PRODUCT-DETAILS

# AF190-40-00-12

# AF190-40-00-12 Contactor

## General Information

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|---|---|
| Extended Product Type | AF190-40-00-12 |
| Product ID | 1SFL487102R1200 |
| EAN | 7320500504239 |
| Catalog Description | AF190-40-00-12 Contactor |
| Long Description | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, By-pass and Distribution application up to max 1000 V. Operated with wide control voltage range 48-130 V, 50/60 Hz and DC |

## Classifications

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|---|---|
| Object Classification Code | Q |
| ETIM 4 | EC000066 - Magnet contactor, AC-switching |
| ETIM 5 | EC000066 - Magnet contactor, AC-switching |
| ETIM 6 | EC000066 - Power contactor, AC switching |
| ETIM 7 | EC000066 - Power contactor, AC switching |
| IDEA Granular Category Code (IGCC) | 4755 >> Contactors |

## Container Information

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|---|---|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 166 mm |
| Package Level 1 Depth / | 238 mm |

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|---|---|
| Length | |
| Package Level 1 Height | 180 mm |
| Package Level 1 Gross Weight | 3.9 kg |
| Package Level 1 EAN | 7320500504239 |

## Certificates and Declarations (Document Number)

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|---|---|
| ABS Certificate | 14-LD1092198-PDA |
| BV Certificate | BV_36353_A0BV |
| CB Certificate | SE-82315 |
| CCC Certificate | CQC_2014010304676685 |
| cUL Certificate | 20140925-E73397 |
| Declaration of Conformity - CE | 2CMT2015-005440 |
| DNV GL Certificate | DNV_E-14043 |
| EAC Certificate | 9AKK107046A8618 |
| Instructions and Manuals | 1SFC101066M0201 |
| LR Certificate | LR_14_70011(E1) |
| PRS Certificate | TE_2092_880423_16 |
| RINA Certificate | ELE060313XG_002 |
| RMRS Certificate | 9AKK107045A6978 |
| RoHS Information | 2CMT2015-005440 |

## Technical UL/CSA

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|---|---|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (600 V AC) 250 A |

## Environmental

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| Ambient Air Temperature | Close to Contactor for Storage -40 ... +70 °C<br>Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... +50 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... +70 °C |
| Maximum Operating Altitude Permissible | 3000 m |
| RoHS Status | Following EU Directive 2011/65/EU |

## Technical

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|---|---|
| Number of Main Contacts NO | 4 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 0 |
| Number of Auxiliary Contacts NC | 0 |
| Rated Operational Voltage | Main Circuit 1000 V |
| Rated Frequency (f) | Main Circuit 50 Hz |
| Conventional Free-air Thermal Current ($I_{th}$) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 275 A |
| Rated Operational Current AC-1 ($I_e$) | (1000 V) 40 °C 250 A<br>(1000 V) 55 °C 225 A<br>(1000 V) 60 °C 225 A |

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|---|---|
| | (1000 V) 70 °C 185 A<br>(690 V) 40 °C 275 A<br>(690 V) 55 °C 250 A<br>(690 V) 60 °C 250 A<br>(690 V) 70 °C 200 A |
| Rated Operational Current AC-3 ($I_e$) | (220 / 230 / 240 V) 55 °C 190 A<br>(380 / 400 V) 55 °C 190 A<br>(415 V) 55 °C 190 A<br>(440 V) 55 °C 190 A |
| Rated Operational Power AC-3 ($P_e$) | (220 / 230 / 240 V) 55 KWT<br>(380 / 400 V) 90 KWT<br>(415 V) 90 KWT<br>(440 V) 110 KWT |
| Rated Breaking Capacity AC-3 acc. to IEC 60947-4-1 | 8 x Ie AC-3 |
| Rated Making Capacity AC-3 acc. to IEC 60947-4-1 | 10 x Ie AC-3 |
| Short-Circuit Protective Devices | gG Type Fuses 355 A |
| Rated Short-time Withstand Current ($I_{cw}$) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1520 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 275 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 621 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1900 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 878 A |
| Maximum Breaking Capacity | cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 3300 A |
| Maximum Electrical Switching Frequency | AC-1 300 cycles per hour |
| Rated Insulation Voltage ($U_i$) | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V |
| Rated Impulse Withstand Voltage ($U_{imp}$) | Main Circuit 8 kV |
| Mechanical Durability | 5 million |
| Maximum Mechanical Switching Frequency | 300 cycles per hour |
| Coil Operating Limits | (acc. to IEC 60947-4-1) 0.85 x Uc Min. ... 1.1 x Uc Max. (at θ ≤ 70 °C) |
| Rated Control Circuit Voltage ($U_c$) | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 V |
| Coil Consumption | Holding at Max. Rated Control Circuit Voltage 50 Hz 4 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 4 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 2.5 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 175 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 175 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 130 W |
| Operate Time | Between Coil De-energization and NO Contact Opening 45 ... 80 ms<br>Between Coil Energization and NO Contact Closing 25 ... 60 ms |
| Connecting Capacity Main Circuit | Flexible 2 x 50 ... 95 m²<br>Rigid Al-Cable 1 x 95 ... 185 m²<br>Rigid Cu-Cable 2 x 50 ... 120 m² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 1x 0.75 ... 2.5<br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5<br>Flexible 2x0.75 ... 2.5 m²<br>Solid 2 x 1 ... 4 m²<br>Stranded 2 x 1 .... 4 m² |
| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00 |
| Terminal Type | Main Circuit: Bars |

## Dimensions

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| Product Net Width | 140 mm |
| Product Net Depth / Length | 153 mm |
| Product Net Height | 196 mm |

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| Product Net Weight | 3.3 kg |

## Popular Downloads

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|---|---|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals | 1SFC101066M0201 |

## Ordering

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|---|---|
| Minimum Order Quantity | 1 piece |
| Customs Tariff Number | 85364900 |

## Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors