Product data sheet
Characteristics

M9F22145
Miniature circuit breaker (MCB), Multi9 C60SP, 1P, 45A, 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	1P
Number of protected poles	1
[In] rated current	45 A at 25 °C conforming to EN/IEC 60947-2
Network type	AC DC
Trip unit technology	Thermal-magnetic
Curve code	C
Breaking capacity	10 KA AIR at 65 V DC conforming to UL 1077 10 KA AIR at 65 V DC conforming to CSA C22.2 No 235 3 KA Icu at 415 V AC conforming to EN/IEC 60947-2 10 KA Icu at 240 V AC conforming to EN/IEC 60947-2 20 KA Icu at 60 V DC conforming to EN/IEC 60947-2 3 KA Icu at 415 V AC conforming to GB/T 14048.2 10 KA Icu at 240 V AC conforming to GB/T 14048.2 20 KA Icu at 60 V DC conforming to GB/T 14048.2 5 KA AIR at 277 V AC conforming to UL 1077 10 KA AIR at 240 V AC conforming to UL 1077 10 KA AIR at 120 V AC conforming to UL 1077 5 KA AIR at 277 V AC conforming to CSA C22.2 No 235 10 KA AIR at 240 V AC conforming to CSA C22.2 No 235 10 KA AIR at 120 V AC conforming to CSA C22.2 No 235
Standards	EN/IEC 60947-2 GB/T 14048.2 UL 1077 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 415 V AC 50/60 Hz 60 V DC
Magnetic tripping limit	8.5 x In +/- 20 % AC 12 x In +/- 20 % DC
[Ics] rated service breaking capacity	2.25 KA 75 % conforming to EN/IEC 60947-2 - 415 V AC 7.5 KA 75 % conforming to EN/IEC 60947-2 - 240 V AC 20 KA 100 % conforming to EN/IEC 60947-2 - 60 V DC 2.25 KA 75 % conforming to GB/T 14048.2 - 415 V AC 7.5 KA 75 % conforming to GB/T 14048.2 - 240 V AC 20 KA 100 % conforming to GB/T 14048.2 - 60 V DC
[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
Contact position indicator	Yes
Control type	Toggle
Local signalling	ON/OFF indication
Mounting mode	Clip-on
Mounting support	DIN rail
9 mm pitches	2
Height	81 Mm
Width	18 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…35 mm² (18 AWG...2 AWG) - rigid Tunnel type terminal (top or bottom)1…25 mm² (18 AWG...3 AWG) - flexible with ferrule Tunnel type terminal (top or bottom)1…25 mm² (18 AWG...8 AWG) - flexible
Wire stripping length	14 Mm for top or bottom connection
Tightening torque	3.5 N.M top or bottom
Earth-leakage protection	Without

Environment

IP degree of protection	IP20 conforming to IEC 60529 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

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	7.500 Cm
Package 1 Width	1.800 Cm
Package 1 Length	8.500 Cm
Package 1 Weight	121.000 G
Unit Type of Package 2	BB1
Number of Units in Package 2	12
Package 2 Height	8.000 Cm
Package 2 Width	22.500 Cm
Package 2 Length	9.000 Cm
Package 2 Weight	1.519 Kg
Unit Type of Package 3	S03
Number of Units in Package 3	144
Package 3 Height	30.000 Cm
Package 3 Width	30.000 Cm
Package 3 Length	40.000 Cm
Package 3 Weight	18.715 Kg

Offer Sustainability

Recyclability potential, in %	56
Total lifecycle Carbon footprint	22 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1.1135452430199586
Carbon footprint of the manufacturing phase [A1 to A3]	1 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.01750050122909008
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.00567851785037968
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	21.004499999999997
Carbon footprint of the use phase [B2, B3, B4, B6]	21 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]	0.3511587319655616
Carbon footprint of the end-of-life phase [C1 to C4]	0.4 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	22
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), which
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 and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised