



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Manual Switches

## Electronic Control Pushbutton

MML21 Series

### LED, INCANDESCENT, OR NON-LIGHTED DISPLAY



PWB Mount  
(Standard plunger)



Panel Mount  
(Standard plunger)



PWB Mount  
(One-piece plunger)

#### FEATURES

- Silver or gold contacts
- Choice of rectangular or square housings
- Accepts one LED or incandescent lamp
- Printed wiring board or snap-in panel mounting
- Bezels and mounting clips, LEDs and legended lenses can be furnished installed or ordered separately
- UL recognized, CSA certified

#### Example: MML21KK3AAK

Electronic control pushbutton switch with standard plunger; rectangular housing (black); bezel (black); mounting clips on long sides, PWB terminals; 1-pole, momentary action, silver contacts, black plunger.

#### Example: MML21KK3AAKRSDR

As above, except furnished with red LED and red lens installed.

**MML21KK3AAHRSXX20** as above, legended.

Catalog listing codes for switch, less assembled display options

### MML21 STANDARD PLUNGER SWITCHES ORDER GUIDE

MML21K		K		3		AA	
Housing Type		Mounting		Terminals		Circuitry/Action (Each pole is double throw)	
		Rectangular	Square			Rectangular	Square
<b>MML21K</b> Rectangular Black Housing <b>MML21H</b> Square Black Housing		<b>A</b> No bezel (PWB mounting) <b>K</b> Black bezel, mtg. clip/long sides	<b>A</b> No bezel (PWB mounting) <b>R</b> Black bezel & mtg. clip	<b>3</b> Printed Wiring Board <b>2</b> Solder		<b>Silver Contacts:</b> <b>AA</b> 1 pole, mom. action <b>AB</b> 1 pole, alt. action <b>AC</b> 2 pole, mom. action <b>AD</b> 2 pole, alt. action <b>Gold Contacts:</b> <b>BA</b> 1 pole, mom. action <b>BB</b> 1 pole, alt. action <b>BC</b> 2 pole, mom. action <b>BD</b> 2 pole, alt. action	<b>Silver contacts:</b> <b>AA</b> 1-pole, mom. action <b>AB</b> 1-pole, alt. action  <b>Gold contacts</b> <b>BA</b> 1-pole, mom. action <b>BB</b> 1-pole, alt. action

### MML21 ONE PIECE LENS/PLUNGER SWITCHES ORDER GUIDE

Catalog listing codes for switch, less assembled display options

MML21H		K		3		AA	
Housing Type		Mounting		Terminals		Circuitry/Action (Each pole is double throw)	
		Rectangular	Square			Rectangular	Square
<b>MML21K</b> Rectangular Black Housing <b>MML21H</b> Square Black Housing		<b>A</b> No bezel (PWB mounting) <b>K</b> Black bezel, mtg. clip/long sides	<b>A</b> No bezel (PWB Mounting) <b>R</b> Black bezel & mtg. clip	<b>3</b> Printed Wiring Board <b>2</b> Solder		<b>Silver Contacts:</b> <b>AA</b> 1 pole, mom. action <b>AB</b> 1 pole, alt. action <b>AC</b> 2 pole, mom. action <b>AD</b> 2 pole, alt. action <b>Gold Contacts:</b> <b>BA</b> 1 pole, mom. action <b>BB</b> 1 pole, alt. action <b>BC</b> 2 pole, mom. action <b>BD</b> 2 pole, alt. action	<b>Silver contacts:</b> <b>AA</b> 1-pole, mom. action <b>AB</b> 1-pole, alt. action  <b>Gold contacts</b> <b>BA</b> 1-pole, mom. action <b>BB</b> 1-pole, alt. action

# Manual Switches

## Electronic Control Pushbutton Switches

Electrical Data	page 69
Bezels	page 84
Strip and matrix mounting	page 83
PWB pin locations	page 91

