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# Data sheet for SINAMICS S110 Control Unit CU305 DP



Figure similar

**Article No. :** 6SL3040-0JA00-0AA0

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

Item no. :
Consignment no. :
Project :

## Inputs / outputs

| | |
|---|---|
| **Digital inputs** | |
| Number | 5 |
| Voltage | -3 ... 30 V |
| Low level | -3 ... 5 V |
| High level | 15 ... 30 V |
| Power consumption at 24 V DC, typ. | 6.0 mA |
| Delay time L→H, typ. [1] | 15 µs |
| Delay time H→L, typ. [1] | 55 µs |
| **Fail-safe digital inputs** | |
| Number [2] | 3 |
| **Digital I/O** | |
| Number [3] | 4 |
| **As input** | |
| Voltage | -3 ... 30 V |
| Low level | -3 ... 5 V |
| High level | 15 ... 30 V |
| Power consumption at 24 V DC, typ. | 6.0 mA |
| Delay time L→H [1] | 5 µs |
| Delay time H→L [1] | 5 µs |
| **As output** | |
| Continuous short-circuit proof | Yes |
| Voltage | DC 24 V |
| Load current per digital output, max. | 100 mA |
| Delay time, approx. | 150 µs |
| **As fail-safe digital output** | |
| Number | 1 |
| **Analog inputs** | |
| Number | 1 |
| Voltage | -10 ... 10 V |
| Resolution | 12 bit + sign |
| Internal resistor | 15 kOhm |

## Electrical data

| | |
|---|---|
| Power supply voltage | DC 24 V -15 % + 20 % |
| Max. power consumption [5] | 0.8 A |
| Power loss, max. | 20 W |
| Protection, max. | 20 A |

## Communication

| | |
|---|---|
| Communication | Profibus DP |

## On-board encoder interface

| | |
|---|---|
| Encoder evaluation | optional incremental encoder TTL/HTL or encoder SSI without incremental signals |
| Current consumption at 24 V DC | 0.35 A |
| Current consumption at 5 V DC | 0.35 A |
| Encoder frequency, max. | 500 kHz |
| SSI baudrate | 100 ... 250 kBaud<br>The baud rate depends on cable length |
| SSI absolute position resolution | 30 bit |
| **Line length, max.** | |
| TTL encoder [6] | 100 m (328.08 ft) |
| HTL encoder unipolar signal | 100 m (328.08 ft) |
| HTL encoder bipolar signal | 300 m (984.25 ft) |
| SSI encoder | 100 m (328.08 ft) |

## Environmental conditions

| | |
|---|---|
| Installation altitude | 1,000 m (3,280.84 ft) |
| **Ambient temperature during** | |
| Operation | 0 ... 55 °C (32 ... 131 °F) |
| Storage | -25 ... 70 °C (-13 ... 158 °F) |
| Transport | -40 ... 70 °C (-40 ... 158 °F) |
| **Relative humidity during** | |
| Transport, max. | 95 % at 40 °C (104 °F) |

## Connections

| | |
|---|---|
| PE connection | 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) |

## Mechanical data

| | |
|---|---|
| Net weight | 0.95 kg (2.09 lb) |
| **Dimensions** | |
| Width | 73.0 mm (2.87 in) |
| Height | 183.2 mm (7.21 in) |
| Depth | 55.0 mm (2.17 in) |

## Standards

| | |
|---|---|
| Compliance with standards | cULus |

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens

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Figure similar

[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.
[2] 3 parameterizable, fail-safe digital inputs (floating), or alternatively 6 parameterizable digital inputs (floating)
[3] Parameterizable as DI or DO
[5] Power requirement 0.8 A for CU305 incl. 350 mA for HTL encoder + 0.5 A for PM340
[6] TTL only bipolar signals; for bipolar signals, the signal lines must be twisted in pairs and shielded