PRODUCT-DETAILS

# S203-D50NA

## Miniature Circuit Breaker - 3+NP - D - 50 A



### General Information

| | |
|---|---|
| Extended Product Type | S203-D50NA |
| Product ID | 2CDS253103R0501 |
| EAN | 4016779552073 |
| Catalog Description | Miniature Circuit Breaker - 3+NP - D - 50 A |
| Long Description | System pro M compact S200 miniature circuit breakers are current limiting. They have two different tripping mechanisms, the delayed thermal tripping mechanism for overload protection and the electromechanic tripping mechanism for short circuit protection. They are available in different characteristics (B,C,D,K,Z), configurations (1P,1P+N,2P,3P,3P+N,4P), breaking capacities (up to 6 kA at 230/400 V AC) and rated currents (up to 63A). All MCBs of the product range S200 comply with IEC/EN 60898-1, IEC/EN 60947-2, UL1077 allowing the use for residential, commercial and industrial applications. Bottom-fitting auxiliary contact can be mounted on S200 to save 50% space. |

### ABB EcoSolutions

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|---|---|
| ABB EcoSolutions | Yes |
| EcoSolutions Profile | 9AKK108469A3796 |
| Circular Design Principles Recyclability | Design for Closing Resource Loops - Standard EN45555 - 87.8 % |

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| Rate | |
|---|---|
| Offered with Extended Lifetime | Product Durability |
| End of Life Instructions | 9AKK108468A3132 |
| Environmental Product Declaration - EPD | 9AKK108467A7832 |

## Technical

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|---|---|
| Standards | IEC/EN 60898-1<br>IEC/EN 60947-2<br>UL 1077 |
| Tripping Characteristic | D |
| Rated Operational Voltage | acc. to IEC 60898-1 400 V AC<br>acc. to IEC 60898-1 400 V<br>acc. to IEC 60947-2 440 V AC |
| Operational Voltage | Maximum (Incl. Tolerance) 440 V AC<br>Minimum 12 V AC<br>Minimum 12 V DC |
| Rated Insulation Voltage ($U_i$) | acc. to IEC/EN 60664-1 440 V |
| Rated Impulse Withstand Voltage ($U_{imp}$) | 4 kV<br>at 2000 m 5 kV<br>at Sea Level 6.2 kV |
| Dielectric Test Voltage | 50/60 Hz-1 min: 2 kV |
| Input Voltage Type | AC |
| Rated Current ($I_n$) | 50 A |
| Rated Short-Circuit Capacity | (AC) 6 kA<br>(DC) 6 kA<br>(400 V AC) 6 kA<br>(400 V) 6 kA |
| Rated Ultimate Short-Circuit Breaking Capacity ($I_{cu}$) | (230 V AC) 20 kA<br>(400 V AC) 10 kA<br>(440 V AC) 10 kA<br>(230 V) 20 kA<br>(400 V) 10 kA |
| Rated Conditional Short-Circuit Current ($I_{nc}$) | (230 V) 20 kA<br>(400 V) 10 kA |
| Rated Service Short-Circuit Breaking Capacity ($I_{cs}$) | (230 V AC) 15 kA<br>(400 V AC) 7.5 kA<br>(440 V AC) 7.5 kA |
| Rated Frequency (f) | 50 / 60 Hz |
| Power Loss | 11.6 W<br>at Rated Operating Conditions per Pole 2.9 W |
| Power Supply Connection | Arbitrary |
| Contact Position Indication | Red ON / Green OFF |
| Energy Limiting Class | 3 |
| Electrical Endurance | 10000 AC cycle |
| Mechanical Endurance | 20000 cycle |
| Number of Protected Poles | 3 |
| Number of Poles | 3+N |
| Overvoltage Category | III |
| Position of Neutral Terminals | Right |
| Tightening Torque | 2.8 N·m |
| Mounting Type | DIN-Rail |
| Screw Terminal Type | Failsafe Bi-directional Cylinder-lift Terminal |

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|---|---|
| Actuator Marking | I / O |
| Actuator Material | Insulation Group II, Black, Sealable |
| Housing Material | Insulation Group II, RAL 7035 |
| Mounting on DIN Rail | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715 |
| Mounting Position | any |
| Recommended Screw Driver | Pozidriv 2 |
| Accessories Available | Yes |
| Connecting Capacity | Busbar 10 / 10 mm²<br>Flexible with Ferrule 0.75 ... 25 mm²<br>Flexible 0.75 ... 25 mm²<br>Rigid 0.75 ... 35 mm²<br>Rigid 0.75 ... 35 mm²<br>Stranded 0.75 ... 35 mm² |
| Installation Size | acc. to DIN 43880 1 |
| Wire Stripping Length | 12.5 mm |
| Terminal Type | Screw Terminals |

## Material Compliance

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|---|---|
| RoHS Information | 2CDK403001D0607 |
| RoHS Status | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| RoHS Date | 0335 |
| REACH Declaration | 9AKK107492A1906 |
| REACH Information | True - contains substances > 0.1 mass percentage |
| REACH Date | 20240821 |
| Conflict Minerals Reporting Template (CMRT) | 9AKK108468A3363 |

## Environmental

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|---|---|
| Ambient Air Temperature | Operation -25 ... +55 °C<br>Storage -40 ... +70 °C |
| Reference Ambient Air Temperature | 30 °C |
| Degree of Protection | IP20<br>IP40<br>Enclosure with Cover IP40 |
| Pollution Degree | 3 |
| Environmental Conditions | 28 cycles<br>with 55 °C / 90-96 %<br>and 25 °C / 95-100 % |
| Resistance to Vibrations | 20 Cycles with Load 0.8 In: 5g 5 ... 150 ... 5 Hz |
| Resistance to Shock acc. to IEC 60068-2-27 | 25g 2 shocks 13 ms |

