

# SIEMENS

## Product data sheet

## 6SL3511-0PE21-5AM0



Abb. ähnlich

SINAMICS G110D AC-DRIVE,  
W/O REPAIR SWITCH WITH BUILT IN CL. A FILTER  
WITH BUILT IN BRAKING CHOPPER WITH AS-  
INTERFACE BUS INTERFACE 3AC380-500V +10/-  
10% 47-63HZ OUTPUT HIGH OVERLOAD: 1,5KW  
FOR 200% 3S,150% 60S,100% 300S AMBIENT  
TEMP -10 TO +40 DEG C 210 X 450 X 145 (HXWXD),  
FSA PROTECTION IP65 WITHOUT OPERATOR  
PANEL

|                                                              |                                                                                                                  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| product brand name                                           | SINAMICS                                                                                                         |
| Product-type designation                                     | G110D                                                                                                            |
| <b>Electrical data</b>                                       |                                                                                                                  |
| Operational voltage / from external supply voltage / with DC | 24 V                                                                                                             |
| Consumed current / maximum                                   | 320 mA                                                                                                           |
| • note                                                       | from the unswitched 24 V supply, yellow AS-Interface cable                                                       |
| Relative humidity                                            |                                                                                                                  |
| • maximum                                                    | 95 %                                                                                                             |
| • note                                                       | at 40°C (104°F); RH, condensation not permitted                                                                  |
| Design of the brake                                          | DC braking                                                                                                       |
| • note                                                       | Integrated brake control provides brake with DC supply voltage; the DC-side disconnection enables "fast" braking |
| • with UL approval / maximum                                 | 600 mA                                                                                                           |

|                                                          |                                                                                      |
|----------------------------------------------------------|--------------------------------------------------------------------------------------|
| • without UL approval / maximum                          | 1 A                                                                                  |
| Protection function / parameter lock                     | Yes                                                                                  |
| Current consumption                                      |                                                                                      |
| • without supplementary fan / maximum                    | 180 mA                                                                               |
| • note                                                   | from the switched 24 V supply, black AS-Interface cable, without additional fan      |
| • with supplementary fan / maximum                       | 350 mA                                                                               |
| • note                                                   | from the switched 24 V supply, black AS-Interface cable, with additional fan         |
| Design of the drive/storage medium                       | 1 SINAMICS Micro Memory Card (MMC), 1 SIMATIC Memory Card (SD card)                  |
| Product expansion / for storage medium                   | Memory card slot, optional                                                           |
| Released active power / Rated value                      | 1.5 kW                                                                               |
| Active power output (hp) / rated value                   | 1.5 hp                                                                               |
| Input current / rated value                              | 3.8 A                                                                                |
| Output current / rated value                             | 4.3 A                                                                                |
| Number of fixed frequencies / parameterizable            | 6                                                                                    |
| <b>I/O interfaces</b>                                    |                                                                                      |
| Digital inputs                                           | 4                                                                                    |
| Analog inputs                                            | 1                                                                                    |
| PTC/KTY interface                                        | 1 input, connectable sensors: PTC, KTY or Thermo-Click, connection via Power Modules |
| Type of control / of mechanical holding brake / of motor | Connection via Power Modules                                                         |
| <b>Integrated bus interface</b>                          |                                                                                      |
| Protocol / for bus system                                | USS                                                                                  |
| Design of the interface / for bus system                 | RS232                                                                                |
| <b>Tool interfaces</b>                                   |                                                                                      |
| Design of the interface                                  | Intelligent Operator Panel IOP                                                       |
| Design of the interface                                  |                                                                                      |
| • for PC interface                                       | USB                                                                                  |
| • for bus system                                         | AS-Interface                                                                         |
| <b>Open-loop/closed-loop control techniques</b>          |                                                                                      |
| • linear or quadratic parameterization                   | Yes                                                                                  |
| • flux current control                                   | Yes                                                                                  |
| Output current / max.                                    | 8.6 A                                                                                |

