

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 3-POLE, MOTOR STARTER PROTECTION TM120M, AM, IN=100A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION II=5...15 X IN CABLE CONNECTION UNDERVOLTAGE RELEASE (UVR) 24 V DC 2 AUXILIARY SWITCH HQ



| Model  |                             |
|--|-----------------------------|
| product brandname                              | SENTRON                     |
| Product designation                            | Molded case circuit breaker |
| Design of the product                          | Starter protection          |
| Design of the overcurrent release              | TM120M                      |
| Protective function of the overcurrent release | I                           |
| Number of poles                                | 3                           |
| Design of the auxiliary release                | Undervoltage release (UVR)  |
| Design of the auxiliary switch                 | 2 auxiliary switches HQ     |

| General technical data   |        |
|--|--------|
| Tension assignée d'isolement Ui  | 800 V  |
| Max. rated operational voltage Ue with AC 50/60Hz  | 690 V  |
| Max. rated operational voltage Ue with DC  | 500 V  |
| Operating power / at AC-3 / at 400 V   | 0 W    |
| Operating power / at AC-3 / at 230 V   | 0 W    |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 25 W   |
| Mechanical service life (switching cycles) / typical   | 15 000 |

|   |         |
|---|---------|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000   |
| Neutral conductors / upgradeable/retrofitable                             | No      |
| Ground fault monitoring version   | Without |
| Product function  |         |
| • communication function  | No      |
| • Phase failure detection   | No      |
| • other measurement function  | No      |
| Net weight  | 1.05 kg |

### Electricity

|   |       |
|---|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné Iu                                      | 100 A |
| Operating current   |       |
| • at 40 °C  | 100 A |
| • at 45 °C  | 100 A |
| • at 50 °C  | 100 A |
| • at 55 °C  | 98 A  |
| • at 60 °C  | 96 A  |
| • at 65 °C  | 94 A  |
| • at 70 °C  | 91 A  |

### Switching capacity according to IEC 60947

|   |        |
|---|--------|
| Switching capacity class of the circuit breaker           | H      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V  | 100 kA |
| • at 415 V  | 70 kA  |
| • at 440 V  | 55 kA  |
| • at 690 V  | 5 kA   |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V  | 100 kA |
| • at 415 V  | 70 kA  |
| • at 440 V  | 40 kA  |
| • at 690 V  | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V  | 220 kA |
| • at 415 V  | 154 kA |
| • at 440 V  | 121 kA |
| • at 690 V  | 8.5 kA |

### Adjustable parameters

|   |     |
|---|-----|
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
|---|-----|

|   |     |
|---|-----|
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
| Adjustable response value current / I <sub>i</sub> min. | 0 A |
| Adjustable response value current / I <sub>i</sub> max. | 0 A |

### Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| Depth  | 70 mm   |

### Connections

|   |                                 |
|---|---------------------------------|
| Arrangement of electrical connectors / for main current circuit                 | Front terminal                  |
| Type of electrical connection / for main current circuit                        | box terminal                    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (1.5 - 70 mm <sup>2</sup> ) |

### Auxiliary circuit

|  |   |
|--|---|
| Product component  |   |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• Voltage trigger</li> <li>• undervoltage release with leading contact</li> <li>• Trip indicator</li> </ul> | <ul style="list-style-type: none"> <li>Yes</li> <li>No</li> <li>No</li> <li>No</li> </ul> |
| Number of CO contacts / for auxiliary contacts   | 2   |

### Accessories

|   |  |
|---|--|
| Product extension / optional / motor drive  | Yes  |
| Manufacturer's article number   |  |
| <ul style="list-style-type: none"> <li>• of the supplied basic switch</li> <li>• of the integrated auxiliary switch/alarm switch</li> <li>• of the integrated auxiliary trip</li> </ul> | <ul style="list-style-type: none"> <li><a href="#">3VA1110-6MH36-0AA0</a></li> <li><a href="#">3VA9988-0AA12</a></li> <li><a href="#">3VA9608-0BB11</a></li> </ul> |

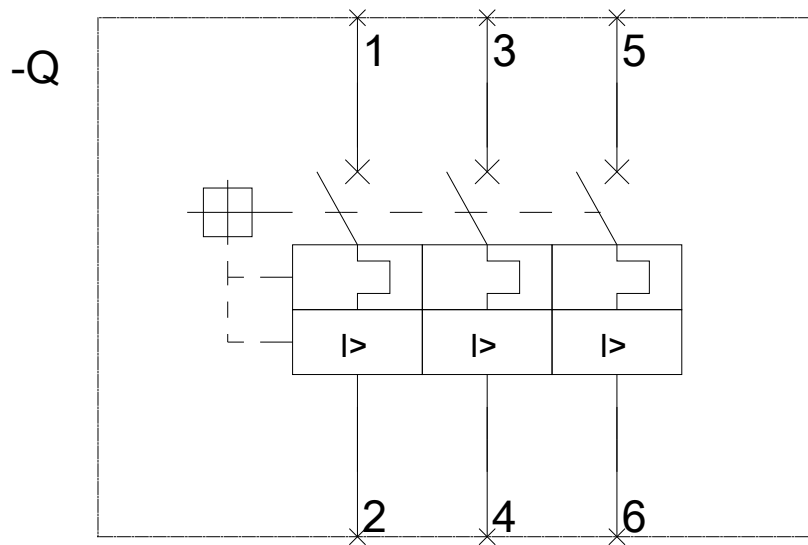
### Environmental conditions

|  |  |
|--|--|
| Protection class IP / on the front   | IP40   |
| Ambient temperature  |  |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | <ul style="list-style-type: none"> <li>-25 °C</li> <li>70 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul> |

### Certificates

|  |   |
|--|---|
| Equipment marking / acc. to DIN EN 81346-2 | Q |
|--|---|





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