SIEMENS

Data sheet for SINAMICS \$120 control unit CU310-2 PN

Article No.: 6SL3040-1LA01-0AA0

Client order no. : Order no. : Offer no. : Remarks :





| Inputs / outputs | | Electrical data | |
|--|---|--|---|
| Digital inputs | | Electronics power supply | DC 24 V (20.4 28.8 V) |
| Number | 11 | Max. power consumption 5) | 0.8 A |
| Voltage | -3 30 V | Power loss, max. | 20 W |
| Low level | -3 5 V | Protection, max. | 20 A |
| High level | 15 30 V | Communication | |
| Power consumption at 24 V DC, typ. | 3.5 mA | Communication | PROFINET, EtherNet/IP |
| Delay time L \rightarrow H, typ. 1) | 50 μs | | |
| Delay time H→L, typ. 1) | 150 μs | On-board enc | oder interface |
| Digital I/O | | Encoder evaluation | optional incremental encoder TTL/HTL or encoder SSI without incremental signals |
| Number of bidirectional, not potential-free inputs ³⁾ | 8 | max. load current at 24 V encoder supply | 0.35 A |
| As input | | max. load current at 5 V encoder supply | 0.35 A |
| Voltage | -3 30 V | Encoder frequency, max. | 300 kHz |
| Low level | -3 5 V | SSI baudrate | 100 1,000 kBaud |
| High level | 15 30 V | SSI absolute position resolution | 30 bit |
| Power consumption at 24 V DC, typ. | | Line length, max. | |
| Delay time L→H 1) | 5 μs | TTL encoder ⁶⁾ | 100 m (328.08 ft) |
| Delay time H→L 1) | 50 μs | HTL encoder unipolar signal | 100 m (328.04 ft) |
| As output | | HTL encoder bipolar signal | 300 m (984.25 ft) |
| Continuous short-circuit proof | Yes | SSI encoder | 100 m (328.08 ft) |
| Voltage | DC 24 V | | |
| Load current per digital output, max. | 500 mA | Installation altitude | 2,000 m (6,561.68 ft) |
| Delay time L→H, typ./ max. | 150 μs / 400 μs | Ambient temperature during | 2,000 III (0,301.00 It) |
| Delay time H→L, typ./ max. | 75 μs / 100 μs | Operation | 0 55 °C (32 131 °F) |
| Analog inputs | | | |
| Number 4) | 1 | Storage | -25 55 °C (-13 131 °F) |
| As voltage input | | Transport | -40 70 °C (-40 158 °F) |
| Voltage | -10 10 V | Relative humidity during | |
| Resolution | 12 bit + sign (with respect to the maximum range that can be resolved - 11 +11 V) | Transport, max. | 95 % at 40 °C (104 °F) |
| R_i | >100 kΩ | | |
| As current input | | | |
| Voltage | -20 20 mA | | |
| Resolution | 11 bit + sign (with respect to -22 22 mA); Maximum range that can be resolved -44 +44 mA) | | |

>250 Ω



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STRINGS .

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| Connections | | | |
|------------------------------|------------------|--|--|
| PE connection | 1 (M5 screw) | | |
| Supply voltage, max. | 2.5 mm² (AWG 14) | | |
| Digital inputs, max. | 1.5 mm² (AWG 16) | | |
| Digital inputs/outputs, max. | 1.5 mm² (AWG 16) | | |
| DRIVE-CLIQ | 1 | | |
| PROFINET | 2 | | |
| PROFIBUS | | | |
| RS232 | | | |
| Ethernet | 1 | | |
| Temperature sensor | 1 | | |
| 24 V | 1 | | |

| Measuring sockets | 3 | | |
|---------------------------|----------------------------------|--|--|
| Number of slots | | | |
| Flash card | 1 | | |
| Mechanical data | | | |
| Net weight | 0.95 kg (2.09 lb) | | |
| Dimensions | | | |
| Width | 73.0 mm (2.87 in) | | |
| Height | 191.0 mm (7.52 in) | | |
| Depth | 75.0 mm (2.95 in) | | |
| Standards | | | |
| Compliance with standards | CE, KC, cULus, EAC, C-Tick (RCM) | | |

¹⁾ The specified delay times refer to the hardware. The actual reaction time depends on the time slot in which the digital input or output is processed.

³⁾ can be parameterized - as DI - as DO

⁴⁾The analog input can be switched between current and voltage input.

 $^{^{5)}}$ without taking into account digital outputs. Option slot extension, DRIVE-CLiQ supply and Power Module PM340

⁶⁾ Signal cables twisted in pairs and shielded