SIEMENS

Data sheet 6AU1410-0AA00-0AA0

SPARE PART SIMOTION DRIVE-BASED CONTROL UNIT D410 DP; PROGRAMMABLE SINGLE-AXIS MOTION CONTROLLER; INTERFACES: 4 DI, 4 DI/DO, 1 EP, 1 TEMP, 1 ENCODER, 1 DRIVE-CLIQ, 1 PROFIBUS

Figure similar

Article number	
Product brand name	SIMOTION
Product type designation	D410 DP
Version of the motion control system	Single-axis system

PLC and motion control performance	
Number of axes / maximum	1
Maximum number of axes / note	The value indicated refers to real axes; virtual axes can be used additionally.
Minimum PROFIBUS cycle clock	2 ms
Minimum interpolator cycle clock	2 ms
Minimum servo cycle clock	2 ms

Integrated drive control	
Maximum number of axes for integrated drive control	
• servo	1
• vector	1
• V/f	1

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• note	Alternative control modes; drive control based on SINAMICS S120 CU310, firmware version V2.x

Memory	
RAM (work memory)	38 Mbyte
Additional RAM work memory for Java applications	20 Mbyte
RAM disk (load memory)	23 Mbyte
Retentive memory	9 kbyte
Persistent memory (user data on CF)	300 Mbyte

Communication	
Interfaces	
• DRIVE-CLiQ	1
• PROFIBUS	1
— note	Equidistant and isochronous; Can be configured as master or slave

General technical data	
Fan	Integrated
DC supply voltage	
• rated value	24 V
• minimum	20.4 V
• maximum	28.8 V
Consumed current / typical	800 mA
• Note	with no load on inputs/outputs, no 24 V supply via DRIVE-CLiQ and PROFIBUS interface
Making current, typ.	3 A
Power loss [W] / typical	20 W
Ambient temperature, during	
• storage	-40 ... +70 °C
• transport	-40 ... +70 °C
• operation	0 ... 55 °C
— note	Maximum 5000 m (16405 ft) above sea level. Above an altitude of 2000 m (6562 ft), the max. ambient temperature decreases by 7 °C (12.6 °F) every 1000 m (3281 ft).
Relative humidity	
• during operation	5 ... 95 %
• without condensation, tested acc. to IEC 60068-2-38	Wert fehlt
Air pressure	700 ... 1 060 hPa
Degree of protection	IP20
Height	183.2 mm
Width	73 mm
Depth	89.6 mm
Net weight	990 g

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Digital inputs	
Number of digital inputs	4
DC input voltage	
• rated value	24 V
• for signal "1"	15 ... 30 V
• for signal "0"	-3 ... +5 V
Electrical isolation	Yes
• note	Yes, in groups of 4
Current consumption for "1" signal level, typ.	10 mA
Input delay time for	
• signal "0" → "1", typ.	50 µs
• signal "1" → "0", typ.	150 µs

Digital inputs/outputs	
Number of digital I/Os	4
Parameterization possibility of the digital I/Os	parameterizable as DI, as DO, as measuring input input (max. 3), as output of output cam (max. 4)

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.	10 mA
Input delay time for DI 9 to DI 11 for	
• signal "0" → "1", typ.	5 µs
• signal "1" → "0", typ.	50 µs
— note	can also be used as probe inputs
Input delay time for DI 8 for	
• signal "0" → "1", typ.	50 µs
• signal "1" → "0", typ.	100 µs
Measuring input / reproducibility	5 µs

If used as an output	
Load voltage	
• rated value	24 V
• minimum	20.4 V
• maximum	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" → "1", typ.	150 µs

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• signal "0" → "1", max.	400 µs
• signal "1" → "0", typ.	75 µs
• signal "1" → "0", max.	100 µs
— note	Data for Vcc = 24 V; load 48 Ohm; "1" = 90 % VOut, "0" = 10 % VOut
Cam output	
• reproducibility	200 µs
— note	typ. 200 µs for 3 ms bus/servo cycle; typ. 300 µs for 6 ms bus/servo cycle
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

Onboard encoder interface

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 ... 250
Resolution of absolute position SSI	30 bit
Cable length for	
• TTL incremental encoder, max.	100 m
• 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
• SSI absolute encoder, max.	100 m

Additional technical data

Design of the sensor / to detect the ambient temperature / connectable	KTY84-130 or PTC
Back-up of non-volatile data	
• of retentive data	unlimited buffer duration
• of real-time clock, min.	5 d
• note	Data buffering is maintenance-free
Approvals	
• USA	cULus
• Canada	cULus

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