# Product data sheet
## Characteristics

# M9F22320
## Miniature circuit breaker (MCB), Multi9 C60SP, 3P, 20A, C curve, 10kA (UL1077), 10kA (IEC/EN 60947-2)



## Main

| | |
|---|---|
| Range | Multi9 |
| Product name | Multi9 C60 |
| Product or component type | Miniature circuit-breaker |
| Device short name | C60SP |
| Device application | Distribution |
| Poles description | 3P |
| Number of protected poles | 3 |
| [In] rated current | 20 A at 25 °C conforming to EN/IEC 60947-2 |
| Network type | AC |
| Trip unit technology | Thermal-magnetic |
| Curve code | C |
| Breaking capacity | 14 KA AIR at 240 V AC conforming to UL 1077<br>14 KA AIR at 240 V AC conforming to CSA C22.2 No 235<br>10 KA AIR at 480Y/277 V AC conforming to UL 1077<br>10 KA AIR at 480Y/277 V AC conforming to CSA C22.2 No 235<br>6 KA Icu at 440 V AC conforming to EN/IEC 60947-2<br>10 KA Icu at 415 V AC conforming to EN/IEC 60947-2<br>20 KA Icu at 240 V AC conforming to EN/IEC 60947-2<br>6 KA Icu at 440 V AC conforming to GB/T 14048.2<br>10 KA Icu at 415 V AC conforming to GB/T 14048.2<br>20 KA Icu at 240 V AC conforming to GB/T 14048.2 |
| Standards | EN/IEC 60947-2<br>GB/T 14048.2<br>UL 1077<br>CSA C22.2 No 235 |
| Product certifications | IEC[RETURN]CCC[RETURN]UR[RETURN]CSA |

## Complementary

| | |
|---|---|
| [Ue] rated operational voltage | 240 V AC 50/60 Hz<br>415 V AC 50/60 Hz<br>440 V AC 50/60 Hz |
| Magnetic tripping limit | 8.5 x In +/- 20 % AC |
| [Ics] rated service breaking capacity | 4.5 KA 75 % conforming to EN/IEC 60947-2 - 440 V AC<br>7.5 KA 75 % conforming to EN/IEC 60947-2 - 415 V AC<br>15 KA 75 % conforming to EN/IEC 60947-2 - 240 V AC<br>4.5 KA 75 % conforming to GB/T 14048.2 - 440 V AC<br>7.5 KA 75 % conforming to GB/T 14048.2 - 415 V AC<br>15 KA 75 % conforming to GB/T 14048.2 - 240 V AC |
| [Ui] rated insulation voltage | 500 V AC conforming to EN/IEC 60947-2 |
| [Uimp] rated impulse withstand voltage | 6 KV conforming to EN/IEC 60947-2 |
| Suitability for isolation | Yes conforming to EN/IEC 60947-2 |

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|---|---|
| Contact position indicator | Yes |
| Control type | Toggle |
| Local signalling | ON/OFF indication |
| Mounting mode | Clip-on |
| Mounting support | DIN rail |
| 9 mm pitches | 6 |
| Height | 81 Mm |
| Width | 54 Mm |
| Depth | 72 Mm |
| Colour | Grey |
| Mechanical durability | 20000 Cycles |
| Electrical durability | 10000 Cycles |
| Provision for padlocking | Padlockable |
| Connections - terminals | Tunnel type terminal (top or bottom)1…25 mm² (18 AWG...8 AWG) - rigid<br>Tunnel type terminal (top or bottom)1…16 mm² (18 AWG...8 AWG) - flexible with ferrule<br>Tunnel type terminal (top or bottom)1…16 mm² (18 AWG...8 AWG) - flexible |
| Wire stripping length | 14 Mm for top or bottom connection |
| Tightening torque | 2.5 N.M top or bottom |
| Earth-leakage protection | Without |

## Environment

| | |
|---|---|
| IP degree of protection | IP20 conforming to IEC 60529<br>IP40 (modular enclosure) conforming to IEC 60529 |
| Pollution degree | 3 conforming to EN/IEC 60947-2 |
| Tropicalisation | 2 conforming to IEC 60068-1 |
| Relative humidity | 95 % at 55 °C |
| Operating altitude | 0...2000 m |
| Ambient air temperature for operation | -30…70 °C |
| Ambient air temperature for storage | -40…80 °C |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 7.500 Cm |
| Package 1 Width | 5.400 Cm |
| Package 1 Length | 8.500 Cm |
| Package 1 Weight | 343.900 G |
| Unit Type of Package 2 | BB1 |
| Number of Units in Package 2 | 4 |
| Package 2 Height | 7.600 Cm |
| Package 2 Width | 8.800 Cm |
| Package 2 Length | 22.500 Cm |
| Package 2 Weight | 1.421 Kg |
| Unit Type of Package 3 | S03 |
| Number of Units in Package 3 | 48 |
| Package 3 Height | 30.000 Cm |
| Package 3 Width | 30.000 Cm |
| Package 3 Length | 40.000 Cm |
| Package 3 Weight | 17.593 Kg |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 56 |
| Total lifecycle Carbon footprint | 39 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 2.398618483622845 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 2 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.0522978423677417 |

| | |
|---|---|
| Carbon footprint of the distribution phase [A4] | 0.1 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.01696947004740189 |
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 35.546076923076924 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 36 kg CO2 eq. |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1.0493896014740522 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 39 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| SCIP Number | 40a4e715-7fff-45ff-88bf-38212f6a80a5 |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and Nickel (Metallic), wh |
| OECD PFAS Regulation | Item contains PFAS Chemicals |
| POP Directive | No POPs |
| Halogen-free status | Halogen free plastic parts product |
| PVC free | Yes |
| Silicone-free | No |
| End of life manual availability | No need of specific recycling operations |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection a |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : Commercialised