



 PRODUCT-DETAILS

GAF1650-10-11-70

GAF1650-10-11 100-250V 50/60Hz / 100-250V DC Contactor



General Information

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| Extended Product Type | GAF1650-10-11-70 |
| Product ID | 1SFL677025R7011 |
| EAN | 7320500408810 |
| Catalog Description | GAF1650-10-11 100-250V 50/60Hz / 100-250V DC Contactor |
| Long Description | A 3-pole Contactor suitable for DC-1 applications where all three poles must be connected in series in a 1-pole configuration up to max 1000 VDC. Operated with wide control voltage range 100-250 V, AC/DC |

Ordering

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

Popular Downloads

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|-----------------------------------|------------------|
| EPLAN Data | 9AAC171155_EPLAN |
| Data Sheet, Technical Information | 1SBC100214C0202 |

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| Data Sheet, Technical Information (Part 2) | 1SAC200017M0002 |
| Instructions and Manuals | 1SFC101047M9701 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

Dimensions

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| Product Net Width | 438 mm |
| Product Net Depth / Length | 244 mm |
| Product Net Height | 392 mm |
| Product Net Weight | 33 kg |
| Dimension Diagram | 53540930-7 |

Technical

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| Number of Main Contacts NO | 1 |
| Number of Main Contacts NC | 0 |
| Number of Auxiliary Contacts NO | 1 |
| Number of Auxiliary Contacts NC | 1 |
| Number of Poles | 1P |
| Rated Operational Voltage | Main Circuit 1000 V |
| Conventional Free-air Thermal Current (I_{th}) | acc. to IEC 60947-4-1, Open Contactors $\theta = 40\text{ °C}$ 1650 A |
| Rated Operational Current AC-3 (I_e) | (415 V) 55 °C 1060 A (440 V) 55 °C 1060 A (500 V) 55 °C 970 A (690 V) 55 °C 970 A (1000 V) 55 °C 400 A |
| Rated Operational Current DC-1 (I_e) | (1000 V) 3 Poles in Series, 40 °C 1650 A (1000 V) 3 Poles in Series, 55 °C 1450 A (1000 V) 3 Poles in Series, 70 °C 1270 A (220 V) 3 Poles in Series, 40 °C 1650 A (220 V) 3 Poles in Series, 55 °C 1450 A (220 V) 3 Poles in Series, 70 °C 1270 A (400 V) 3 Poles in Series, 40 °C 1650 A (400 V) 3 Poles in Series, 55 °C 1450 A (400 V) 3 Poles in Series, 70 °C 1270 A (600 V) 3 Poles in Series, 40 °C 1650 A (600 V) 3 Poles in Series, 55 °C 1450 A (600 V) 3 Poles in Series, 70 °C 1270 A |
| Rated Insulation Voltage (U_i) | acc. to UL/CSA 1000 V |
| Rated Impulse Withstand Voltage (U_{imp}) | Main Circuit 8 kV |
| Mechanical Durability | 0.5 million |
| Maximum Mechanical Switching Frequency | 300 cycles per hour |
| Coil Operating Limits | (acc. to IEC 60947-4-1) 0.85 x U_c Min. ... 1.1 x U_c Max. (at $\theta \leq 70\text{ °C}$) |
| Rated Control Circuit Voltage (U_c) | 50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V |

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| Coil Consumption | Holding at Max. Rated Control Circuit Voltage 50 Hz 48 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 48 V-A Holding at Max. Rated Control Circuit Voltage DC 16 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 1900 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 1900 V-A Pull-in at Max. Rated Control Circuit Voltage DC 1700 V-A |
| Power Loss | at Rated Operating Conditions per Pole 80 W |
| Operate Time | Between Coil De-energization and NC Contact Closing 35 ... 55 ms Between Coil De-energization and NO Contact Opening 35 ... 55 ms Between Coil Energization and NC Contact Opening 50 ... 80 ms Between Coil Energization and NO Contact Closing 50 ... 80 ms |
| Connecting Capacity Main Circuit | Bar 100 mm ² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Flexible 2x0.75 ... 2.5 mm ² Solid 2 x 1 ... 4 mm ² Stranded 2 x 1 ... 4 mm ² |
| Connecting Capacity | Bar 100 mm ² |
| Degree of Protection | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00 |
| Connecting Terminals (delivered in open position) Main Poles | M 3.5 (+,-) pozidriv 2 screw with cable clamp |
| Recommended Screw Driver | Main Circuit M12 Control Circuit Pozidriv 2 Control Circuit M3.5 |
| Tightening Torque | Cable Lug 45 N-m Main Circuit 45 N-m |
| Terminal Type | Main Circuit: Bars |
| Suitable for Product Class | Block Contactors Block Contactors |
| Product Name | Block Contactor |

Technical UL/CSA

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| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA | (1000 V DC) 1650 A (440 V DC) 1650 A (600 V DC) 1650 A |

Environmental

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| Ambient Air Temperature | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 70 °C Close to Contactor for Storage -40 ... 70 °C Operation -40 ... 70 °C Storage -40 ... +70 °C |
| Maximum Operating Altitude Permissible | Without Derating 3000 m |

Material Compliance

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| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658 |
| REACH Declaration | 2CMT2021-006202 |

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|-------------------------------------|--|
| RoHS Declaration | 2CMT2021-006277 |
| RoHS Information | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| Toxic Substances Control Act - TSCA | 2CMT2023-006525 |
| WEEE B2C / B2B | Business To Business |
| WEEE Category | 5. Small Equipment (No External Dimension More Than 50 cm) |

ABB EcoSolutions

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| End Of Life Disassembling Instructions | 1SFC100112M0005 |
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Certificates and Declarations

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|----------------------------------|---------------------|
| CB Certificate | SEMKO_SE-76672 |
| CQC Certificate | CQC2012010304550984 |
| Declaration of Conformity - CCC | 2020980304001789 |
| Declaration of Conformity - CE | 2CMT003517 |
| Declaration of Conformity - UKCA | 2CMT2020-006118 |
| EAC Certificate | 9AKK107046A8618 |
| UL Certificate | 9AKK107046A9917 |
| UL Listing Card | UL_E73397 |

Container Information

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| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 555 mm |
| Package Level 1 Depth / Length | 365 mm |
| Package Level 1 Height | 500 mm |
| Package Level 1 Gross Weight | 35 kg |
| Package Level 1 EAN | 7320500408810 |

External Classifications and Standards

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| Object Classification Code | Q |
| ETIM 7 | EC002552 - Power contactor, DC switching |
| ETIM 8 | EC002552 - Power contactor, DC switching |
| ETIM 9 | EC002552 - Power contactor, DC switching |
| eClass | V11.0 : 27371018 |
| UNSPSC | 39121529 |
| IDEA Granular Category Code (IGCC) | 4763 >> Power contactor, DC switching |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → GA Contactors → GAF1650

