

SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 110 ... 240 V AC/DC, 50 ... 60 HZ, 0.1 ... 0.4 A, IP20, CONNECTION MAIN CIRCUIT: SCREW TERMINAL, CONNECTION AUXILIARY CIRCUIT: SCREW TERMINAL



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|-----------------------|-----------------|
| Product brand name | SIRIUS |
| Product designation | compact starter |
| Design of the product | direct starter |

| General technical data | |
|---|--|
| Product function | |
| • Control circuit interface to parallel wiring | Yes |
| Product extension | |
| • Auxiliary switch | Yes |
| Insulation voltage | |
| • rated value | 690 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 000 V |
| maximum permissible voltage for safe isolation | |
| • between auxiliary and auxiliary circuit | 250 V |
| • between control and auxiliary circuit | 300 V |
| • between main and auxiliary circuit | 400 V |
| Protection class IP | IP20 |
| Vibration resistance | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s ² ; 10 cycles |
| Mechanical service life (switching cycles) | |

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|--|---|
| • of the main contacts typical | 10 000 000 |
| • of auxiliary contacts typical | 10 000 000 |
| • of the signaling contacts typical | 10 000 000 |
| Electrical endurance (switching cycles) of auxiliary contacts | |
| • at DC-13 at 6 A at 24 V typical | 30 000 |
| • at AC-15 at 6 A at 230 V typical | 200 000 |
| Type of assignment | continuous operation according to IEC 60947-6-2 |
| Equipment marking | |
| • acc. to DIN EN 61346-2 | Q |
| • acc. to DIN EN 81346-2 | Q |

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|----------------------------|----------------|
| Ambient conditions | |
| Ambient temperature | |
| • during operation | -20 ... +60 °C |
| • during storage | -55 ... +80 °C |
| • during transport | -55 ... +80 °C |

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| Main circuit | |
| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 0.1 ... 0.4 A |
| Formula for making capacity limit current | 120 x I _e |
| Formula for interruption capacity limit current | 100 x I _e |
| Mechanical power output for 4-pole AC motor | |
| • at 400 V rated value | 0.09 kW |
| • at 500 V rated value | 0.12 kW |
| • at 690 V rated value | 0.18 kW |
| Operating voltage | |
| • at AC-3 rated value maximum | 690 V |
| Operating current | |
| • at AC at 400 V rated value | 0.4 A |
| • at AC-43 | |
| — at 400 V rated value | 0.3 A |
| — at 500 V rated value | 0.32 A |
| — at 690 V rated value | 0.35 A |
| No-load switching frequency | 3 600 1/h |
| Operating frequency | |
| • at AC-41 acc. to IEC 60947-6-2 maximum | 750 1/h |
| • at AC-43 acc. to IEC 60947-6-2 maximum | 250 1/h |

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|---------------------------------------|-------|
| Control circuit/ Control | |
| Type of voltage | AC/DC |
| Control supply voltage 1 at AC | |

| | |
|--|---------------|
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 110 ... 240 V |
| Control supply voltage 1 | |
| <ul style="list-style-type: none"> • at DC | 110 ... 240 V |
| Holding power | |
| <ul style="list-style-type: none"> • at AC maximum • at DC maximum | 6 W 5.1 W |

Auxiliary circuit

| | |
|--|--------|
| Number of NC contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts | 1 |
| Number of NO contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts • of instantaneous short-circuit trip unit for signaling contact | 1 1 |
| Number of CO contacts | |
| <ul style="list-style-type: none"> • of the current-dependent overload release for signaling contact | 1 |
| Operating current of auxiliary contacts at AC-12 maximum | 10 A |
| Operating current of auxiliary contacts at DC-13 | |
| <ul style="list-style-type: none"> • at 250 V | 0.27 A |

Protective and monitoring functions

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|--|----------------------------|
| Trip class | CLASS 10 and 20 adjustable |
| Off-delay time | 50 ms |
| Operational short-circuit current breaking capacity (Ics) | |
| <ul style="list-style-type: none"> • at 400 V • at 500 V rated value • at 690 V rated value | 53 kA 3 kA 3 kA |

UL/CSA ratings

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|--|---|
| Full-load current (FLA) for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value | 0.4 A 0.4 A |
| Contact rating of auxiliary contacts according to UL | contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300 |

Short-circuit protection

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|---|-----------------------------------|
| Product function Short circuit protection | Yes |
| Design of the fuse link | |
| <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the signaling switch of the short-circuit release required | fuse gL/gG: 10 A 6A gL/gG/400V |

- for short-circuit protection of the signaling switch of the overload release required

4A gL/gG/400V

Installation/ mounting/ dimensions

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| Mounting position | any |
| <ul style="list-style-type: none"> • recommended | vertical, on horizontal standard mounting rail |
| Mounting type | screw and snap-on mounting |
| Height | 170 mm |
| Width | 45 mm |
| Depth | 165 mm |

