SIEMENS

Data sheet

6AU1435-0AA00-0AA1

SPARE PART SIMOTION DRIVE-BASED CONTROL UNIT D435; PROGRAMMABLE MOTION CONTROLLER; STANDARD PERFORMANCE; INTERFACES: 8 DI, 8 DI/DO, 4 DRIVE-CLIQ, 2 PROFIBUS, 2 ETHERNET, 2 USB, 1 OPTION SLOT



Article number

product brandname	SIMOTION
Product type designation	D435
Performance class for motion control system	STANDARD Performance
Version of the motion control system	Multiple-axis system

PLC and motion control performance	
Number of axes / maximum	32
Minimum PROFIBUS cycle clock	1 ms
Minimum PROFINET send cycle clock	0.5 ms
Minimum interpolator cycle clock	1 ms
Minimum servo cycle clock	1 ms

Integrated drive control

Maximum number of axes for integrated drive control

- servo vector
- V/f
- Alternative control modes; drive control based on SINAMICS • note S120 CU320, firmware version V2.x

6

4

8

Memory	
RAM (work memory)	48 Mbyte
Additional RAM work memory for Java applications	20 Mbyte
RAM disk (load memory)	29 Mbyte
Retentive memory	364 kbyte
Persistent memory (user data on CF)	300 Mbyte

Communication	
Interfaces	
DRIVE-CLiQ	4
• 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	Optional fan/battery module (single fan)
DC supply voltage	
• rated value	24 V
• minimum	20.4 V
• maximum	28.8 V
Consumed current / typical	600 mA
• Note	with no load on inputs/outputs, no 24 V supply via DRIVE-CLiQ and PROFIBUS interface
Making current, typ.	6 A
Power loss [W] / typical	15 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 $^{\circ}$ C (12.6 $^{\circ}$ F) every 1000 m (3281 ft).
Relative humidity	
 during operation 	5 95 %
Air pressure	700 1 060 hPa
Degree of protection	IP20
Height	380 mm
Width	50 mm
Depth	270 mm