|                                                            |                                                                                |
|------------------------------------------------------------|--------------------------------------------------------------------------------|
| Efficiency                                                 | 0.95                                                                           |
| Design of electrical connection / of motor                 | HAN Q8 (socket)                                                                |
| Design of electrical connection / of RS 232 interface      | Connection to RS232 interface cable via the optical interface of the converter |
| Design of the electrical connection / of the USB interface | Connection to USB interface cable via the optical interface of the converter   |
| Design of electrical connection / at line supply conductor | HAN Q4/2 (connector)                                                           |
| Connectable cable cross-section                            |                                                                                |
| • for mains supply line                                    | 1.5 ... 6 mm <sup>2</sup>                                                      |
| • for motor supply line                                    | 1 ... 4 mm <sup>2</sup>                                                        |
| Cable length / for motor                                   |                                                                                |
| • shielded                                                 | 15 m                                                                           |
| • unshielded                                               | 30 m                                                                           |
| Protection class                                           | IP65/UL Type 3                                                                 |
| Dimensions / width                                         | 445 mm                                                                         |
| Dimensions / height                                        | 210 mm                                                                         |
| Dimensions / depth                                         | 125 mm                                                                         |
| Frame size                                                 | FSA                                                                            |
| Weight, approx.                                            | 6.7 kg                                                                         |
| General technical data of power electronics                |                                                                                |
| Input voltage / number of phases                           | 3                                                                              |
| Line voltage                                               | 380 ... 500 V                                                                  |
| Line voltage / relative positive tolerance                 | 10 %                                                                           |
| Line voltage / relative negative tolerance                 | -10 %                                                                          |
| Mains demand for short-circuit voltage                     | No restriction                                                                 |
| Electrical input frequency                                 | 47 ... 63 Hz                                                                   |
| • for U/f control                                          | 0 ... 650 Hz                                                                   |
| Pulse frequency                                            | 4 kHz                                                                          |
| Power factor                                               | 0.7 ... 0.85                                                                   |
| Output voltage in percent / referred to input voltage      | 0 ... 87 %                                                                     |

|                                                                               |                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of duty cycle duration / with high overload                              | Average max. rated output current during a cycle time of 300 s; 1.5 × rated output current (i.e. 150% overload) for 60 s with a cycle time of 300 s; 2 × rated output current (i.e. 200 % overload) for 3 s with a cycle time of 300 s |
| Type of cooling                                                               | Convection                                                                                                                                                                                                                             |
| Installation altitude at height above sea level without power reduction, max. | 1000 m                                                                                                                                                                                                                                 |
| Short-time withstand current (SCCR)                                           | 40 kA                                                                                                                                                                                                                                  |
| Protection function                                                           |                                                                                                                                                                                                                                        |
| • undervoltage protection                                                     | Yes                                                                                                                                                                                                                                    |
| • overvoltage protection                                                      | Yes                                                                                                                                                                                                                                    |
| • overload protection                                                         | Yes                                                                                                                                                                                                                                    |
| • ground-fault protection                                                     | Yes                                                                                                                                                                                                                                    |
| • short-circuit protection                                                    | Yes                                                                                                                                                                                                                                    |
| • stall protection                                                            | Yes                                                                                                                                                                                                                                    |
| • for blocked rotor                                                           | Yes                                                                                                                                                                                                                                    |
| Protection function / for motor                                               |                                                                                                                                                                                                                                        |
| • temperature monitoring                                                      | Yes                                                                                                                                                                                                                                    |
| • temperature monitoring                                                      | Yes                                                                                                                                                                                                                                    |
| <b>Mechanical data</b>                                                        |                                                                                                                                                                                                                                        |
| Vibration frequency                                                           |                                                                                                                                                                                                                                        |
| • with constant acceleration                                                  |                                                                                                                                                                                                                                        |
| • during transport                                                            | 9 ... 200 Hz                                                                                                                                                                                                                           |
| • in accordance with EN 60068-2-6                                             | Constant acceleration = 9.81 m/s <sup>2</sup> (1 × g)                                                                                                                                                                                  |
| • during operation                                                            | 9 ... 200 Hz                                                                                                                                                                                                                           |
| • in accordance with EN 60068-2-6                                             | Constant acceleration = 19.62 m/s <sup>2</sup> (2 × g)                                                                                                                                                                                 |
| • with constant deflection                                                    |                                                                                                                                                                                                                                        |
| • during transport                                                            | 5 ... 9 Hz                                                                                                                                                                                                                             |
| • in accordance with EN 60068-2-6                                             | Constant deflection 3.1 mm                                                                                                                                                                                                             |
| • during operation                                                            | 2 ... 9 Hz                                                                                                                                                                                                                             |
| • in accordance with EN 60068-2-6                                             | Constant deflection 7 mm                                                                                                                                                                                                               |
| Shock acceleration                                                            |                                                                                                                                                                                                                                        |
| • during transport                                                            |                                                                                                                                                                                                                                        |
| • in accordance with EN 60068-2-27                                            | 147.15 m/s <sup>2</sup>                                                                                                                                                                                                                |
| • note                                                                        | (15 × g)/11 ms, 3 shocks in each axis and direction                                                                                                                                                                                    |

