SIEMENS

Data sheet 5SJ4120-7HG42



Circuit breaker 10kA, 1-pole, C, 20A according to UL 489-277V

| Model | | | |
|--|--|--|--|
| product brand name | SENTRON | | |
| product designation | Miniature circuit breakers | | |
| design of the product | Miniature circuit-breaker 5SJ4 | | |
| General technical data | | | |
| number of poles | 1 | | |
| tripping characteristic class | С | | |
| mechanical service life (switching cycles) / typical | 10 000 | | |
| installation environment regarding EMC | Suitable for environment B (immunity to interference not applicable) | | |
| reference code / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750 | F | | |
| overvoltage category | 3 | | |
| degree of pollution | 3 | | |
| Voltage | | | |
| type of voltage / of the operating voltage | AC/DC | | |
| insulation voltage (Ui) / at AC / rated value | 440 V | | |
| Supply voltage | | | |
| supply voltage / at AC / rated value | 400 V | | |
| operating voltage | | | |
| at AC / acc. to UL 489 and CSA C22.2 No. 5-02 / maximum | 277 V | | |
| at DC / rated value / maximum | 60 V | | |
| at DC / single channel / acc. to UL 489 and CSA C22.2 No. 5-02 / maximum | 60 V | | |
| at DC / 2-channel / acc. to UL 489 and CSA C22.2 No. 5-02 / maximum | 125 V | | |
| Protection class | | | |
| protection class IP | IP20, with connected conductors, IP 40 in the handle range | | |
| Switching capacity | | | |
| switching capacity current | | | |
| • acc. to EN 60898 / rated value | 10 kA | | |
| • acc. to IEC 60947-2 / rated value | 15 kA | | |
| Dissipation | | | |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 2.4 W | | |
| Current | | | |
| operational current | | | |
| at 30 °C / rated value | 20 A | | |
| at 40 °C / rated value | 20 A | | |
| • at 45 °C / rated value | 19.4 A | | |

