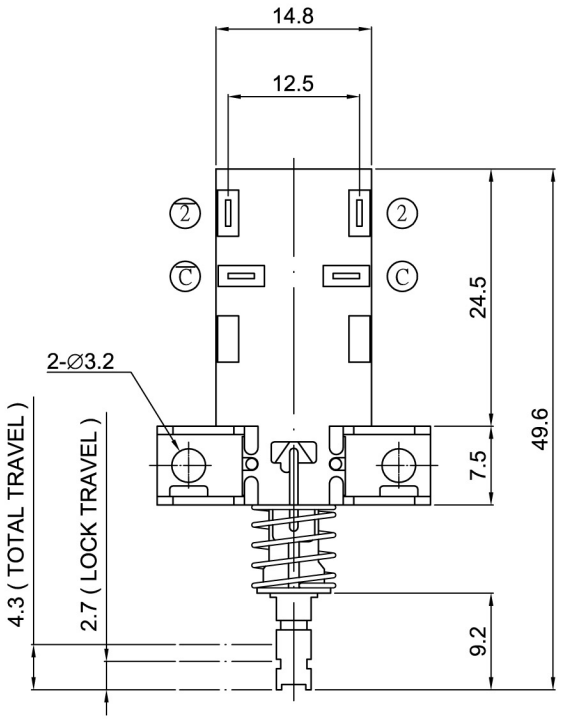
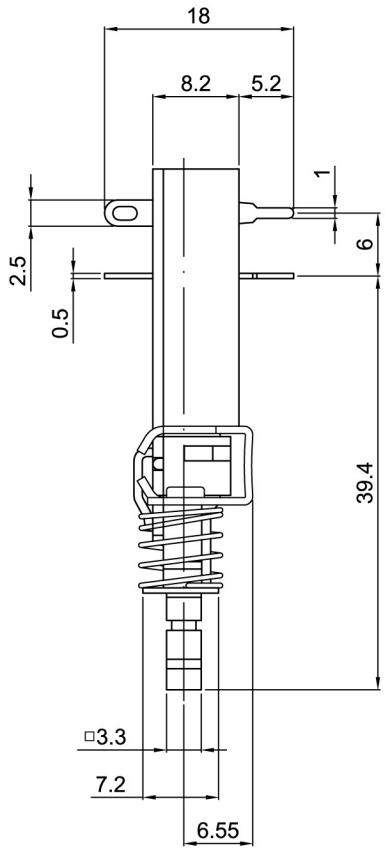
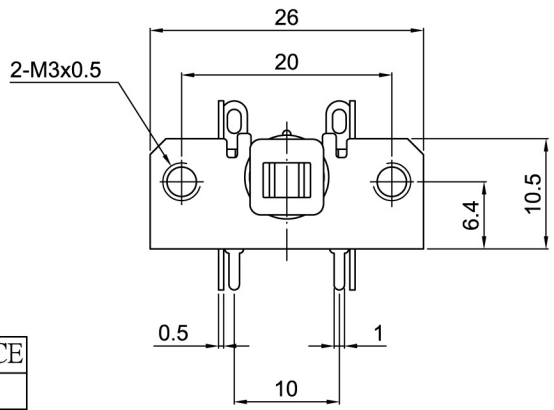
Order code	Manufacturer code	Description
78-0069	PT-M3BL	PCB POWER SWITCH LOCKING DPST M3 HOLE RC

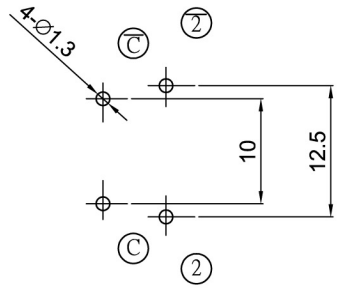
Sales: 01206 751166
Sales@rapidelec.co.uk
Technical: 01206 835555
Tech@rapidelec.co.uk
Fax: 01206 751188
www.rapidonline.com