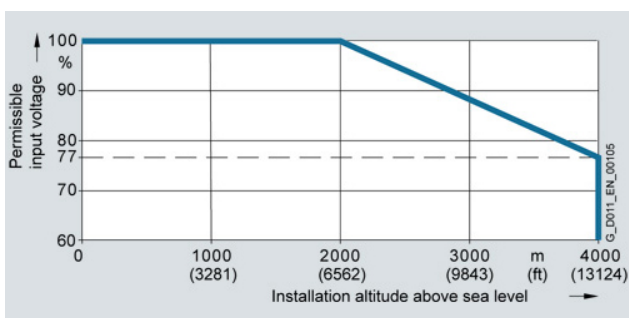
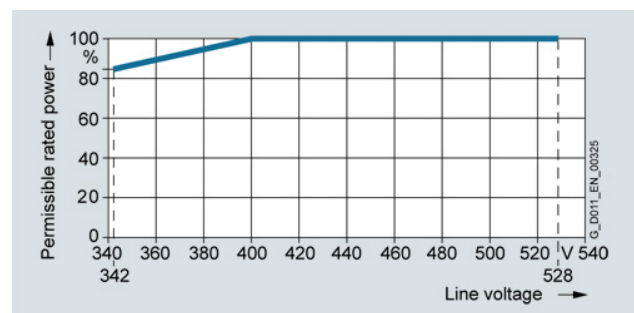
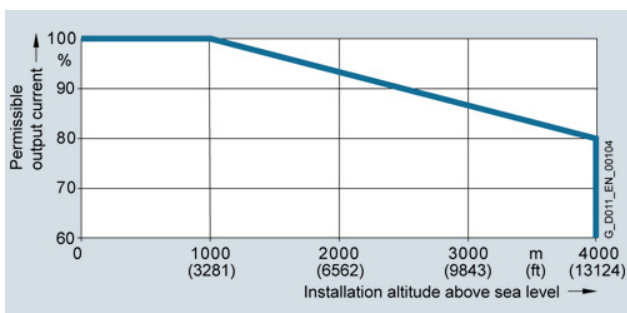
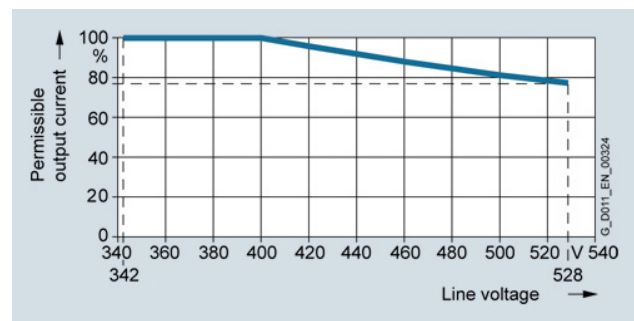
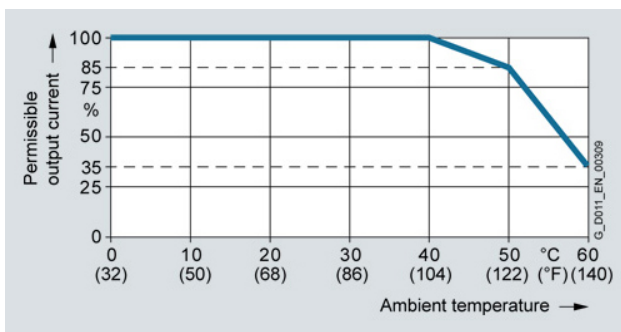
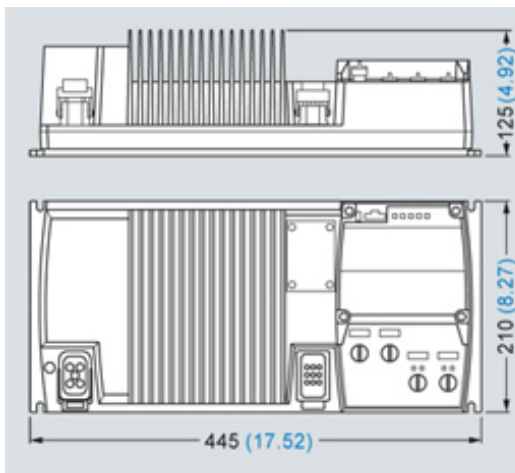
|                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>during operation           <ul style="list-style-type: none"> <li>in accordance with EN 60068-2-27</li> <li>note</li> </ul> </li> </ul>                                                                                                                                                                                           | 147.15 m/s <sup>2</sup><br>(15 x g)/11 ms, 3 shocks in each axis and direction                                                                                                                                                                                  |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                 |
| mounting position                                                                                                                                                                                                                                                                                                                                                        | Horizontal wall mounting and "flat" mounting                                                                                                                                                                                                                    |
| Equipment protection class                                                                                                                                                                                                                                                                                                                                               | Class III (PELV)                                                                                                                                                                                                                                                |
| Touch protection                                                                                                                                                                                                                                                                                                                                                         | Class I (with protective conductor system)                                                                                                                                                                                                                      |
| Ambient temperature, during <ul style="list-style-type: none"> <li>storage</li> <li>transport</li> <li>operation</li> </ul>                                                                                                                                                                                                                                              | -40 ... +70 °C<br>-40 ... +70 °C<br>-10 ... +40 °C                                                                                                                                                                                                              |
