



With the DDS1 series, LAM Technologies redefines the stepper motor drive with pulse control enhancing it with new characteristics and functionalities.

It is now possible to eliminate the loss of steps, adjust the motor torque, handle the limit switches, control the motor with +/10V reference and have many other features to use the stepper motor in applications so far precluded.

The DDS1 series is fully digitally controlled and ensures a smooth and precise rotation of the motor.

The family comprises in 10 models differing in functionality and power.

#### Family Development

Power Supply / Motor Current	5 Digital Inputs, 2 Digital Outputs 1 Analog Input	8 Digital Inputs, 3 Digital Outputs 1 Analog Input 1 Encoder Input A, B, I
24Vdc Auxiliary Power Supply		
20..50Vdc / 0.2..1.4Arms	<b>DDS1141</b>	<b>DDS1241</b>
20..50Vdc / 1.0..4.5Arms	<b>DDS1144</b>	<b>DDS1244</b>
20..50Vdc / 2.0..10.0Arms	<b>DDS1148</b>	<b>DDS1248</b>
24..90Vdc / 1.0..4.5Arms	<b>DDS1174</b>	<b>DDS1274</b>
24..90Vdc / 2.0..10.0Arms	<b>DDS1178</b>	<b>DDS1278</b>

The old concept of step and resolution has been abandoned in favor of the STEPLESS drive technology, that allows the user to freely define the relationship between the pulses applied and the position of the motor, bypassing the strict division imposed by the older drives.

Pairing the drive with a motor with integrated encoder eliminates the loss of steps and improves the system efficiency. Additionally, the motor torque can finally be utilized 100% as it is no longer necessary to reserve a torque margin to prevent the loss of steps.

In simpler applications, it is possible to command the motor in START/STOP, with speeds selectable by digital I/Os or analog input, with total control of the acceleration and deceleration ramps.

The DDS1 series drives define a new level of performance and functionality without penalizing the costs. They are compact and ensure easy and quick DIN rail mounting.



#### LAM Technologies

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## Main technical Data:

Moels	Description	Value			Units	
		Min	Typ	Max		
<b>DDS1x41</b>	Power supply voltage	20		50	Vdc	
	Motor phase current	0.2		1.4	Arms	
<b>DDS1x44</b>	Power supply voltage	20		50	Vdc	
	Motor phase current	1		4.5	Arms	
<b>DDS1x48</b>	Power supply voltage	20		50	Vdc	
	Motor phase current	2		10	Arms	
<b>DDS1x74</b>	Power supply voltage	24		90	Vdc	
	Motor phase current	1		4.5	Arms	
<b>DDS1x78</b>	Power supply voltage	24		90	Vdc	
	Motor phase current	2		10	Arms	
All models	Auxiliary Power Supply Voltage	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 operating voltage	-10		+10	Vdc	
	Analog inputs impedance		47		KΩ	
	Supply voltage for Encoder	5.0	5.2	5.4	Vdc	
	Supply current for Encoder			100	mA	
	Encoder Input Compatibility	Line Driver, TTL/CMOS, Open Collector				
	PWM frequency		20		KHz	
	Mechanical Specifications					
		Height		100		mm
	Depth		122		mm	
<b>DDS1x41, DDS1x44</b>	Width		23		mm	
	Weight		150		g	
<b>DDS1xx8</b>	Width		35		mm	
	Weight		230		g	

x = any character, also nothing

Connectors (CN4 only available on DDS12xx series):

