JAT JENAER ANTRIEBSTECHNIK

Servo Amplifier ECOviva 416

Integrated safety that perfectly fits to your application



EtherCAT

CANopen

Integrated safety

Safety function STO according to EN 61800-5-2, further safety functions under preparation

Easy commissioning

Intuitive parameterization and commissioning via new JAT engineering software ECOmotionSuite

Simple installation

Single cable solution motor/brake/encoder

EMC shielding tabs directly on the connectors

High connectivity

Field bus interfaces: EtherCAT, CANopen

PROFINET under preparation

Cost-efficient solution

Implemented sequences replace smaller controllers

Diverse drive applications

Numerous technology functions for application-specific drive solutions, no time-consuming programming

Power supply:

230 (85 ... 265) V_{AC} 1- oder 3-phase

Control of:

3-phase brushless synchronous motors or synchronous linear motors

Up to 6 encoder interfaces:

Incremental encoder: RS422, SINCOS

Absolute value encoder: BISS® or HIPERFACE® interface

Encoder output for master-slave operation

Concurrent processing of multiple feedback signals

Fast current control

approx. 62,5 µs

Interpolating operation via EtherCAT or CANopen

I/O:

6 digital inputs per axis

4 digital outputs per axis

2 high speed capture inputs (RS422) for fast event capturing

Integrated mains filter

Dot Matrix OLED Display

Optional fan unit

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→ Technical data

1-phase AC supply		
Rated supply voltage	V_{AC}	230
Mains frequency	Hz	50 ... 60
Rated installed load	kVA	3,5
Rated power loss	W	156
Rated output voltage (AC)	V_{AC}	205

3-phase AC supply		
Rated supply voltage	V_{AC}	230
Mains frequency	Hz	50 ... 60
Rated installed load	kVA	4,8
Rated power loss	W	166
Rated output voltage (AC)	V_{AC}	215

Data of the power stage		
Peak output current (3~)	A_{eff}	16
Max. phase current	A_{DC}	22
Rated output current (3~)	A_{eff}	8
Rated output current (1~)	A_{eff}	8
Max. DC link voltage	V_{DC}	365
Rated DC link voltage	V_{DC}	325
Overvoltage trip	V_{DC}	400
Max. output power	W	8000
Rated output power (1~)	W	1844*
Rated output power (3~)	W	3834*
DC link capacity (AC-supply)	µF	1540
Regenerated capacity (AC-supply)	Ws	42
* Sum of both axes		

Standards	
Ambient conditions according to EN 61800-2	
Applied standards for CE cert.	EMC according to EN IEC 61800-3, Electrical safety according to EN 61800-5-1, RoHS according to EN IEC 63000 Functional safety according to EN 61800-5-2
Standards UL	UL61800-5-1 (under prep.)

Logic Supply		
Logic supply	V	24 ±10%
Input current (maximum) @ 24 V_{DC}	A	0,4*
*) without external loads, e.g. I/O or encoder or brake		

Digital inputs/outputs		
6 digital control signal inputs per axis	V	LOW 0...5, HIGH 15...30
	mA	5 (@ 24 V)
4 digital control signal outputs per axis	V	24
	A	0,5
2 fast capture inputs		RS422
	ns	40

Safety function STO
2 STO inputs per axis
1 STO feedback signal (output) per axis
SIL-3 (according to EN 61800-5-2); PL e (according to ISO EN 13849-1)

Dimensions and weight		
Dimensions W x H x D	mm	72,3 x 274,5 x 195,9
Weight	kg	3,24

Ambient conditions		
Class	Operation: 3K3 according to EN 61800-2 Storage, transport: 1K4 according to EN 61800-2	
Storage temperature	°C	-25 ... +55
Ambient temperature during operation	°C	+5 ... +40
Degree of humidity, non-condensing	% rel. h.	85 (maximum)
Installation altitude above sea level	m	< 2000
Mounting position	The technical data refer to a vertical position.	
Protection class	IP20	
Pollution degree	2	
Cooling	Sufficient air circulation must be ensured in a closed control cabinet.	

Basic functions

- Digital current, speed and position control with position, speed and torque limits
- Digital filtering functions to dampen vibrations in the overall system
- Parameterizable jerk filters optimize the motion profiles and improve the machine's longevity
- Short circuit, voltage, temperature, encoder, following error and i^2t monitoring
- Intelligent holding brake control with automatic voltage reduction
- Evaluation of limit switches and reference sensor, multiple homing modes
- Status display and configuration of fieldbus node address and baud rate via OLED display and 2 keys on the device's front side
- Connector for external ballast resistor

ECOmotionSuite - The new JAT Engineering Software

- Setting of all parameters via an intuitive web-based interface that can be run on all common devices
- Individually configurable dashboards, all required functionalities at a glance
- Wizard-supported commissioning
- Oscilloscope function to dynamically display selected operating values
- Firmware update