The Multimec 5E and 5G series is the new generation of the existing 3A, 3C, 3E, 3F, 4A and 4F Multimec switches. The 5E and 5G series is a narrower product line, but the flexibility is more advanced. The switches will be supplied in high temperature material only to stand today's advanced soldering processes. The cap holding system is improved, by a superior snap system.

The 5E and 5G series can be supplied with LED's integrated in the switch and also as a surface mount switch. A high variety of aesthetic designed keycaps is available for the Multimec switches both as solid caps, but also with excellent illumination possibilities.

The standard program will include three different actuation forces: 2, 3.5, and 6.5N. The Multimec switches are known for their crisp audible tactile feel although a quiet version is available for sensitive applications such as audio, conference and military equipment.

The switch can be used as through-hole or SMD versions, and are designed to be used in a wide variety of applications.
Technical Data:
- through-hole or SMD / 50mA/24VDC / single pole/momentary
- 10,000,000 operations life time / IP67 sealing / actuation force: 2.0, 3.5, 6.5 N
- high temperature -40/+160º C

5GTH9 (through-hole) 1+2 LED

5GTH9 (through-hole)

5ETH9 (through-hole)

5GSH9 (SMD) 1+2 LEDS

5GSH9 (SMD)

5ESH9 (SMD)

HOW TO ORDER

5G
Switch: TH9 through-hole / SH9 surface mount
Actuation force: 20 / 35 / 65
LED:
01 blue / 22 green / 42 yellow / 61 white / 82 red / 2242 green/yellow / 8222 red/green / 8242 red/yellow

5E
Switch: TH9 through-hole / SH9 surface mount
Actuation force: 20 / 35 / 65

Ordering example: 5GSH96535
The new caps for the Multimec switches 1PS / 1QS / 1RS is optimized with a “snap on” system to ensure the cap to stay on the switch actuator even under heavy vibrations or similar scenarios.

- The 1PS cap is a solid cap which can be supplied in different colours
- The 1QS cap is a solid cap like 1PS, but with a rectangular lens for intensive or smooth illumination
- The 1RS cap is a solid cap like 1PS, but with a round lens for intensive or smooth illumination
Technical Data
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
  LED: -40/+85°C
  solid cap: +65°C
  transparent: +85°C
- actuation force: 2.0, 3.5, 6.5 N

Dimensions (through-hole)

Dimensions (w/LED)

Dimensions (SMD)

PCB layout

HOW TO ORDER

Switch Mounting Actuation force LED Cap Colour code Lens
5G TH9 through-hole 20 01 blue 1QS with lens 00 blue 1 transparent
5G SH9 surface mount 35 22 green 1RS with lens 03 grey 6 frosted white
5G 65 42 yellow 1PS 08 red
5G 22 white 82 red
5G 82 green/yellow 2242 red/green
5G 8222 red/yellow 8242 red/yellow

Cap
- 1QS with lens
- 1RS with lens
- 1PS

Colour code
- 00 blue
- 03 grey
- 08 red
- 09 black

Lens
- 1 transparent
- 6 frosted white

Switch to be used: 5E or 5G

5E Mounting Actuation force Cap Colour code
5E TH9 through-hole 20 1PS solid colour 00 blue
5E SH9 surface mount 35
5E 65

Ordering example: 5ETH935+1PS08

See colour codes on our website: www.mec.dk

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Tel.: +45 44 97 33 66 · Fax: +45 44 68 15 14 · E-mail: danmec@mec.dk · www.mec.dk
The new caps for the Multimec switches 1SS / 1LS / 1IS is optimized with a “snap on” system to ensure the cap to stay on the switch actuator even under heavy vibrations or similar scenarios.

- The 1SS cap is a solid cap which can be supplied in different colours
- The 1LS cap is a solid cap like 1SS, but with a small round lens for intensive or smooth illumination
- The 1IS cap is a transparent or milk white cap like 1SS, for intensive or smooth illumination
**Technical Data**

- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10,000,000 operations life time
- IP67 sealing
- temperature range:
  - LED: -40/+85°C
  - solid cap: +65°C
  - transparent: +85°C
- actuation force: 2.0, 3.5, 6.5 N

---

**Dimensions (through-hole) 1SS**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 8.5</td>
<td></td>
</tr>
<tr>
<td>Height/1SS</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**Dimensions (w. LED) 1LS**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 8.5</td>
<td></td>
</tr>
<tr>
<td>Height/1LS</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**Dimensions (SMD) 1IS**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 8.5</td>
<td></td>
</tr>
<tr>
<td>Height/1IS</td>
<td>15.0</td>
</tr>
</tbody>
</table>