| Ambient temperature (°F) <ul style="list-style-type: none"> <li>during storage               <ul style="list-style-type: none"> <li>maximum</li> </ul> </li> <li>during transport               <ul style="list-style-type: none"> <li>maximum</li> </ul> </li> <li>during operation               <ul style="list-style-type: none"> <li>maximum</li> </ul> </li> </ul> | -40 ... +158 °F<br>According to EN 60068-2-1<br>-40 ... +158 °F<br>According to EN 60068-2-1<br>14 ... 104 °F<br>According to EN 60068-2-2                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                          | Class 3C2 to EN 60721-3-3                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                          | 2 according to EN 61800-5-1                                                                                                                                                                                                                                     |
| <b>Standards</b>                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                 |
| Approval, accord. to                                                                                                                                                                                                                                                                                                                                                     | UL 508C (UL list number E121068), CE, c-Tick                                                                                                                                                                                                                    |
| Verification of suitability / for CE marking                                                                                                                                                                                                                                                                                                                             | Low-voltage directive 2006/95/EC                                                                                                                                                                                                                                |
| Standard                                                                                                                                                                                                                                                                                                                                                                 | The EMC product standard EN 61800-3 does not apply directly to a frequency inverter but to a PDS (Power Drive System), which comprises the complete circuitry, motor and cables in addition to the inverter. The frequency inverters on their own do not genera |
| Product component                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                                                             |
| Design of line filter                                                                                                                                                                                                                                                                                                                                                    | Class A                                                                                                                                                                                                                                                         |
| <b>Weitere Informationen</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                 |

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letzte Änderung:

Jul 14, 2014