| * at 50 °C/ rated value * at 60 °C/ rated value | | | | | | |
|--|--|--|------------------------|-------------------|--|--|
| e at 80 °C / rated value 20 A Main circuit type of voltage supply / st AC / sec. to UL 489 and CSA 22 No. 53.0 Zoz 2 No. 54.0 Mechanical engineering / industry Product component / neutral conductor switching product component / neutral conductor witching product component / neutral conductor product component / neutral conductor product component / neutral conductor product feature / neutral conductor product feature / neutral conductor response product extension / installable / supplementary devices / yes product extension / installable / supplementary devices / yes / y | at 50 °C / rated value | 18.8 A | | | | |
| **AC / rated value** **Main circuit** **Main circuit** **Main circuit** **Main circuit** **Machanical engineering / industry** **Machanical engineering / industry** **Product details** **Product component / neutral conductor switching product feature / touch protection yes product component / neutral conductor switching product feature / touch protection yes product component neutral conductor switching No neutral terminals top No neutral terminals terminals (neutral terminals top No neutral terminals (neutral terminals terminals (neutral terminals neutral terminals (neutral terminals neutral terminals / neutral | at 55 °C / rated value | | | | | |
| Main circuit type of voltage supply / at AC / acc. to UL 489 and CSA 22 2 No. 5-10 22 | | 17.6 A | 17.6 A | | | |
| sype of voltage supply 1 at AC / acc. to UL 489 and CSA (22 2 No. 50.92) suitability for operation | at AC / rated value | 20 A | | | | |
| ### Suitability for operation Product details Product details Product details Product details Product details Product details Product component Product details Product component Product | Main circuit | | | | | |
| Product details product component / neutral conductor switching product feature / touch protection yes product component | | 480/277 | | | | |
| product component / neutral conductor switching product teature / fouch protection yes product teature / fouch protection yes product component • tunnel terminals top • No • tunnel terminals top • No • combined terminal top | suitability for operation | Mechanical engineering / inc | dustry | | | |
| product feature / touch protection product component • tunnel terminals top • tunnel terminals bottom • tunnel terminals bottom • combined terminal bottom • halogen-free • sealable • silicon-free • sealable • silicon-free • product extension / installable / supplementary devices Product function product function product function / note Short circuit breaking capacity short-circuit current ((cn) / at AC / acc. to Ut. 1077 and CSA C222. No.235 Connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 25 mm² Ightening forque / with screw-type terminals / maximum position / of power supply cord Mechanical Design height 121 mm width 18 mm depth 70 mm installation position net weight 176 g Environmental conditions Without or expressions **Total Conditions** Without or expressions **Total Conditions** * | Product details | | | | | |
| product component • tunnel terminals top • tunnel terminals topt • tunnel terminals topt • combined terminal top • combined terminal bottom • combined terminal bottom • combined terminal bottom • combined terminal bottom product feature • halogen-free • sealable • silicon-free • product function product function product function product function product function / note Terminal tightening torque for Cu, 60/75°C; 3.5Nm/31b.in Short circuit breaking capacity short-circuit current (Ion) / at AC / acc. to U, 1077 and CSA C222 No 235 Connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 126 mm² • maximum 127 mm 13,5 N·m 15ghtening torque / with screw-type terminals / maximum 15ghtening torque / with screw-type terminals / max | product component / neutral conductor switching | No | | | | |
| tunnel terminals top tunnel terminals bottom combined terminal bottom combined termina | product feature / touch protection | Yes | | | | |
| tunnel terminals bottom combined terminal top combined terminal bottom Yes combined terminal bottom Yes combined terminal bottom Yes solicon-free sealable silicon-free sealable silicon-free Silicon-free Product function Product function Product function / note Terminal tightening torque for Cu, 60/75°C; 3,5Nm/31lb.in Short circuit breaking capacity short-circuit current (Icn) / at AC / acc. to U. 1077 and C5 C22.2 No.235 Connectable conductor cross-section / finely stranded / with core end processing minimum minimum mightening torque / with screw-type terminals / maximum position / of power supply cord Machanical Design Height Mechanical Design Height 121 mm width depth 70 mm Installation depth 70 mm Installa | product component | | | | | |
| combined terminal top combined terminal bottom Yes roduct feature halogen-free selable selicon-free roduct reaction / installable / supplementary devices Product function roduct function roduct function / note Freminal tightening torque for Cu, 60/75°C; 3.5Nm/31lb.in Short circuit breaking capacity short-circuit current (lcn) / at AC / acc. to UL 1077 and CSA C22 2 No 235 Connections connectable conductor cross-section / finely stranded / with core end processing minimum maximum 25 mm² tightening torque / with screw-type terminals / maximum position / of power supply cord May Mechanical Design height 121 mm width 18 mm depth 70 mm installation depth 7176 g Environmental Conditions wibration resistance ambient temperature / during operation minimum mini | tunnel terminals top | No | | | | |
| e combined terminal bottom product feature halogen-free sealable Silicon-free product extension / installable / supplementary devices Product vansion / installable / supplementary devices Product function product function product function / note Short circuit breaking capacity short-circuit current ((cn) / at AC / acc. 10 kA | tunnel terminals bottom | No | | | | |