---

**HOW TO ORDER**

**5G**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Mounting</th>
<th>Actuation force</th>
<th>LED</th>
<th>Cap</th>
<th>Colour code</th>
<th>Height/1IS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH9</td>
<td>through-hole</td>
<td>20</td>
<td>01 blue</td>
<td>1IS transparent</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>SH9</td>
<td>surface mount</td>
<td>35</td>
<td>22 green</td>
<td>1LS with lens</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>65</td>
<td>61 white</td>
<td>16 frosted white</td>
<td>12.0</td>
<td></td>
</tr>
</tbody>
</table>

**5E or 5G**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Mounting</th>
<th>Actuation force</th>
<th>Cap</th>
<th>Colour code</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH9</td>
<td>through-hole</td>
<td>20</td>
<td>1SS solid colour</td>
<td>00 blue</td>
<td>08.0</td>
</tr>
<tr>
<td>SH9</td>
<td>surface mount</td>
<td>35</td>
<td>02 green</td>
<td>09.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>65</td>
<td>03 grey</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>04 yellow</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>06 white</td>
<td>12.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>08 red</td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>09 black</td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>39 black (high temperature)</td>
<td>15.0</td>
<td></td>
</tr>
</tbody>
</table>

**Switch to be used:** 5E or 5G

---

**Ordering example:** SGTH93501+1LS03115.0

See colour codes on our website: www.mec.dk
The new caps for the Multimec switches 1DS / 1ES / 1FS is optimized with a “snap on” system to ensure the cap to stay on the switch actuator even under heavy vibrations or similar scenarios.

- The 1DS cap is a solid cap which can be supplied in different colours
- The 1ES cap is a solid cap like 1DS, but with a small round lens for intensive or smooth illumination
- The 1FS cap is a solid cap like 1DS, but with a large round lens for intensive or smooth illumination
**Technical Data**
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10,000,000 operations life time
- IP67 sealing
- temperature range:
  - LED: -40/+85°C
  - solid cap: +65°C
  - transparent: +85°C
- actuation force: 2.0, 3.5, 6.5 N

### Dimensions (through-hole)

#### PCB layout

**Dimensions (w. LED)**

**Dimensions (SMD)**

### HOW TO ORDER

<table>
<thead>
<tr>
<th>Switch</th>
<th>Mounting</th>
<th>Actuation force</th>
<th>LED</th>
<th>Cap</th>
<th>Colour code</th>
<th>Lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>5G</td>
<td>TH9</td>
<td>20</td>
<td>01</td>
<td>1ES</td>
<td>00 blue</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SH9</td>
<td>35</td>
<td>22</td>
<td></td>
<td>03 grey</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>65</td>
<td>42</td>
<td></td>
<td>08 red</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>61</td>
<td>1FS</td>
<td>09 black</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2242</td>
<td></td>
<td>11 transparent</td>
<td>transparent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8222</td>
<td></td>
<td>16 frosted white</td>
<td>frosted white</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8242</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ordering example: 5GTH935 + 1DS08

See colour codes on our website: www.mec.dk

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Dimensions (mm) Unless otherwise specified, all tolerances ±0.2

mec®
Industriparke 23·DK-2750 Ballerup·Denmark
Tel.: +45 44 97 33 66 · Fax: +45 44 68 15 14 · E-mail: danmec@mec.dk · www.mec.dk.
Controlmec TM is a five position integrated switch solution, designed for outdoor, dusty and humid applications, to control a unit, navigate in a display, operate auxiliary equipment on a vehicle, boat or similar. The Controlmec is sealed to IP67, and exist of:
- One complete solid cap, with recess on the back site for the seal efficiency
- The unit panel plate (customers design)
- A gasket to seal between the cap, and the panel.
- A support ring to ensure the right position of sealing behind the front plate
- And then the PCB including the switches

The PCB with the switches, shall be assembled according to the MEC datasheet, and mounted to the back side of the front panel by bolts, to ensure the right pressure for the sealing efficiency.

