

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	nication
Power consumption at 24 V DC, typ.	3.5 mA	Communication	PROFINET, EtherNet/IP
Delay time L→H, typ. 1)	50 μs		,
Delay time H→L, typ. 1)	150 μs	On-board encoder interface	
Digital I/O		Encoder evaluation	optional incremental encoder TTL/HT or encoder SSI without incremental
Number of bidirectional, not potential-free inputs ³⁾	8	max. load current at 24 V encoder	signals 0.35 A
As input		supply	0.33 A
Voltage	-3 30 V	max. load current at 5 V encoder supply	0.35 A
Low level	-3 5 V	Encoder frequency, max.	300 kHz
High level	15 30 V	SSI baudrate	100 1,000 kBaud
Power consumption at 24 V DC, typ.	3.5 mA	SSI absolute position resolution	30 bit
Delay time L→H 1)	5 μs	Line length, max.	
Delay time H→L 1)	50 μs	TTL encoder ⁶⁾	100 m (328.08 ft)
As output		HTL encoder unipolar signal	100 m (328.04 ft)
Continuous short-circuit proof	Yes	HTL encoder bipolar signal	300 m (984.25 ft)
Voltage	DC 24 V	SSI encoder	100 m (328.08 ft)
Load current per digital output,	F00 A	Environmental conditions	
max.	500 mA	Installation altitude	2,000 m (6,561.68 ft)
Delay time L \rightarrow H, typ./ max.	150 μs / 400 μs	Ambient temperature during	
Delay time $H\rightarrow L$, typ./ max.	75 μs / 100 μs	Operation	0 55 °C (32 131 °F)
Analog inputs		Storage	-25 55 °C (-13 131 °F)
Number ⁴⁾	1	Transport	-40 70 °C (-40 158 °F)
As voltage input		Relative humidity during	
Voltage	-10 10 V	Transport, max.	95 % at 40 °C (104 °F)
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		



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Connections			
PE connection	1 (M5 screw)		
Supply voltage, max.	2.5 mm ² (AWG 14)		
Digital inputs, max.	1.5 mm ² (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