



PRODUCT-DETAILS

# S203M-C50

## Miniature Circuit Breaker - S200M - 3P - 50 A - C



| General Information   |   |
|-----------------------|---|
| Extended Product Type | S203M-C50   |
| Product ID            | 2CDS273001R0504   |
| EAN                   | 4016779543996   |
| Catalog Description   | Miniature Circuit Breaker - S200M - 3P - 50 A - C   |
| Long Description      | System pro M compact S200M 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 10 kA at 230/400 V AC) and rated currents (up to 63A). All MCBs of the product range S200M comply with IEC/EN 60898-1 and IEC/EN 609 47-2, allowing the use for residential, commercial and industrial applications. Bottom-fitting auxiliary contact can be mounted on S200M to save 50% space. |

| ABB EcoSolutions                                  |   |
|---|---|
| ABB EcoSolutions                                  | Yes   |
| EcoSolutions Profile                              | 9AKK108469A3798   |
| Recyclability Rate of the Product acc. to EN45555 | Design for Closing Resource Loops - Standard EN45555 - 90.6 % |

|   |                         |
|---|-------------------------|
| Extended Product Lifetime               | Product Durability      |
| Offered with Takeback Services          | Take Back for Recycling |
| End Of Life Disassembling Instructions  | 9AKK108468A3132         |
| Environmental Product Declaration - EPD | 9AKK108467A7833         |

## Technical

|   |   |
|---|---|
| Dielectric Test Voltage                                     | 50/60 Hz-1 min: 2 kV  |
| Rated Ultimate Short-Circuit Breaking Capacity ( $I_{cu}$ ) | (230 V AC) 25 kA<br>(400 V AC) 15 kA<br>(440 V AC) 15 kA<br>(230 V) 25 kA<br>(400 V) 15 kA  |
| Rated Service Short-Circuit Breaking Capacity ( $I_{cs}$ )  | (133 V AC) 15 kA<br>(230 V AC) 7.5 kA   |
| 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   | 3P  |
| Tightening Torque   | 2.8 N·m   |
| Screw Terminal Type   | Failsafe Bi-directional Cylinder-lift Terminal  |
| Actuator Marking  | I / O   |
| Actuator Material   | Insulation Group II, Black, Sealable  |
| Recommended Screw Driver                                    | Pozidriv 2  |
| Accessories Available                                       | Yes   |
| Connecting Capacity   | Busbar 10 / 10 mm <sup>2</sup><br>Flexible with Ferrule 0.75 ... 25 mm <sup>2</sup><br>Flexible 0.75 ... 25 mm <sup>2</sup><br>Flexible 0.75 ... 25 mm <sup>2</sup><br>Rigid 0.75 ... 35 mm <sup>2</sup><br>Rigid 0.75 ... 35 mm <sup>2</sup><br>Stranded 0.75 ... 35 mm <sup>2</sup> |
| Installation Size   | acc. to DIN 43880 1   |
| Terminal Type   | Screw Terminals   |

## Electrical

|                                    |   |
|------------------------------------|---|
| Tripping Characteristic            | C   |
| 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<br>Withstand Voltage (U <sub>imp</sub> )         | 4 kV<br>at 2000 m 5 kV<br>at Sea Level 6.2 kV                       |
| Input Voltage Type   | AC/DC   |
| Rated Current (I <sub>n</sub> )                                | 50 A  |
| Rated Short-Circuit<br>Capacity                                | (AC) 10 kA<br>(230 V AC) 10 kA<br>(400 V AC) 10 kA<br>(400 V) 10 kA |
| Rated Conditional Short-<br>Circuit Current (I <sub>nc</sub> ) | (230 V) 10 kA<br>(400 V) 20 kA                                      |
| Frequency (f)  | 50 Hz   |
| Rated Frequency (f)  | 50 / 60 Hz  |
| Power Loss   | 9.75 W<br>at Rated Operating Conditions per Pole 3.25 W             |
| Overvoltage Category   | III   |

## Design

|                  |                               |
|------------------|-------------------------------|
| Housing Material | Insulation Group II, RAL 7035 |
|------------------|-------------------------------|