| product feature halogen-free seatable sliticon-free yes product extension / installable / supplementary devices Product function product function / note Terminal tightening torque for Cu, 60/75°C; 3.5Nm/31lb.in Short circuit breaking capacity short-circuit current (Icn) / at AC / acc. to UL 1077 and CSA C22.2 No 235 Connections connectable conductor cross-section / finely stranded / with core end processing minimum newsimum 25 mm² sightening torque / with screw-type terminals / maximum 25 mm² sightening torque / with screw-type terminals / maximum 25 mm² sightening torque / with screw-type terminals / maximum 28 mm² sightening torque / with screw-type terminals / maximum 18 mm 40chanical Design height 121 mm width 18 mm 40epth 70 mm installation depth 70 mm installation depth 70 mm unber of modular width units 1 fastening method on standard mounting rail mounting position any net weight 75 °C Environmental conditions vibration resistance ambient temperature / during operation minimum 55 °C maximum 40 °C maximum - 40 °C maximum - maximum - 40 °C maximum - maximum - acc. to IDIN EN 61346-2 - e.acc. to | combined terminal top | Yes | | | | |
| halogen-free salable salable silcon-free yes yes product extension / installable / supplementary devices Product function product function / note Short circuit breaking capacity short-circuit current (Icn) / at AC / acc. to UL 1077 and CSA C22.2 No 235 Connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum jot power supply cord Mechanical Design height installation depth | combined terminal bottom | Yes | | | | |
| * saalable | product feature | | | | | |
| • silicon-free product extension / installable / supplementary devices Product function product function / note Terminal tightening torque for Cu, 60/75°C; 3.5Nm/31lb.in Short circuit breaking capacity short-circuit current (Icn) / at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections connectable conductor cross-section / finely stranded / with core end processing • minimum 0.75 mm² • maximum 25 mm² tightening torque / with screw-type terminals / maximum 0.5 N·m position / of power supply cord Mechanical Design height 121 mm width 18 mm depth 70 mm number of modular width units 1 fastening method 0 no standard mounting rail mounting position 176 g Environmental conditions vibration resistance 50 m/s² at 25 to 150Hz and 60m/s² at 35Hz (4sec) ambient temperature / during operation • minimum -25 ° C • maximum -25 ° C emaximum -40 ° C • maximum -75 ° C Ference code • acc. to IDIN EN 61346-2 • acc. to IDIC B18146-2 • acc. to IEC 81346-2 Ference Rode • acc. to IEC 81346-2 Ference Rode • acc. to IEC 81346-2 Ference Rode • acc. to IEC 81346-2 • Central Product Anoxonal Tert Cartificates Peciaration of Text C | halogen-free | Yes | | | | |
| product extension / installable / supplementary devices Product function product function / note Terminal tightening torque for Cu, 60/75°C; 3.5Nm/31lb.in Not circuit breaking capacity short-circuit current ((cn) / at AC / acc. to UL 1077 and CsA C22.2 No.235 Connectable conductor cross-section / finely stranded / with core end processing | • sealable | Yes | | | | |
| Product function / note | • silicon-free | Yes | | | | |
| product function / note Short circuit breaking capacity short-circuit current (Icn) / at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum ightening torque / with screw-type terminals / maximum position / of power supply cord Mechanical Dosign height 121 mm width 48 mm depth 70 mm installation depth 70 mm number of modular width units fastening method mounting position net weight 176 g Environmental conditions vibration resistance • minimum • maximum 55 °C ambient temperature / during operation • minimum • maximum - 25 °C contrictaess reference code • acc. to IDIS R 61346-2 • acc. to IDIS R 61346-2 • Connections 10 kA 10 | product extension / installable / supplementary devices | Yes | | | | |
| Short circuit breaking capacity short-circuit current (lcn) / at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 10.75 mm² 25 mm² 25 mm² 25 mm² 3.5 N·m position / of power supply cord Mochanical Design height 121 mm width 48 mm depth 70 mm installation depth 70 mm number of modular width units fastening method mounting position net weight 176 g Environmental conditions vibration resistance minimum minimu | | | | | | |
| Short circuit breaking capacity short-circuit current (lcn) / at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 10.75 mm² 25 mm² 25 mm² 25 mm² 3.5 N·m position / of power supply cord Mochanical Design height 121 mm width 48 mm depth 70 mm installation depth 70 mm number of modular width units fastening method mounting position net weight 176 g Environmental conditions vibration resistance minimum minimu | product function / note | Terminal tightening torque for | or Cu, 60/75°C; 3.5Nm/ | 31lb.in | | |
| breaking capacity short-circuit current (Icn) / at AC / acc. to UL 1077 and CSA C22.2 No.235 Connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 25 mm² tightening torque / with screw-type terminals / maximum position / of power supply cord Mechanical Design height 121 mm width 18 mm depth 70 mm number of modular width units 1 fastening method mounting position mounting position mounting position any net weight Environmental conditions vibration resistance minimum • maximum 55 °C Certificates reference code • acc. to DIN EN 61346-2 • Ceneral Product Approval | | 0 0 1 | , | | | |
| connectable conductor cross-section / finely stranded / with core end processing • minimum • maximum 25 mm² tightening torque / with screw-type terminals / maximum position / of power supply cord Mechanical Design height 121 mm width 18 mm depth 70 mm installation depth 70 mm number of modular width units 1 fastening method mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum 55 °C -25 °C ambient temperature / during storage • minimum -40 °C • maximum 75 °C Certificates reference code • acc. to IEC 81346-2 • acc. to IEC 81346-2 • Ceneral Perduct Annoyaral | breaking capacity short-circuit current (Icn) / at AC / acc. | 10 kA | | | | |
| with core end processing • minimum • maximum 125 mm² 25 mm² tightening torque / with screw-type terminals / maximum position / of power supply cord Any Mechanical Design height 121 mm width 18 mm depth 70 mm number of modular width units 1 fastening method mounting position net weight 176 g Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum ambient temperature / during storage • minimum • maximum ambient temperature / during storage • minimum • maximum -25 °C certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 • Centrificates Feanural Product Approval | Connections | | | | | |