Connections/Terminals

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| Product function | |
| <ul style="list-style-type: none"> • removable terminal for main circuit | Yes |
| <ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit | Yes |
| Type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit | screw-type terminals |
| <ul style="list-style-type: none"> • for auxiliary and control current circuit | screw-type terminals |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts | |
| — solid | 2x (1.5 ... 6 mm ²), 1x 10 mm ² |
| — finely stranded with core end processing | 2x (1.5 ... 6 mm ²) |
| <ul style="list-style-type: none"> • at AWG conductors for main contacts | 2x (16 ... 10), 1x 8 |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts | |
| — solid | 0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²) |
| — finely stranded with core end processing | 0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²) |
| <ul style="list-style-type: none"> • at AWG conductors for auxiliary contacts | 2x (20 ... 14) |

Safety related data

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| B10 value | |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 3 000 000 |
| Proportion of dangerous failures | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 40 % |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 50 % |
| Failure rate [FIT] | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 100 FIT |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |

Communication/ Protocol

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| Product function Bus communication | No |
| Protocol is supported | |
| <ul style="list-style-type: none"> • IO-Link protocol | No |

Electromagnetic compatibility

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| Field-bound parasitic coupling acc. to IEC 61000-4-3 | 10 V/m |
| Electrostatic discharge acc. to IEC 61000-4-2 | 8 kV |
| Conducted HF-interference emissions acc. to CISPR11 | 150 kHz ... 30 MHz Class A |
| Field-bound HF-interference emission acc. to CISPR11 | 30 ... 1000 MHz Class A |

Supply voltage

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| Supply voltage required Auxiliary voltage | No |
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Certificates/approvals

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|--------------------------|-----|---------------------------------------|
| General Product Approval | EMC | Functional Safety/Safety of Machinery |
|--------------------------|-----|---------------------------------------|



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|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)



| | |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



[Environmental Confirmations](#)

[Confirmation](#)

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-1AP32>

Cax online generator

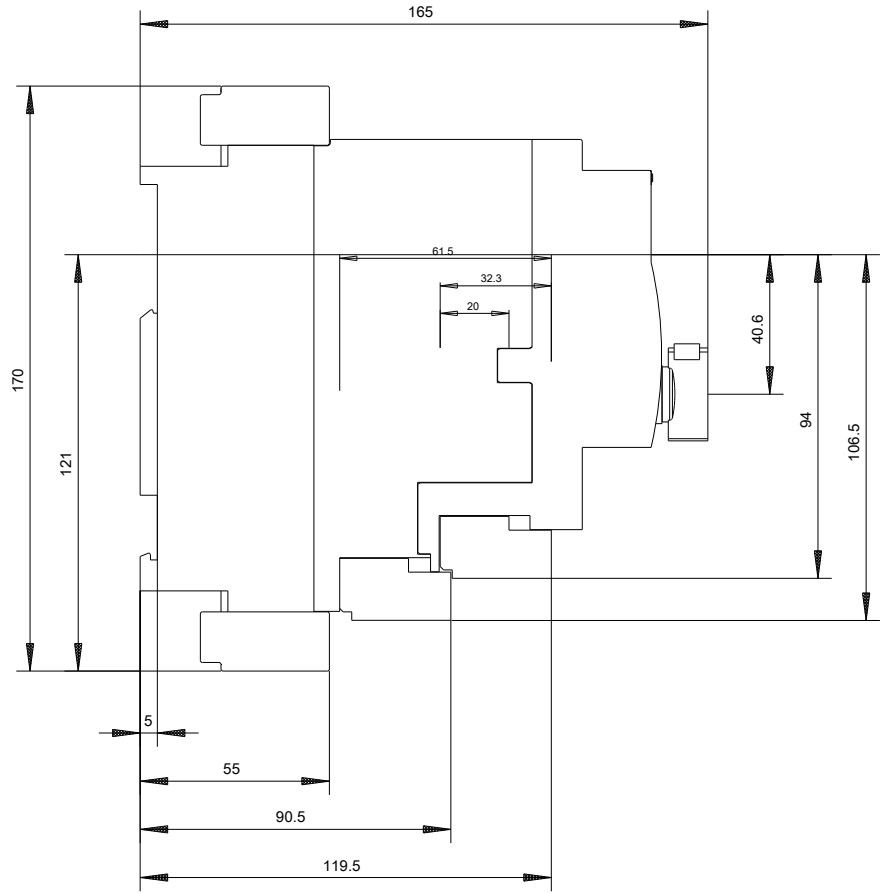
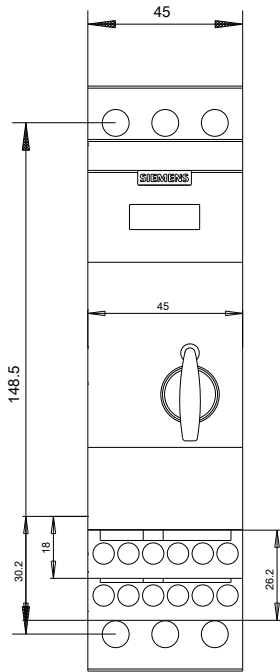
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-1AP32>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-1AP32>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-1AP32&lang=en





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