## Technical UL/CSA

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|---|---|
| Maximum Operating Voltage UL/CSA | 110 V DC<br>480Y/277 V AC |
| Interrupting Rating acc. to UL1077 | (110 V DC) 10 kA<br>(277 V AC) 6 kA<br>(480Y / 277 V AC) 6 kA |
| Connecting Capacity UL/CSA | Busbar 18-8 AWG<br>Conductor 18-4 AWG |

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|---|---|
| Tightening Torque UL/CSA | 18 in·lb |

## Dimensions

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|---|---|
| Width in Number of Modular Spacings | 4.0 |
| Product Net Width | 70 mm |
| Product Net Height | 88 mm |
| Product Net Depth / Length | 69 mm |
| Product Net Weight | 0.58 kg |
| Pole Net Weight | 0.125 kg |
| Built-In Depth ($t_2$) | 69 mm |
| Dimension Diagram | 2CDC022007F0010 |

## Ordering

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|---|---|
| Package Level 1 Units | carton 1 piece |
| Package Level 1 Gross Weight | 0.59 kg |

## Certificates and Declarations

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|---|---|
| Declaration of Conformity - CE | 2CDK403001D0607 |
| Declaration of Conformity - UKCA | 9AKK108467A5053 |
| $I^2t$ Characteristic | 9AKK107992A5103 |
| Certification Agency | EN<br>IEC<br>UL |

## Installation

| | |
|---|---|
| Instructions and Manuals | 2CDS207104P0002 |

## Popular Downloads

| | |
|---|---|
| Data Sheet, Technical Information | 9AKK107991A8329 |
| $I^2t$ Characteristic | 9AKK107992A5103 |

## Classifications

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|---|---|
| ETIM 8 | EC000042 - Miniature circuit breaker (MCB) |
| ETIM 9 | EC000042 - Miniature circuit breaker (MCB) |
| WEEE Category | 5. Small Equipment (No External Dimension More Than 50 cm) |
| WEEE B2C / B2B | Business To Business |
| CN8 | 8536 20 10 |
| UNSPSC | 39121603 |
| eClass | V11.0 : 27141901 |

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|---|---|
| IDEA Granular Category Code (IGCC) | 4897 >> Miniature circuit breakers |
| Object Classification Code | F |

## Accessories

| Identifier | Description | Type | Quantity | Unit Of Measure |
|---|---|---|---|---|
| 2CDS200922R0001 | Signal / Auxiliary Contact | S2C-S/H6R | 1 | piece |
| 2CDS200912R0001 | Auxiliary Contact | S2C-H6R | 1 | piece |
| 2CDS200970R0031 | Auxiliary Contact | S2C-H01 | 1 | piece |
| 2CDS200970R0032 | Auxiliary Contact | S2C-H10 | 1 | piece |
| 2CDS200936R0001 | Auxiliary Contact | S2C-H11L | 1 | piece |
| 2CDS200936R0002 | Auxiliary Contact | S2C-H20L | 1 | piece |
| 2CDS200936R0003 | Auxiliary Contact | S2C-H02L | 1 | piece |
| 2CDS200946R0001 | Auxiliary Contact | S2C-H6-11R | 1 | piece |
| 2CDS200946R0002 | Auxiliary Contact | S2C-H6-20R | 1 | piece |
| 2CDS200946R0003 | Auxiliary Contact | S2C-H6-02R | 1 | piece |
| 2CDS200909R0001 | Shunt Trip | S2C-A1 | 1 | piece |
| 2CDS200909R0002 | Shunt Trip | S2C-A2 | 1 | piece |
| 2CSS200911R0001 | Undervoltage Release | S2C-UA 12 DC | 1 | piece |
| 2CSS200911R0002 | Undervoltage Release | S2C-UA 24 AC | 1 | piece |
| 2CSS200911R0003 | Undervoltage Release | S2C-UA 48 AC | 1 | piece |
| 2CSS200911R0004 | Undervoltage Release | S2C-UA 110 AC | 1 | piece |
| 2CSS200911R0005 | Undervoltage Release | S2C-UA 230 AC | 1 | piece |
| 2CSS200911R0006 | Undervoltage Release | S2C-UA 400 AC | 1 | piece |
| 2CSS200911R0007 | Undervoltage Release | S2C-UA 24 DC | 1 | piece |
| 2CSS200911R0008 | Undervoltage Release | S2C-UA 48 DC | 1 | piece |
| 2CSS200911R0009 | Undervoltage Release | S2C-UA 110 DC | 1 | piece |
| 2CSS200911R0010 | Undervoltage Release | S2C-UA 230 DC | 1 | piece |
| GHS2001901R0003 | Mechanical Accessories | S2C-DH | 1 | piece |
| 2CSS200998R0001 | Mechanical tripping device | S2C-BP | 1 | piece |
| 2CSS200999R0001 | Plug-in base | S2C-EST | 1 | piece |
| 2CDS200918R0001 | Hand Operated Neutral | S2C-NT | 1 | piece |
| 2CCA880100R0001 | Sensor | CMS-100PS | 1 | piece |
| 2CCA880101R0001 | Sensor | CMS-101PS | 1 | piece |
| 2CCA880102R0001 | Sensor | CMS-102PS | 1 | piece |

## Categories

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Low Voltage Products and Systems → Modular DIN Rail Products → Miniature Circuit Breakers MCBs → Miniature Circuit Breakers MCBs







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