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Data sheet 6AU1445-0AA00-0AA1

SPARE PART SIMOTION DRIVE-BASED CONTROL UNIT D445-1; PROGRAMMABLE MOTION CONTROLLER; HIGH PERFORMANCE; INTERFACES: 8 DI, 8 DI/DO, 6 DRIVE-CLIQ, 2 PROFIBUS, 2 ETHERNET, 2 USB, 1 OPTION SLOT; INCL. DUAL FAN / BATTERY MODULE AND BATTERY (REQUIRES >=V4.1 SP2 HF3/4)

Article number	
product brandname	SIMOTION
Product type designation	D445-1
Performance class for motion control system	HIGH Performance
Version of the motion control system	Multiple-axis system

PLC and motion control performance	
Number of axes / maximum	64
Minimum PROFIBUS cycle clock	1 ms
Minimum PROFINET send cycle clock	0.5 ms
Minimum interpolator cycle clock	0.5 ms
Minimum servo cycle clock	0.5 ms

Integrated drive control	
Maximum number of axes for integrated drive control	
• servo	6
• vector	4
• V/f	8
• note	Alternative control modes; drive control based on SINAMICS S120 CU320, firmware version V2.x

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Memory	
RAM (work memory)	96 Mbyte
Additional RAM work memory for Java applications	20 Mbyte
RAM disk (load memory)	59 Mbyte
Retentive memory	364 kbyte
Persistent memory (user data on CF)	300 Mbyte

Communication	
Interfaces	
• DRIVE-CLiQ	6
• USB	2
• Industrial Ethernet	2
• PROFIBUS	2
— note	Equidistant and isochronous; Can be configured as master or slave
• PROFINET	0
— note	Optional via CBE30; 1 interface with 4 ports; supports PROFINET IO with IRT and RT; configurable as a PROFINET IO controller and/or device

General technical data	
Fan	Double fan/battery module included in scope of delivery
DC supply voltage	
• rated value	24 V
• minimum	20.4 V
• maximum	28.8 V
Consumed current / typical	1 000 mA
• Note	with no load on inputs/outputs, no 24 V supply via DRIVE-CLiQ and PROFIBUS interface
Making current, typ.	5 A
Power loss [W] / typical	24 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	380 mm

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Width	50 mm
Depth	270 mm
• Note	When the spacer is removed 230 mm (9.05 in) deep
Net weight	3 100 g

Digital inputs	
Number of digital inputs	8
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	8
Parameterization possibility of the digital I/Os	parameterizable as DI, as DO, as measuring input input (max. 6), as output of output cam (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.	10 mA
Input delay time for	
• signal "0" → "1", typ.	5 µs
• signal "1" → "0", typ.	50 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	125 µs
Switching frequency of the outputs for	
• resistive load, max.	100 Hz
• inductive load, max.	2 Hz
• lamp load, max.	11 Hz
Short-circuit protection	Yes

Additional technical data

Back-up of non-volatile data	
• of retentive data	at least 5 days
• of real-time clock, min.	5 d
• note	longer buffer duration of the retentive data and the real-time clock using a battery inserted in the double fan/battery module
Approvals	
• USA	cULus
• Canada	cULus
• Australia	RCM (formerly C-Tick)

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