| • minimum • maximum 1 maximum 1 mosition / of power supply cord 2 maximum 1 mosition / of power supply cord 2 maximum 2 mosition / of power supply cord 3 maximum 3 maximum 4 mosition / of power supply cord 4 maximum 4 mounting position 1 mumber of modular width units 1 mounting position 2 mounting position 2 mounting position 2 mounting position 3 mounting position 4 mounting rail 5 mounting position 5 mounting position 5 mounting position 5 mounting position 6 minimum 5 mounting position 7 mounting position 8 mounting position 9 minimum 1 mounting position 1 mounting rail 1 mounting rail 2 mounting position 3 mounting position 4 mounting position 9 mounting position 1 mounting rail 2 mounting rail 3 mounting rail 4 mounting rail 4 mounting rail 5 mounting rail 5 mounting rail 5 mounting rail 6 mounting rail 7 mounting rail 8 mm 7 mounting rail 9 mo | | | | | | |
| tightening torque / with screw-type terminals / maximum position / of power supply cord Any Mechanical Design height height depth installation depth number of modular width units fastening method mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum • maximum - 25°C cortificates reference code • acc. to DIN EN 61346-2 • acc. to DIN EN 61346-2 • acc. to DIC EN 3146-2 • Centeral Product Approval | | 0.75 mm ² | | | | |
| position / of power supply cord Mechanical Design height height width 18 mm depth 70 mm number of modular width units fastening method nounting position net weight 176 g Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • maximum -40 °C -25 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 • Central Product Approval | • maximum | 25 mm² | | | | |
| position / of power supply cord Mechanical Design height height width 18 mm depth 70 mm number of modular width units fastening method nounting position net weight 176 g Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • maximum -40 °C -25 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 • Central Product Approval | tightening torque / with screw-type terminals / maximum | 3.5 N·m | | | | |
| height 121 mm width 18 mm depth 70 mm installation depth 70 mm number of modular width units 1 fastening method on standard mounting rail mounting position any net weight 176 g Environmental conditions vibration resistance 50 m/s² at 25 to 150Hz and 60m/s² at 35Hz (4sec) ambient temperature / during operation • minimum 55 °C • maximum -25 °C ambient temperature / during storage • minimum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 F • acc. to IEC 81346-2 F • acc. to IEC 81346-2 F | position / of power supply cord | Any | | | | |
| width 18 mm depth 70 mm installation depth 70 mm number of modular width units 1 fastening method on standard mounting rail mounting position any net weight 176 g Environmental conditions vibration resistance 50 m/s² at 25 to 150Hz and 60m/s² at 35Hz (4sec) ambient temperature / during operation • minimum 55 °C • maximum -25 °C ambient temperature / during storage • minimum -40 °C • maximum -75 °C Certificates reference code • acc. to DIN EN 61346-2 F • acc. to IEC 81346-2 F General Product Approval | Mechanical Design | | | | | |
| depth 70 mm installation depth 70 mm number of modular width units 1 fastening method on standard mounting rail mounting position any net weight 176 g Environmental conditions vibration resistance 50 m/s² at 25 to 150Hz and 60m/s² at 35Hz (4sec) ambient temperature / during operation | height | 121 mm | | | | |
| installation depth number of modular width units fastening method mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • conditions • minimum • conditions • c | width | 18 mm | | | | |
| number of modular width units fastening method mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -40 °C emaximum -40 °C certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | depth | 70 mm | | | | |
| number of modular width units fastening method mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -40 °C | installation depth | 70 mm | | | | |
| mounting position net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • minimum • maximum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | | 1 | | | | |
| net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • minimum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | fastening method | on standard mounting rail | | | | |
| net weight Environmental conditions vibration resistance ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • minimum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | mounting position | any | | | | |
| Vibration resistance subject temperature / during operation minimum m | | 176 g | | | | |
| ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • maximum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | | | | | | |
| ambient temperature / during operation • minimum • maximum -25 °C ambient temperature / during storage • minimum • maximum -40 °C • maximum 75 °C Certificates reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval | vibration resistance | 50 m/s² at 25 to 150Hz and 60m/s² at 35Hz (4sec) | | | | |
| minimum maximum minimum minimum minimum maximum maximum o C certificates reference code acc. to DIN EN 61346-2 acc. to IEC 81346-2 F General Product Approval Declaration of Test Certificates | | | , , , | | | |
| maximum -25 °C ambient temperature / during storage minimum maximum 75 °C Certificates reference code acc. to DIN EN 61346-2 acc. to IEC 81346-2 F General Product Approval Declaration of Test Certificates | | 55 °C | | | | |
| ambient temperature / during storage | • maximum | -25 °C | | | | |
| minimum | ambient temperature / during storage | | | | | |
| maximum 75 °C Certificates reference code acc. to DIN EN 61346-2 | | -40 °C | | | | |
| reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval Declaration of Test Certificates | | | | | | |
| reference code • acc. to DIN EN 61346-2 • acc. to IEC 81346-2 F General Product Approval Declaration of Test Certificates | Certificates | | | | | |
| acc. to DIN EN 61346-2 acc. to IEC 81346-2 F General Product Approval Declaration of Test Certificates | | | | | | |
| acc. to IEC 81346-2 Beclaration of Test Certificates Compared Product Approval Compared Pr | | F | | | | |
| General Product Approval Declaration of Test Certificates | | | | | | |
| Ganarai Product Annroval | | | Declaration of | T40 (15) | | |
| | General Product Approval | | | lest Certificates | | |











Special Test Certificate

other

Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SJ4120-7HG42

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/5SJ4120-7HG42

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SJ4120-7HG42

CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications



