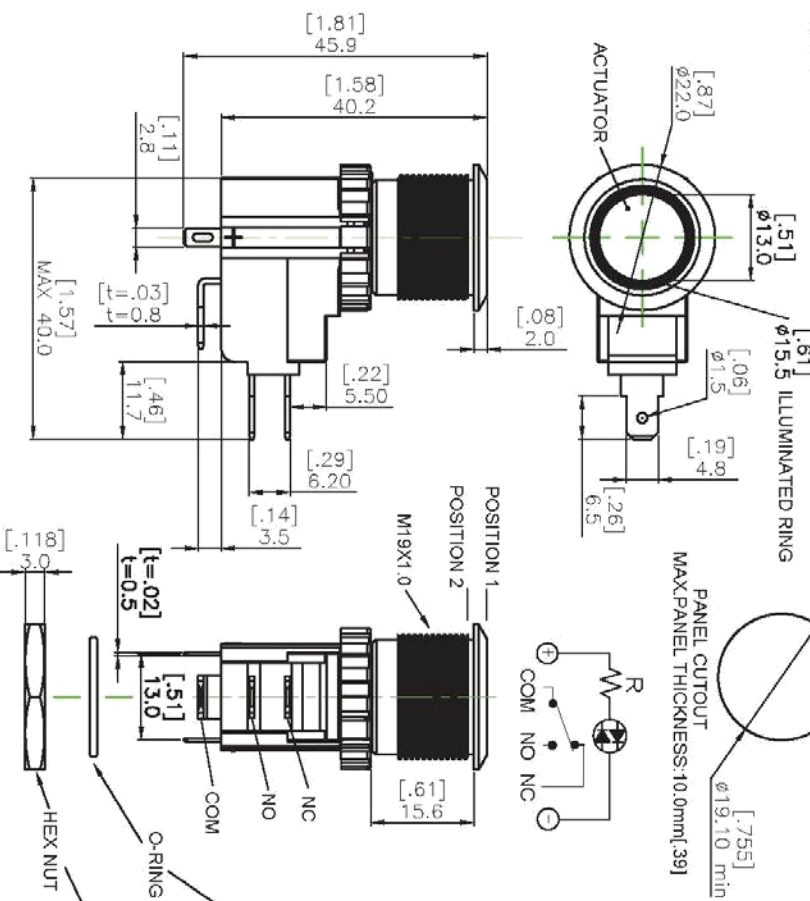
SPECIFICATIONS

- CONTACT MATERIAL: SILVER
- RATING: 16A 250/125VAC.
- ELECTRICAL LIFE: 16A/125&250VAC 50,000 CYCLES
- MECHANICAL LIFE: Momentary 1,000,000. SELF-LOCK 500,000.
- INSULATION RESISTANCE: 100MΩ MIN AT 500VDC.
- DIELECTRIC STRENGTH: 1,500V RMS@sea level.
- CONTACT RESISTANCE: 50mΩ MAX @1A 12VDC(initial value).
- OPERATING TEMPERATURE: -25°C to 85°C
- TRAVEL: ABOUT 3.2mm.
- OPERATION PRESSURE: 3.5±1.5N
- INGRESS PROTECTION: IP67,IK08(Stainless Steel).
- TORQUE: 1~3Nm.

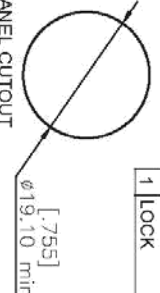
TOLERANCE (公差):	
0.00 mm	± 0.25mm
0.0 mm	± 0.40mm
ANGULAR: ± 2°	

MW19-XXXXXXXX - XXXX

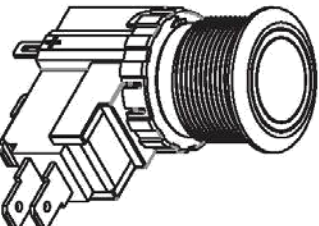
MATERIAL:
 BUSHING: Stainless Steel,
 BASE: PBT(UL 94-V0) ; PC(UL94-V2) ; PA6T(UL94-V0)
 ACTUATOR: PC(UL 94-V2);Stainless Steel.
 INNER ASSEMBLY: POM/PA66
 SPRING: Steel.
 SEALING: Silicone
 O-Ring: Silicone.
 TERMINAL/CONTACT: Brass, Silver plated.
 HEX NUT : Nickel plated brass.
 RoHS



PANEL CUTOUT
 MAX.PANEL THICKNESS:10.0mm[.39]



Body type	Button type	Operating type	Light type	LED color	LED voltage	Micro switch type	rating (A)	Connect forms	Terminal types
A0 Stainless	F Flat	0 Momentary 1 LOCK	0 Without LED E Ring Moveable (Flat bottom only) L Ring+Power logo P Power logo D Spot	0 Without LED 1 White 3 Red 5 Yellow 6 Green 7 Blue A ReddGreen B ReddBlue	0 Without LED Resistor 3 3V 6 6V 12 12V 24 24V 36 36V 111 110V 220 220V	Without Micro switch Standard A Q-Logo	1 16	Z SPDT T SPST-NO D SPST-NC	#187 B Quick-connected terminal(t=0.8)



SPECIFICATIONS
CONTACT MATERIAL: SILVER
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 2.RATING: 16A 250/125VAC
 3.ELECTRICAL LIFE: 16A/125&250VAC 50,000 CYCLES
 4.MECHANICAL LIFE: Momentary 1,000,000
 SELF-LOCK 500,000
 5.INSULATION RESISTANCE:100MΩ MIN AT 500VDC.
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 7.CONTACT RESISTANCE: 50mΩ MAX @1A 12VDC(initial value).
 8.OPERATING TEMPERATURE: -25°C to 85°C
 9.TRAVEL: ABOUT 3.2mm.
 10.OPERATION PRESSURE: 3.5±1.5N
 11.INGRESS PROTECTION: IP67,IK08(Stainless Steel).
 12.TORQUE: 1~3Nm.

TOLERANCE (公差):
 0.00 mm ± 0.25mm
 0.0 mm ± 0.40mm
 ANGULAR: ± 2°