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Data sheet for SINAMICS S120 control unit CU310-2 PN


Figure similar

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

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

Item no. :
Consignment no. :
Project :

Inputs / outputs

Digital inputs	
Number	11
Voltage	-3 ... 30 V
Low level	-3 ... 5 V
High level	15 ... 30 V
Power consumption at 24 V DC, typ.	3.5 mA
Delay time L→H, typ. [1]	50 µs
Delay time H→L, typ. [1]	150 µs
Digital I/O	
Number of bidirectional, not potential-free inputs [3]	8
As input	
Voltage	-3 ... 30 V
Low level	-3 ... 5 V
High level	15 ... 30 V
Power consumption at 24 V DC, typ.	3.5 mA
Delay time L→H [1]	5 µs
Delay time H→L [1]	50 µs
As output	
Continuous short-circuit proof	Yes
Voltage	DC 24 V
Load current per digital output, max.	500 mA
Delay time L→H, typ./ max.	150 µs / 400 µs
Delay time H→L, typ./ max.	75 µs / 100 µs
Analog inputs	
Number [4]	1
As voltage input	
Voltage	-10 ... 10 V
Resolution	12 bit + sign (with respect to the maximum range that can be resolved -11 ... +11 V)
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)
R_i	>250 Ω

Electrical data

Electronics power supply	DC 24 V (20.4 ... 28.8 V)
Max. power consumption [5]	0.8 A
Power loss, max.	20 W
Protection, max.	20 A

Communication

Communication	PROFINET, EtherNet/IP

On-board encoder interface

Encoder evaluation	optional incremental encoder TTL/HTL or encoder SSI without incremental signals
max. load current at 24 V encoder supply	0.35 A
max. load current at 5 V encoder supply	0.35 A
Encoder frequency, max.	300 kHz
SSI baudrate	100 ... 1,000 kBaud
SSI absolute position resolution	30 bit
Line length, max.	
TTL encoder [6]	100 m (328.08 ft)
HTL encoder unipolar signal	100 m (328.04 ft)
HTL encoder bipolar signal	300 m (984.25 ft)
SSI encoder	100 m (328.08 ft)

Environmental conditions

Installation altitude	2,000 m (6,561.68 ft)
Ambient temperature during	
Operation	0 ... 55 °C (32 ... 131 °F)
Storage	-25 ... 55 °C (-13 ... 131 °F)
Transport	-40 ... 70 °C (-40 ... 158 °F)
Relative humidity during	
Transport, max.	95 % at 40 °C (104 °F)

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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