mechapro®

LAM DDS6 series

CANopen Digital Microstep Stepper Motor Controller

20V=...90V=, 0.2A$_{RMS}$...10A$_{RMS}$ (14.1A$_{peak}$)

The DDS6 series drives are realized in full digital technology and are suitable for the driving of two phase stepper motors.

They are equipped with the CANopen fieldbus and can control the motor in torque, speed and position with high accuracy.

In addition to the digital and analog I/O they provide with inputs for incremental and absolute encoders. The integrated protections and the isolation of the fieldbus and I/O ensure high reliability. The detailed diagnostics information and the permanent storage of the errors facilitate the detection and resolution of problems.

The family comprises 15 different models with differing functionality and power.

The modell series at a glance:

Power Supply / Motor Current 24Vdc Auxillary Power Supply	CANopen DS301 Rev. 3.0 and IEC 61800-7-201/301 (DSP402)		
	Digital I/O	Digital & Analog I/O ABZ Encoder	Digital & Analog I/O ABZ Encoder Absolute Encoder (SSI)
20..50 Vdc / 0.2-1.4 Arms	DDS6041	DDS6241	DDS6441
20..50 Vdc / 1.0-4.5 Arms	DDS6044	DDS6244	DDS6444
20..50 Vdc / 2.0-10 Arms	DDS6048	DDS6248	DDS6448
24..90 Vdc / 1.0-4.5 Arms	DDS6074	DDS6274	DDS6474
24..90 Vdc / 2.0-10 Arms	DDS6078	DDS6278	DDS6478

The DDS6 series drives state of the art technology that is the result of more than 28 years of experience. The motor is vector controlled that makes the concept of step division obsolete. The STEPLESS operation mode ensures high speed and maximum torque use. With a motor with integrated encoder it is possible to use the stepper technology also in applications that require torque control. Ultimately, the fieldbus in standard CANopen ensures an efficient and quick integration into modern automation systems.

The compact size and the quick DIN rail mounting give additional advantages that, together with the competitive cost, make the DD6 series drives the best choice for any modern application.

Features:

- CANopen profiles CiA301 and CiA402
- Fully digital vector control
- Stepless technology with configurable nominal step size, operation of the motor in microstep
- Up to 6 digital inputs and 3 digital outputs
- Optional: 2 analog inputs & outputs +/-10V
- Optional: Encoder input A, B, Index differential
- Optional: SSI absolute Encoder input
- Position control and speed control
- Optional: Closed-loop control, torque control
- Separate I/O supply 20-35V= (as required)

Models	Description	Value			Unit
		Min.	Typ.	Max.	
DDS6x41	Power supply voltage	20		50	V=
	Motor phase current (effective Value)	0.2		01. Apr	Arms
DDS6x44	Power supply voltage	20		50	V=
	Motor phase current (effective Value)	1		4.5	Arms
DDS6x48	Power supply voltage	20		50	V=
	Motor phase current (effective Value)	2		10	Arms
DDS6x74	Power supply voltage	24		90	V=
	Motor phase current (effective Value)	1		4.5	Arms
DDS6x78	Power supply voltage	24		90	V=
	Motor phase current (effective Value)	2		10	Arms
All models	Supply voltage logic (optional)	20	24	35	Vdc
	Digital input voltage range	3		28	Vdc
	Digital input supply current	3	4	8	mA
	Digital output voltage range	1		30	Vdc
	Digital output current range			80	mA
	Analog input voltage range	-10.0		+10.0	Vdc
	Analog input impedance		47		kOhm
	Supply voltage Encoder (output)	5.0	5.2	5.4	Vdc
	Supply current Encoder			100	mA
	Encoder input compatibility	Line Driver, TTL/CMOS, Open Collector			
	Chopper frequency		20		kHz
	Protections / Diagnostics / Alarms	Over-/Under voltage, Short circuit, Overheating, Break phase			
	Mechanical Specifications				
	Height	100			mm
	Depth	122			mm
DDS6x41, DDS6x44	Width	23			mm
DDS6x48, DDS6x74, DDS6x78		35			
DDS6x41, DDS6x44	Weight	130			g
DDS6x48, DDS6x74, DDS6x78		220			

Also available:
Series DDS1 with Step&Direction I/O Interface
Series DDS7xxP with ProfiNet Interface
Series DDS7xxE with EtherCAT Interface
Series DDS7xxM with Modbus TCP/IP Interface
Accessories:
Programming interface UDP30
Programming software OmniAutomation (free download at www.mechapro.de/en/consulting-service/)