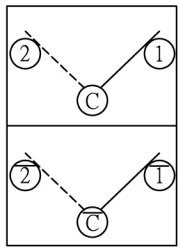




P.C.B. LAYOUT



SCHEMATIC



1. LOCK TYPE .
2. RATING : 4A 250V AC .
3. CONTACT RESISTANCE : 100 mΩ MAX .
4. INSULATION RESISTANCE : 500V DC , 500 MΩ MIN .
5. OPERATING FORCE : (NON-LOCK) 500±200 gf , (LOCK) 600±200 gf .
6. OPERATING TEMPERATURE : -20℃ ~ 70℃ .
7. OPERATING LIFE : 10,000 CYCLES .

DIMENSION	TOLERANCE
BELOW 10mm	±0.3
10~100mm	±0.5
ABOVE 100mm	±0.8
ANGLE	±3°

SYM	DATE	DESCRIPTION	REV.
△			
△			
△			

DATE	DRAWN BY	CHECKED BY	APPROVAL BY
2004/10/04	KAVEN		

UNIT: mm

SKIAGRAPHY:

TITLE: PT SERIES PUSH BUTTON POWER SWITCH

PART NO: PT-M3BL

DWG NO: PT-M3BL

SPECIFICATIONS OF PT SERIES
POWER PUSH BUTTON SWITCHES

1. POLE - POSITION：SPST, SPDT, DPST AND DPDT ARE AVAILABLE.

2. RATING：250V AC　4A

3. OPERATING TEMPERATURE RANGE：-20℃ ~ 70℃

4. ELECTRICAL PERFORMANCE.

	ITEM	TEST CONDITIONS	CRITERIA
4-1	CONTACT RESISTANCE	DC 1.5V 100mA BY METHOD OF VOLTAGE DROP.	100 mΩ MAX.
4-2	INSULATION RESISTANCE	DC 500V	500 MΩ MIN.
4-3	DIELECTRIC STRENGTH	1. AC 1,000V 1 MINUTE BETWEEN TERMINALS 2. AC 4,000V 1 MINUTE BETWEEN TERMINAL AND FRAME	BREAKDOWN IS NOT ALLOWALE.

5. MECHANICAL PERFORMANCE

	ITEM	TEST CONDITIONS	CRITERIA
5-1	OPERATING FORCE	1. MOMENTARY TYPE 2. LOCK TYPE	1. 600±200gf 2. 500±200gf
5-2	TRAVEL	1. LOCK TRAVEL 2. FULL TRAVEL	1. 3.0±0.3 mm 2. 4.5±0.3 mm
5-3	ROBUSTNESS OF TERMINAL	1 Kgf FOR 1 MINUTE	TERMINAL COULD BE BENT BUT LOOSENED TERMINAL OR BASE FRAME BROKEN IS NOT ALLOWABLE.

5-4	ROBSTNESS OF ACTUATOR	1. ALONG OPERATING DIRECTION TO APPLY A STATIC LOAD 10 Kgf AT END OF ACTUATOR TO PUSH FOR 15 SECONDS. 2. TO APPLY A STATIC LOAD 2Kgf VERTICALLY TO END OF ACUTATOR TO PUSH IT FOR 15 SECONDS. 3. ALONG OPPOSITE OPERATING DIRECTION TO APPLY A STATIC LOAD 5 Kgf TO PULL END OF ACTUATOR FOR 15 SECONDS.	ACTUATOR BROKEN OR ANY UNUSUAL APPEARANCE OCCURRED ON SWITCH CONSTRUCTION IS NOT ALLOWABLE.
5-5	SOLDERABILITY	260±5℃ 3±0.5 SECONDS	SOLDER COVERAGE 75% Min.