## Technical UL/CSA

|                                       |   |
|---------------------------------------|---|
| Maximum Operating<br>Voltage UL/CSA   | 125 V DC<br>480Y/277 V AC                                     |
| Interrupting Rating acc.<br>to UL1077 | (125 V DC) 10 kA<br>(277 V AC) 6 kA<br>(480Y / 277 V AC) 6 kA |
| Connecting Capacity<br>UL/CSA         | Busbar 14-8 AWG<br>Conductor 14-4 AWG                         |
| Tightening Torque<br>UL/CSA           | 18 in·lb  |

## Material Compliance

|   |  |
|---|--|
| RoHS Information                                  | 2CDK400003K0203  |
| RoHS Status                                       | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| RoHS Date   | 20161001   |
| REACH Declaration                                 | 9AKK107492A1906  |
| REACH Information                                 | True - contains substances > 0.1 mass percentage                       |
| REACH Date  | 20240821   |
| Conflict Minerals<br>Reporting Template<br>(CMRT) | 9AKK108468A3363  |
| SCIP  | 9008497a-14f6-4cfd-83c5-11cf3bc660d1 Germany                           |
| WEEE Category                                     | 5. Small Equipment (No External Dimension More Than 50 cm)             |
| WEEE B2C / B2B                                    | Business To Business   |

## Environmental

|                                      |  |
|--------------------------------------|--|
| Ambient Air<br>Temperature           | Operation -25 ... +55 °C<br>Storage -40 ... +70 °C |
| Reference Ambient Air<br>Temperature | 30 °C  |
| Degree of Protection                 | IP20<br>IP40                                       |

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.<br>to IEC 60068-2-27 | 25g 2 shocks 13 ms  |

## Dimensions

|  |                 |
|--|-----------------|
| Width in Number of<br>Modular Spacings | 3.0             |
| Product Net Width                      | 52.5 mm         |
| Product Net Height                     | 88 mm           |
| Product Net Depth /<br>Length          | 69 mm           |
| Product Net Weight                     | 0.375 kg        |
| Pole Net Weight                        | 0.125 kg        |
| Built-In Depth (t <sub>2</sub> )       | 69 mm           |
| Dimension Diagram                      | 2CDC022007F0010 |

## Ordering

|                                 |                |
|---------------------------------|----------------|
| Package Level 1 Units           | carton 1 piece |
| Package Level 1 Gross<br>Weight | 0.4 kg         |
| E-Number (Finland)              | 3210818        |
| E-Number (Norway)               | 1665561        |
| E-Number (Sweden)               | 2101249        |

## Certificates and Declarations

|                                     |                 |
|-------------------------------------|-----------------|
| Declaration of<br>Conformity - CE   | 2CDK403001D0607 |
| Declaration of<br>Conformity - UKCA | 9AKK108467A5053 |
| I <sup>2</sup> t Characteristic     | 9AKK107992A5102 |

## Installation

|                             |  |
|-----------------------------|--|
| Instructions and<br>Manuals | 2CDS207104P0002  |
| 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  |

## Popular Downloads

|                                      |                 |
|--------------------------------------|-----------------|
| Data Sheet, Technical<br>Information | 9AKK107046A0423 |
| I <sup>2</sup> t Characteristic      | 9AKK107992A5102 |

## External Classifications and Standards

|                                    |   |
|------------------------------------|---|
| ETIM 9                             | EC000042 - Miniature circuit breaker (MCB)                      |
| UNSPSC                             | 39121603  |
| eClass                             | V11.0 : 27141901  |
| IDEA Granular Category Code (IGCC) | 4897 >> Miniature circuit breakers                              |
| Object Classification Code         | F   |
| Standards                          | IEC/EN 60898-1<br>CSA 22.2 No. 235<br>IEC/EN 60947-2<br>UL 1077 |
| Certification Agency               | EN<br>IEC   |

## Accessories

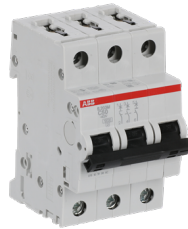
| Identifier      | Description                | Type          | Quantity | Unit Of Measure |
|-----------------|----------------------------|---------------|----------|-----------------|
| 2CDS200922R0001 | Signal/Auxiliary Contact   | S2C-S/H6R     | 1        | piece           |
| 2CDS200912R0001 | 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           |

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## Categories

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Low Voltage Products and Systems → Modular DIN Rail Products → Miniature Circuit Breakers MCBs → Miniature Circuit Breakers MCBs → S200M



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