The Controlmec is an extension of the Navimec system which includes the Multimec switches, of excellent high quality and long lifetime. Configurations can be made with through hole or SMD switch versions, provided they are accurately positioned.
Technical Data
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10,000,000 operations life time
- IP67 sealing
- temperature range:
  LED: -40/+85°C
  solid cap +65°C
  transparent +85°C
- actuation force: 2.0, 3.5, 6.5 N

Dimensions 1ZW

Mounting example

Recommended PCB layout

**HOW TO ORDER**

<table>
<thead>
<tr>
<th>Switch</th>
<th>Mounting</th>
<th>Actuation force</th>
<th>LED</th>
<th>Cap for seal</th>
<th>Colour code</th>
<th>Seal</th>
<th>Seal support</th>
</tr>
</thead>
<tbody>
<tr>
<td>5G</td>
<td>TH9 through-hole</td>
<td>20</td>
<td>01  blue</td>
<td>1ZW</td>
<td>00 blue</td>
<td>1ZZ</td>
<td>1ZY</td>
</tr>
<tr>
<td></td>
<td>SH9 surface mount</td>
<td>35</td>
<td>22  green</td>
<td></td>
<td>02 green</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>42  yellow</td>
<td></td>
<td>03 grey</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>61  white</td>
<td></td>
<td>04 yellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82  red</td>
<td></td>
<td>06 white</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8222 red/green</td>
<td>12W</td>
<td>08 red</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8242 red/yellow</td>
<td></td>
<td>09 black</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2242 green/yellow</td>
<td>11 transparent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16 frosted white</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 5E     | TH9 through-hole  | 20              |     |              |             |      |                |
|        | SH9 surface mount | 35              |     |              |             |      |                |

Panel seal

Recommended PCB layout

Ordering example (sealed version) 1ZW: 1 x 5GTH920 + 4 x 5ETH935 + 1ZW03 + 1ZZ + 1ZY

See colour codes on our website: www.mec.dk
Dimensions (mm) Unless otherwise specified, all tolerances ± 0.2
Controlmec TM is a five position integrated switch solution, designed for easy activations for indoor and non-dusty applications, to control a unit, navigate in a display, operate auxiliary equipment indoor on a vehicle, boat or similar. The Controlmec can also be supplied as an IP67 sealed solution. The Controlmec exist of:

- One complete solid cap
- The unit panel plate (customers design)
- The PCB including the switches

The PCB with the switches, shall be assembled according to the MEC datasheet, and mounted to the back side of the front panel.

The Controlmec is an extension of the Navimec system which includes the Multimec switches, of excellent high quality and long lifetime. Configurations can be made with through hole or SMD switch versions, provided they are accurately positioned.
1Z “without sealing”

Technical Data
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10,000,000 operations life time
- IP67 sealing
- temperature range:
  - LED: -40/+85°C
  - solid cap: +65°C
  - transparent: +85°C
- actuation force: 2.0, 3.5, 6.5 N

Dimensions 1Z

Recommended PCB layout

HOW TO ORDER

<table>
<thead>
<tr>
<th>Switch</th>
<th>Mounting</th>
<th>Actuation force</th>
<th>LED</th>
<th>Cap</th>
<th>Colour code</th>
</tr>
</thead>
<tbody>
<tr>
<td>5G</td>
<td>TH9</td>
<td>20, 35, 65</td>
<td>01 blue</td>
<td>1Z</td>
<td>00 blue</td>
</tr>
<tr>
<td></td>
<td>SH9</td>
<td></td>
<td>22 green</td>
<td></td>
<td>02 green</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>42 yellow</td>
<td></td>
<td>03 grey</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>61 white</td>
<td></td>
<td>04 yellow</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>82 red</td>
<td></td>
<td>06 white</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2242 green/yellow</td>
<td></td>
<td>08 red</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8222 red/green</td>
<td></td>
<td>09 black</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8242 red/yellow</td>
<td></td>
<td>11 transparent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16 frosted white</td>
</tr>
</tbody>
</table>

Switch Mounting
- TH9 through-hole
- SH9 surface mount

Actuation force
- 20
- 35
- 65

LED
- 01 blue
- 22 green
- 42 yellow
- 61 white
- 82 red
- 2242 green/yellow
- 8222 red/green
- 8242 red/yellow

Cap
- 1Z

Colour code
- 00 blue
- 02 green
- 03 grey
- 04 yellow
- 06 white
- 08 red
- 09 black
- 11 transparent
- 16 frosted white

See colour codes on our website: www.mec.dk

Dimensions (mm) Unless otherwise specified, all tolerances ±0.2

Ordering example (unsealed version) 1Z: 1 x 5GTH920 + 4 x 5ETH935 + 1Z03

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