Digital inputs	• Note	When the spacer is removed 230 mm (9.05 in) deep
Number of digital inputs 8	Net weight	2 700 g
Octoport voltage	Digital inputs	
• rated value • for signal "1" • for signal "0" • for signal "0" • for signal "0" • signal "0" • note • note • note • note • rated value • note • signal "0" - "1", typ. • signal "1" - "0", typ. • signal "0" - "1",	Number of digital inputs	8
• for signal "1" • for signal "0" • for signal "0" • for signal "0" • for signal "0" • note • note • note • note Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. Digital inputs/outputs Number of digital I/Os Parameterization possibility of the digital I/Os Parameterization possibility of parameterization p	DC input voltage	
• for signal "0" -3 +5 V Electrical isolation 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 Parameterization possibility of the digital I/Os 8 Parameterization possibility of the digital I/Os 8 Parameterization possibility of the digital I/Os 8 Parameterization possibility of the digital I/Os 9 Fused as an input 10 input voltage 9 • rated value 9 • for signal "1" 15 30 V 9 • for signal "0" 3 +5 V 9 Electrical isolation No 10 mA Current consumption for "1" signal level, typ. 10 mA Input delay time for 9 • signal "0" → "1", typ. 5 µs • signal "1" → "0", typ. 50 µs Measuring input / reproducibility 5 µs If used as an output Load voltage 9 • rated value 924 V 9 • minimum 920 4 V 9 • minimum 920 4 V 9 • minimum 920 4 V 9 • maximum 920 8 8 V 9 Electrical isolation No 10 mA Electrical isolation No 10 mA Current carrying capacity for each output, max. 900 mA Leakage current, max. 900 mA Leakage current, max. 900 mA • signal "0" → "1", typ. 150 µs	• rated value	24 V
Electrical isolation • note Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. Digital inputs/outputs Number of digital I/Os Parameterization possibility of the digital I/Os Parameterization possibility of the digital I/Os Parameterization possibility of the digital I/Os parameterizable as DI, as DO, as measuring input input (max. 6), as output of output carn (max. 8) If used as an input DC input voltage • rated value • for signal "0" • for signal "0" • for signal "0" • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility If used as an output Load voltage • rated value • rated	• for signal "1"	15 30 V
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Current consumption for "1" signal level, typ. Input delay time for signal "0" → "1", typ. signal "1" → "0", typ. 150 μs Parameterization possibility of the digital I/Os Parameterization possibility of output cam (max. 8) If used as an input Possibility of output cam (max. 8) If used as an input Possibility of output cam (max. 8) If used as an output Load voltage Parameterization possibility It used as an output Load voltage Parameterization possibility Parameterization poss	Electrical isolation	Yes
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• signal "0" → "1", typ. • signal "1" → "0", typ. 150 μs Digital inputs/outputs Number of digital I/Os 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 • for signal "1" • for signal "0" • for signal "0" • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility If used as an output Load voltage • rated value • minimum 20.4 V • maximum Electrical isolation No Current carrying capacity for each output, max. 2 mA Output delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	Current consumption for "1" signal level, typ.	10 mA
• signal "1" → "0", typ. Digital inputs/outputs Number of digital I/Os Parameterization possibility of the digital I/Os parameterization 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 • for signal "1" • for signal "0" • for signal "0" • for signal "0" • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "1" → "0", typ. S μs If used as an output Load voltage • rated value • rated value • rated value • minimum 20.4 V • minimum 20.4 V • maximum Electrical isolation No Current carrying capacity for each output, max. Description is publication Voluput delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	Input delay time for	
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Number of digital I/Os 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 • for signal "1" • for signal "0" • for signal "0" • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility If used as an output Load voltage • rated value • maximum 20.4 V • minimum • maximum 28.8 V Electrical isolation No Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", typ. 150 µs • signal "0" → "1", typ.	• signal "1" → "0", typ.	150 µs
Number of digital I/Os 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 • for signal "1" • for signal "0" • for signal "0" • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility 5 µs If used as an output Load voltage • rated value • minimum • maximum 20.4 V • minimum • maximum 28.8 V Electrical isolation No Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", typ. 150 µs • signal "0" → "1", typ.	Digital inputs/outputs	
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• rated value • for signal "1" • for signal "0" • for signal "0" • for signal "0" • 3 +5 V Electrical isolation Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. So μs Measuring input / reproducibility If used as an output Load voltage • rated value • maximum 20.4 V • maximum 28.8 V Electrical isolation No Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	<u>`</u>	
• for signal "1"	DC input voltage	
• for signal "0" Electrical isolation No Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. • signal "1" → "0", typ. Measuring input / reproducibility 5 µs fused as an output Load voltage • rated value • minimum • maximum Electrical isolation Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "0" → "1", max. 400 µs	• rated value	24 V
Electrical isolation Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility 5 μs If used as an output Load voltage • rated value • minimum 20.4 V • maximum 28.8 V Electrical isolation No Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "0" → "1", max.	● for signal "1"	15 30 V
Current consumption for "1" signal level, typ. Input delay time for • signal "0" → "1", typ. • signal "1" → "0", typ. Measuring input / reproducibility If used as an output Load voltage • rated value • minimum • maximum 28.8 V Electrical isolation Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", typ. • signal "0" → "1", max. 10 mA	● for signal "0"	-3 +5 V
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Load voltage 24 V • rated value 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. • signal "0" → "1", max. 400 μs	● signal "1" → "0", typ.	50 μs
Load voltage • rated value • minimum • maximum 20.4 V Electrical isolation No Current carrying capacity for each output, max. Leakage current, max. Output delay for • signal "0" → "1", typ. • signal "0" → "1", max.	Measuring input / reproducibility	5 μs
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Electrical isolation Current carrying capacity for each output, max. Leakage current, max. 2 mA Output delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	• minimum	20.4 V
Current carrying capacity for each output, max. 500 mA Leakage current, max. 2 mA Output delay for • signal "0" → "1", typ. 150 μs • signal "0" → "1", max. 400 μs	• maximum	28.8 V
Leakage current, max. 2 mA Output delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	Electrical isolation	No
Output delay for • signal "0" → "1", typ. • signal "0" → "1", max. 400 μs	Current carrying capacity for each output, max.	500 mA
• signal "0" → "1", typ. 150 μs • signal "0" → "1", max. 400 μs	Leakage current, max.	2 mA
● signal "0" → "1", max. 400 μs	Output delay for	
	• signal "0" → "1", typ.	150 µs
● signal "1" → "0", typ. 75 μs	• 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 fan/battery module
Approvals	
• USA	cULus
Canada	cULus
Australia	RCM (formerly C-Tick)