Order display options assembled to switch by adding codes below<sup>3</sup>

<p><b>K</b></p> <p><b>Plunger Type</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>K</b></td> <td>Black</td> </tr> <tr> <td><b>W</b></td> <td>White</td> </tr> </table>	<b>K</b>	Black	<b>W</b>	White	<p><b>RS</b></p> <p><b>LED*</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>XX</b></td> <td>No Led<sup>4</sup></td> </tr> <tr> <td><b>RS</b></td> <td>Red<sup>5</sup></td> </tr> <tr> <td><b>YS</b></td> <td>Yellow<sup>5</sup></td> </tr> <tr> <td><b>GS</b></td> <td>Green<sup>5</sup></td> </tr> </table>	<b>XX</b>	No Led <sup>4</sup>	<b>RS</b>	Red <sup>5</sup>	<b>YS</b>	Yellow <sup>5</sup>	<b>GS</b>	Green <sup>5</sup>	<p><b>DR</b></p> <p><b>Lens</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>XX</b></td> <td colspan="2">No Lens</td> </tr> <tr> <td colspan="3">For LED Display</td> </tr> <tr> <td><b>DR</b></td> <td>Red</td> <td>For Incandescent or Unlighted Display</td> </tr> <tr> <td><b>DY</b></td> <td>Yellow</td> <td><b>LR</b> Red</td> </tr> <tr> <td><b>DG</b></td> <td>Green</td> <td><b>LY</b> Yellow</td> </tr> <tr> <td></td> <td></td> <td><b>LG</b> Green</td> </tr> <tr> <td></td> <td></td> <td><b>LW</b> White</td> </tr> <tr> <td></td> <td></td> <td><b>LK</b> Black</td> </tr> </table>	<b>XX</b>	No Lens		For LED Display			<b>DR</b>	Red	For Incandescent or Unlighted Display	<b>DY</b>	Yellow	<b>LR</b> Red	<b>DG</b>	Green	<b>LY</b> Yellow			<b>LG</b> Green			<b>LW</b> White			<b>LK</b> Black	<p><b>Legend</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>20</b></td> <td>With Legend (Leave Blank if no legend needed)</td> </tr> </table> <p>Use Legend Order Sheet FO-74024 to cover each catalog listing. (See page 80.)</p>	<b>20</b>	With Legend (Leave Blank if no legend needed)
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**CUSTOMER INSTALLATION:**

**LED**

- Order LED and receptacle, page 84.
- Installation instructions, page 85/87.

**Incandescent Lamp**

- Order lamp/PWB receptacle or lamp/solder receptacle, page 86.
- Installation instructions, page 87.

Order display options assembled to switch by adding codes below

<p><b>H</b></p> <p><b>Button Color (One Piece Plunger)</b></p> <table border="1" style="width: 100%;"> <tr> <td>For LED Display</td> <td>For Incandescent or non-light display</td> </tr> <tr> <td><b>H</b> Red</td> <td><b>R</b> Red</td> </tr> <tr> <td><b>L</b> Yellow</td> <td><b>Y</b> Yellow</td> </tr> <tr> <td><b>N</b> Green</td> <td><b>G</b> Green</td> </tr> <tr> <td></td> <td><b>Z</b> Black</td> </tr> </table>	For LED Display	For Incandescent or non-light display	<b>H</b> Red	<b>R</b> Red	<b>L</b> Yellow	<b>Y</b> Yellow	<b>N</b> Green	<b>G</b> Green		<b>Z</b> Black	<p><b>RS</b></p> <p><b>LED*</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>XX</b></td> <td>No LED<sup>4</sup></td> </tr> <tr> <td><b>RS</b></td> <td>Red<sup>5</sup></td> </tr> <tr> <td><b>YS</b></td> <td>Yellow<sup>5</sup></td> </tr> <tr> <td><b>GS</b></td> <td>Green<sup>5</sup></td> </tr> </table>	<b>XX</b>	No LED <sup>4</sup>	<b>RS</b>	Red <sup>5</sup>	<b>YS</b>	Yellow <sup>5</sup>	<b>GS</b>	Green <sup>5</sup>	<p><b>Legend</b></p> <table border="1" style="width: 100%;"> <tr> <td><b>XX20</b></td> <td>With Legend (Leave Blank if no legend needed)</td> </tr> </table> <p>Use Legend Order Sheet FO-74024 to cover each catalog listing. (See page 81.)</p>	<b>XX20</b>	With Legend (Leave Blank if no legend needed)
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- \*Notes:**
- When an LED is specified in a **rectangular** MML21 listing, MICRO SWITCH will permanently install it in the housing.
  - MICRO SWITCH does **not** permanently install an LED in a **square** MML21 listing. To install an LED in a square housing, order a MML93L or MML93G receptacle and a MML92 LED (see pages 86 and 88).
  - Include four digits (XXXX or XX DR) when a legend is required.
  - For square or rectangular only.
  - For rectangular only.

Manuals