WARNING: The specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

**MS Multi-function ergonomic symmetric grip**

**Features**
- Optimum ergonomic design
- High performance switches

**Mechanical Specifications**
- Material: Thermoplastic
- Colour: Black
- Operating temperature range: -25 °C / +85°C
- Connecting hub: Female thread / M14 x 1,5
- Protection Class: IP54 with plain grip (IP 67 with special assembly on request)
- IP54 with dead man trigger option

**Electrical Specifications**
- Prewired exit cable: 250 mm
- Rated amperage: up to 3 A inductive
- Protection Class (microswitch): IP67

**Configuration Examples**

<table>
<thead>
<tr>
<th>Overall Dimensions</th>
<th>D-man P/B</th>
<th>Front P/B</th>
<th>Rear P/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-0000-0000</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>MS-0000-0000-0000</td>
<td>yes</td>
<td>1xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000</td>
<td>yes</td>
<td>2xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000</td>
<td>yes</td>
<td>3xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000</td>
<td>yes</td>
<td>4xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000</td>
<td>yes</td>
<td>5xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000</td>
<td>yes</td>
<td>6xP9</td>
<td></td>
</tr>
<tr>
<td>MS-A1PS-0000-0000-R1P9</td>
<td>yes</td>
<td>6xP9</td>
<td>1xP9</td>
</tr>
<tr>
<td>MS-A1PS-0000-0000-R2P9</td>
<td>yes</td>
<td>6xP9</td>
<td>2xP9</td>
</tr>
<tr>
<td>MS-A1PS-0000-0000-R3P9</td>
<td>yes</td>
<td>6xP9</td>
<td>3xP9</td>
</tr>
</tbody>
</table>

**Complete Ordering Information:** See Page 36

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**Mod. MS-A1PS-R3P9**

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**Mod. MS-A1PS-R1P9**
**Joysticks**

**MS Multi-function ergonomic symmetric grip**

### Features
- Optimum ergonomic design
- High performance switches

### Mechanical Specifications
- **Material:** Thermoplastic
- **Color:** Black
- **Operating temperature range:** -25 °C / +85°C
- **Connecting hub:** Female thread / M14 x 1.5
- **Protection class:** IP65 with plain grip (IP 67 with special assembly on request)

### Electrical Specifications
- **Prewired exit cable:** 250 mm

**Configuration Examples**

<table>
<thead>
<tr>
<th>D-man</th>
<th>Front</th>
<th>Front</th>
<th>Rear</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/B</td>
<td>P/B</td>
<td>FPR</td>
<td>P/B</td>
<td>P/B</td>
</tr>
</tbody>
</table>

**Complete Ordering Information:** See Page 36
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**MS Multi-function ergonomic symmetric grip**

**Features**
- Optimum ergonomic design
- Internal PWM driver

**Mechanical Specifications**
- Material: thermoplastic
- Colour: black
- Operating temperature range: -25 °C / +85°C
- Connecting hub: Female thread / M14 x 1,5
- Protection class: IP65 with plain grip (IP 67 with special assembly on request)

**Electrical Specifications**
- Prewired exit cable: 250 mm
- A - Dead man push button
  - Rated amperage: up to 3 A inductive
  - Protection Class (microswitch): IP67
- P9 - Push buttons
  - Rated amperage: up to 5 A resistive, up to 3 A inductive
  - Operational Life: > 100,000 cycles
  - Available colours: red, blue, yellow, black, green, white
  - Protection Class: IP64 (IP68 available)
  - Button and bezel material: thermoplastic
  - Contacts: gold plated silver alloy

**FPR Proportional Roller**
- See FPR Data sheet
- Output signal: 3-pins connection / Hall Effect, contactless sensor

**Overall Dimensions**
- Supply voltage: 8 - 32 Volt
- Max. current draw: 100 mA
- Current output range: Factory set 0 and 1500 mA
- PWM dither frequency: 100 Hz
- Operating temperature range: -25°C/40°C

**Configuration Examples**
- MS-01P9-1FPR-1PWM
  - D-man P9: 0
  - P9: 1FP
  - Front: 1FP

- MS-A2P9-1FPR-1PWM
  - D-man P9: yes
  - P9: 2FP
  - Front: 1FP

- MS-A3P9-1FPR-1PWM
  - D-man P9: yes
  - P9: 3FP
  - Front: 1FP

- MS-A4P9-1FPR-1PWM
  - D-man P9: yes
  - P9: 4FP
  - Front: 1FP

**Complete Ordering Information**: See Page 36

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**Mod. MS-A2P9-1FPR-1PWM**

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**Mod. MS-A3P9-1FPR-1PWM**

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