## **SIEMENS**

## Data sheet for SINAMICS S120 control unit CU310-2 PN

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

Client order no. : Order no. : Offer no. : Remarks : Item no. : Consignment no. : Project :



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→H, typ. 1)	50 μs		1
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.	3.5 mA	Line length, max.	
Delay time $L\rightarrow H^{1)}$	5 μs	TTL encoder <sup>6)</sup>	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		tal conditions
Delay time L→H, typ./ max.	150 μs / 400 μs	Installation altitude	2,000 m (6,561.68 ft)
Delay time H→L, typ./ max.		Ambient temperature during	2 5505 (22 424.05)
Analog inputs		Operation	0 55 °C (32 131 °F)
Number <sup>4)</sup>	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 <sub>i</sub>	>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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Connections		
PE connection	1 (M5 screw)	
Supply voltage, max.	2.5 mm <sup>2</sup> (AWG 14)	
Digital inputs, max.	1.5 mm <sup>2</sup> (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)			

<sup>1)</sup> 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.

<sup>3)</sup> can be parameterized - as DI - as DO

<sup>&</sup>lt;sup>4)</sup>The analog input can be switched between current and voltage input.

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

<sup>&</sup>lt;sup>6)</sup>Signal cables twisted in pairs and shielded