

SIEMENS

Product data sheet

6AU1410-2AD00-0AA0



Fig. similar

SIMOTION DRIVE-BASED CONTROL UNIT D410-2 DP/PN;
PROGRAMMABLE SINGLE-AXIS MOTION CONTROLLER WITH MULTI-AXIS OPTION;
INTERFACES: 5 DI, 8 DI/DO, 3 F-DI, 1 F-DO, 1 AI, 1 ENCODER, 1 DRIVE-CLIQ, 1 PROFIBUS, 2 PROFINET PORTS, 1 ETHERNET NOTE: REQUIRES AT LEAST SCOUT/FIRMWARE V4.3 SP1 HF3

product brand name	SIMOTION
Product-type designation	D410-2 DP/PN
Version of the motion control system	Single-axis system with multi-axis option
PLC and motion control performance	
Maximum number of axes	8
Minimum PROFIBUS cycle clock	1 ms
Minimum PROFINET send cycle clock	0.25 ms
Minimum servo cycle clock	0.5 ms
Minimum interpolator cycle clock	0.5 ms
Minimum servo cycle clock	1 ms when using the TO axis and the integrated closed-loop drive control
Integrated drive control	
Maximum number of axes for integrated drive control	
• servo	1
• vector	1

• V/f	1
• note	Alternative control modes; drive control based on SINAMICS S120 CU310-2, firmware version V4.x

Memory

RAM (work memory)	48 Mbyte
Additional RAM work memory for Java applications	20 Mbyte
RAM disk (load memory)	31 Mbyte
Retentive memory	108 kbyte
Persistent memory (user data on CF)	300 Mbyte

Communications

Interfaces	1
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• PROFIBUS	Equidistant and isochronous; Can be configured as master or slave
Interfaces	1
• PROFINET	1 interface with 2 ports: - supports PROFINET IO with IRT and RT - can be configured as PROFINET IO controller and/or device

General technical data

Fan	Integrated
Supply voltage	
• rated value	24 V
Making current, typ.	3 A
Power loss, typ.	20 W
Ambient temperature	
• during long-term storage	-25 ... +55 °C
• during transport	-40 ... +70 °C
• during operating	0 ... 55 °C
• note	Maximum installation altitude 4000 m above sea level. Above an altitude of 2000 m, the maximum ambient temperature decreases by 7 °C per 1000 m.
Relative humidity / without condensation	
• during operating phase	5 ... 95 %
Air pressure	620 ... 1060 hPa

Protection class IP	IP20
Dimensions	190.7 mm
Dimensions	73 mm
Depth	74.4 mm
Weight, approx.	830 g
Digital inputs	
Number of digital inputs	11
• note	of which: 5 DI and 3 F-DI (= 6 DI)
DC input voltage	
• rated value	24 V
• for signal "1"	15 ... 30 V
• for signal "0"	-3 ... +5 V
Electrical isolation	Yes
Current consumption for "1" signal level, typ.	6 mA
Input delay time for	
• signal "0" → "1", typ.	50 µs
• signal "1" → "0", typ.	150 µs
Digital inputs/outputs	
Number of digital inputs/outputs	8
Parameterization possibility of the digital I/Os	can be parameterized - as DI - as DO - as probe input (max. 8) - as cam output (max. 8)
If used as an input	
DC input voltage	
• rated value	24 V
• for signal "1"	15 ... 30 V
• for signal "0"	-3 ... +5 V
Electrical isolation	No
Current consumption for "1" signal level, typ.	5 mA
Input delay time for	
• signal "0" → "1", typ.	5 µs
• signal "1" → "0", typ.	50 µs
Measuring input	
• reproducibility	5 µs
• note	typical value

• resolution	1 μ s
If used as an output	
Load voltage	
• rated value	24 V
• minimum	20.4 ... 28.8 V
Electrical isolation	No
Current carrying capacity for each output, max.	500 mA
Leakage current, max.	2 mA
Output delay for	
• signal "0" $\rightarrow$ "1", typ.	150 μ s
• signal "0" $\rightarrow$ "1", max.	400 μ s
• signal "1" $\rightarrow$ "0", typ.	75 μ s
• signal "1" $\rightarrow$ "0", max.	100 μ s
• note	Data for Vcc = 24 V; load 48 Ohm; "1" = 90 % VOut, "0" = 10 % VOut
Cam output	125 μ s
• reproducibility	typical value
Cam output	125 μ s
• resolution	typical value
Switching frequency of the outputs for	
• resistive load, max.	100 Hz
• inductive load, max.	0.5 Hz
• lamp load, max.	10 Hz
Short-circuit protection	Yes
Digital outputs	
Number of digital outputs	1
Parameterization possibility of the digital outputs	can be parameterized as F-DO or DO
Load voltage / rated value	24 V
Load voltage	20.4 ... 28.8 V
Electrical isolation	Yes
Current carrying capacity for each output, max.	500 mA
Leakage current, max.	2 mA
Output delay for	
• signal "0" $\rightarrow$ "1", max.	400 μ s

• signal "0" → "1", typ. • signal "1" → "0", max. • signal "1" → "0", typ. • note	150 µs 100 µs 75 µs Data for V _{cc} = 24 V; load 48 Ohm; "1" = 90 % V _{Out} , "0" = 10 % V _{Out}
Short-circuit protection	Yes
Analog inputs	
Number of analog inputs	1
If used as an voltage input	
Input voltage	-10 ... +10 V
Resolution	12 bit
• note	+sign
Input resistance (R _i)	100 kΩ
If used as an current input	
Input current	-20 ... +20 mA
Resolution	11 bit
• Note	+ sign
Input resistance (R _i)	250 Ω
Encoder interface	optional incremental encoder TTL, incremental encoder HTL or absolute encoder SSI without incremental signals TTL/HTL
Encoder supply for	
• 24 VDC	0.35 A
• 5 VDC	0.35 A
Limiting frequency, max.	500 kHz
SSI baud rate	100 ... 1000 kBd
Resolution of absolute position SSI	30 bit
Cable length for / TTL incremental encoder, max.	100 m
Cable length for / HTL incremental encoder for	
• unipolar signals, max.	100 m
• bipolar signals, max.	300 m
• note	TTL only bipolar signals; for bipolar signals, the signal lines must be twisted in pairs and shielded
Cable length for / SSI absolute encoder, max.	100 m
PTC/KTY interface	KTY84-130 or PTC

Backup of non-volatile data • of retentive data • of real-time clock, min. • note	unlimited buffer duration 5 d Data buffering is maintenance-free
Approvals • USA • Canada • Australia	cULus cULus C-Tick

Further information[Information and download center for Industry Automation and Drives](#)[Technical documentation \(Motion Control\)](#)[Industry Mall \(online ordering system\)](#)[Service & Support \(FAQs, manuals, operating instructions, certificates, characteristics, ...\)](#)**last change:**

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