

SIEMENS

Product data sheet

6AU1425-0AA00-0AA0



Fig. similar

SIMOTION DRIVE-BASED CONTROL UNIT D425;
PROGRAMMABLE MOTION CONTROLLER;
BASIC PERFORMANCE;
INTERFACES: 8 DI, 8 DI/DO,
4 DRIVE-CLIQ, 2 PROFIBUS, 2 ETHERNET,
2 USB, 1 OPTION SLOT

product brand name	SIMOTION
Product-type designation	D425
Performance class for motion control system	BASIC Performance
Version of the motion control system	Multiple-axis system
PLC and motion control performance	
Maximum number of axes	16
Minimum PROFIBUS cycle clock	2 ms
Minimum PROFINET send cycle clock	0.5 ms
Minimum servo cycle clock	2 ms
Minimum interpolator cycle clock	2 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

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
Communications	
Interfaces	4
Interfaces	2
Interfaces	2
Interfaces	2
• PROFIBUS	Equidistant and isochronous; Can be configured as master or slave
Interfaces	0
• PROFINET	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)
Supply voltage	
• rated value	24 V
Making current, typ.	6 A
Power loss, typ.	15 W
Ambient temperature	
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
• during operating	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 (44.6 °F) every 1000 m (3281 ft).
Relative humidity / without condensation	
• during operating phase	5 ... 95 %
Air pressure	700 ... 1060 hPa

Protection class IP	IP20
Dimensions	380 mm
Dimensions	50 mm
Depth	270 mm
• remark	when the spacer is removed 230 mm deep
Weight, approx.	2600 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 inputs/outputs	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	
<ul style="list-style-type: none"> • rated value • minimum 	24 V 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	
<ul style="list-style-type: none"> • signal "0" → "1", typ. • signal "0" → "1", max. • signal "1" → "0", typ. • signal "1" → "0", max. • note 	150 µs 400 µs 75 µs 100 µs Data for Vcc = 24 V; load 48 Ohm; "1" = 90 % VOut, "0" = 10 % VOut
Cam output	125 µs
Switching frequency of the outputs for	
<ul style="list-style-type: none"> • resistive load, max. • inductive load, max. • lamp load, max. 	100 Hz 2 Hz 11 Hz
Short-circuit protection	Yes
If used as an current input	
Backup of non-volatile data	
<ul style="list-style-type: none"> • of real-time clock, min. • note 	5 d longer buffer duration of the retentive data and the real-time clock using a battery inserted in the fan/battery module
Approvals	
<ul style="list-style-type: none"> • 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 \(FAQs, manuals, operating instructions, certificates, ...\)](#)

last change:

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