

Spécial units



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Mafelec, the specialist in adapted control.

Specific control components to customer specification.

The range of possibilities :

- ① **Multi directional switches**
- Contact is ensured in all positions
- ② **Toggle switches**
- Switches with cam followers
- ③ **Interlocked buttons**
- Safe control
- ④ **Foot control**
- Hands-free control
- ⑤ **Accessories**
- Range of mounting, safety, sealing and labelling for control components.



Our equipment complies with the European RoHS directive, restricting the use of certain dangerous substances in electrical equipment.

Compliance with Standards

Certification	IEC NF 60947-5-1, IEC NF EN 60077-2
Protective finish	Tropicalisation (operating +40°C with 95% humidity) per IEC NF EN 60068-2-3, IEC NF EN 60068-2-30
Vibration resistance	IEC NF EN 61373, IEC NF EN 60068-2-6
Storage temperature	- 40°C to + 85°C per IEC NF EN 60068-2-1, IEC NF EN 60068-2-2
Operating temperature	- 25°C to + 70°C per IEC NF EN 60068-2-1, IEC NF EN 60068-2-2
Protection against accidental contact with active circuits	IP2x as per IEC NF EN 60529
Fire resistance	EN 45545
Degree of protection	IEC NF EN 60529 : IP40 without seal, IP66 with TJ seal and capped head
Mechanical service life in millions of switching operations	Momentary pushbutton : 1 Joystick circuit breaker : 1 Interlocked pushbutton : 1

Characteristics of the contact elements

Rated thermal current	I _{th} = 20A per IEC NF EN 60947-5-1						
Rated insulation voltage	U _i = 630V per IEC NF EN 60947-5-1 and IEC NF EN 60077-2						
Rated surge voltage	6 kV per IEC NF EN 60947-5-1 and IEC NF EN 60077-2						
Contact operation type	Slow make depending action						
Activation force	Pushbuttons: 1NC = 8N, 1NO = 10N, 2NC = 13N, 2NO = 13N						
Contact material	Standard : AgNi Harsh environment : AgPd Low-current : AgPd gold flash <table border="0" style="margin-left: 40px;"> <tr> <td>Ag Nikel 90 - 10</td> <td>contact resistance 5 m Ω</td> </tr> <tr> <td>Ag Palladium 70 - 30 ou</td> <td>contact resistance 20 m Ω</td> </tr> <tr> <td>Ag Nikel 90 -10 gold flash 3 μ</td> <td>contact resistance 5 m Ω</td> </tr> </table> Clean atmosphere Oxidising atmosphere	Ag Nikel 90 - 10	contact resistance 5 m Ω	Ag Palladium 70 - 30 ou	contact resistance 20 m Ω	Ag Nikel 90 -10 gold flash 3 μ	contact resistance 5 m Ω
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Maximum number of contacts	Pushbuttons : - Momentary: 8 - Push-push: 4 - Push-pull: 4 - Illuminated: 6						
Terminal markings	Per IEC NF EN 60947-5-1						
Operating power	AC-12 : 230V/15A & 400V/8A AC-15 : 230/8A & 400V/8A DC-12 : 24V/15A & 110V/8A DC-13 : 24V/4A & 110V/1A						
Connection	Screw and bracket : min. 1x 0.22 mm ² , max. 2x2.5 mm ² Single or double tab for 6.35 mm clip. Special connection on request						