6. RESISTANCE OF SOLDERING HEAT
   6-1 MANUAL SOLDERING：300℃ IN 3 SECONDS
   6-2 DIP SOLDERING：260±5℃ IN 3 SECONDS.

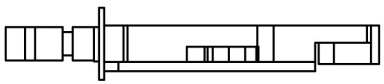
7. DURABILITY：AFTER 10,000 LIFE CYCLES
   7-1 CONTACT RESISTANCE：150 mΩ MAX.
   7-2 OPERATING FORCE：WITHIN THE RANGE OF ±30% OF OPERATING FORCE SPECIFICATION.
   7-3 INSULATION RESISTANCE AND DIELECTRIC STRENGTH SHALL MEET THE REQUIREMENTS OF 4-2 AND 4-3.

8. ENVIRONMENTAL PERFORMANCE

	ITEM	TEST CONDITIONS	CRITERIA
8-1	COLD	-20℃±2℃ FOR 48 HOURS	1. IT SHOULD MEET REQUIREMENTS OF ITEM 4. 2. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL.

8-2	DRY HEAT	70°C±2°C FOR 48 HOURS	1. CONTACT RESISTANCE SHOULD BE LESS THAN 150 mΩ. 2. IT SHOULD MEET REQUIREMENTS OF 4-2 AND 4-3. 3. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL.
8-3	DAMP HEAT	40°C±2°C 90% ~ 95%RH FOR 48 HOURS	1. CONTACT RESISTANCE SHOULD BE LESS THAN 150 mΩ. 2. INSULATION RESISTANCE SHOULD BE HIGHER THAN 100 MΩ. 3. DIELECTRIC SHOULD MEET REQUIREMENTS OF 4-3. 4. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL.

DIMENSION	TOLERANCE
BELOW 10 mm	± 0.3
10~100 mm	± 0.5
ABOVE 100 mm	± 0.8
ANGLE	± 3°



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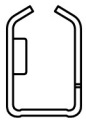

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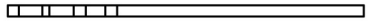

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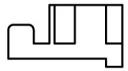

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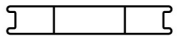

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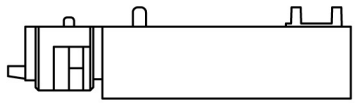

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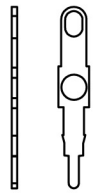

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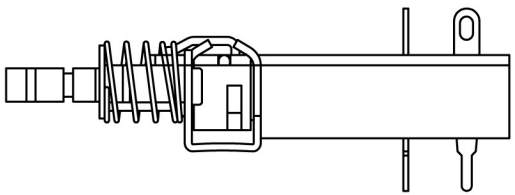

NO.	PART NAME	QTY	MATERIAL	SPECIAL DEAL	RoHS REPORT No.
1	ACTUATOR	1	PBT	+ GF 15%	CE/2005/33371
2	SPRING	1	STAINLESS STEEL		F690101/LF-CTS031176
3	LOCK PIN	1	BLACK STEEL WIRE	OVER NICKEL BRASS PLATING	CE/2004/B2676B
4	BRACKET	1	STEEL PLATE	RAINBOW ZINC PLATING	CE/2004/B3094A
5	COVER	1	PBT	+ GF 15%	CE/2005/33371
6	SLIDER	1	PBT	+ GF 15%	CE/2005/33371
7	MOVING CONTACT	2	PHOSPHOR BRONZE / Ag.ZnO	SILVER PLATING 5μm	CE/2005/10089 ; CE/2005/11378 ; CE/2004/B0168
8	SPRING PLATE	2	STAINLESS STEEL		CE/2005/30859A
9	BASE FRAME	1	PA66	+ GF 33%	CE/2004/B2210
10	TERMINAL	4	RED BRONZE	SILVER PLATING 5μm	CE/2004/C1762

3					DATE	2006/09/13	UNIT	mm	MODE	PUSH BUTTON SWITCH
2					APPROVAL	KAVEN	SCALE	1 : 1	PART	PT-M3BL
1					CONFIRM	REBECCA	VIEW		2D FILE NAME	PT-M3BL
	DATE	APPROVAL	DESIGN	ENGINEERING CHANGE DESCRIPTION	DESIGN	LISHISONG	VER.	01	3D FILE NAME	