LAM Technologies electronic equipment



Programmable Drives 18Vdc(16Vac)...240Vdc(120Vac) 0.3Arms...10Arms (14.1Apk)



The DS30 series drives have a built-in flexible motion controller able to perform accurate motor control in speed and position.

The programming is quick and simple through the development software tool. The program is built using functional blocks as variable assignment blocks, timing block, conditional jump blocks, etc. Particularly powerful is the mathematical block able to execute additions, subtractions, multiplications and divisions and which allows to realize even complex applications.

The connection with the external devices is through 4 inputs and 2 digital outputs each one optocoupled, independently PNP or NPN or line driver usable. Two +/-10V analog inputs and one 0-10Vdc analog output complete the available interface signals.

To assure the maximum flexibility, the I/O are not specialized and through the programming it is possible to use them as per application requirements. For example, it is possible to use the digital inputs to command the start and the stop of a cycle, the execution of the homing procedure, the selection of the target position, of the speed, etc. The digital outputs can be used to indicate the reaching of a position, the intervention of a protection, etc. The analog inputs, for example, can be used to change dynamically the speed, to execute a position adjustment, to change the timing, etc. The analog output can be used instead to command proportional actuators, to supply a speed reference to an inverter, to command an analog instrument, proportional valve, etc.

- ✓ <u>Up to 3000rpm at 1/128 step/rev</u>
- <u>Mathematical functions at <u>32bit</u>
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- Speed or position control
- Independent acceleration and deceleration ramps
- ✓ Absolute and relative positioning
- ✓ 4 digital and two <u>+/-10V analog inputs</u>
- 2 digital and one 0-10V analog ouputs
- 100KHz high speed counter
- <u>AC power supply models available</u>
- Optocoupled and differential I/O, independently NPN or PNP usable
- Inputs from <u>3Vdc up to 28Vdc</u>
- Line driving supported
- ✓ 11 bit analog inputs resolution
- 32bit quote registers from -2,147,483,638 to +2,147,483,647
- Resonance damping
- ✓ Automatic current reduction
- ✓ High efficiency power mosfet stage
- Complete diagnostics with univocal indication for each anomaly
- ✓ Over/under voltage protection, short circuit protection (cross phase, ground and positive supply)
- Overheating protection
- Break motor phase diagnostics
- Compact size
- Easy DIN rail installation
- Removable terminal block connector
- ✓ IP20-compliant construction
- ✓ Cost-effective

The drive is designed to be quickly and easily installed on DIN rail. The connection to the motor, with the control signal and the power supply is through colored and removable terminal blocks.

The connection to the programming and diagnostic port of the drive is through the UDP30 interface (see below), which is connected to the PC by the USB port. The interface ensures also the electrical insulation between the PC and the drive.





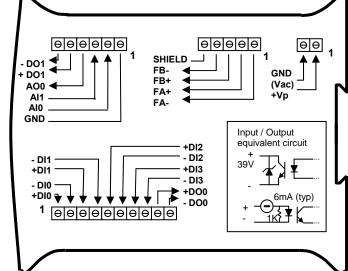
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Symbol	Description			Value			Unit
-				Min	Тур	Max	
Vp	Power supply voltage	(for DC models)	DS3041(A)	18		50	Vdc
Vac	Power supply voltage	Power supply voltage (for AC models)		16		36	Vac
lf	Motor phase current (0.3		1.4	Arms
Vp	Power supply voltage (for DC models)			20		50	Vdc
Vac			DS3044(A)	18		36	Vac
lf	Motor phase current (1		4	Arms
Vp	Power supply voltage			20		50	Vdc
Vac	Power supply voltage		DS3048(A)	18		36	Vac
lf	Motor phase current (rms)		3		8	Arms
Vp	Power supply voltage	(for DC models)		24		90	Vdc
Vac	Power supply voltage	(for AC models)	DS3073(A)	20		65	Vac
lf	Motor phase current (rms)		0.8		3	Arms
Vp	Power supply voltage	(for DC models)		24		90	Vdc
Vac	Power supply voltage		DS3076(A)	20		65	Vac
lf	Motor phase current (2		6	Arms
Vp	Power supply voltage			24		90	Vdc
Vac	Power supply voltage	(for AC models)	DS3078(A)	20		65	Vac
lf	Motor phase current (rms)		4		10	Arms
Vp	Power supply voltage	(for DC models)		45		160	Vdc
Vac	Power supply voltage	(for AC models)	DS3084(A)	35		115	Vac
lf	Motor phase current (· /		2		4	Arms
Vp	Power supply voltage			45		160	Vdc
Vac	Power supply voltage		DS3087(A)	35		115	Vac
lf	Motor phase current (rms)			4		8.5	Arms
Vp	Power supply voltage	····· · /	DS3098	45		240	Vdc
lf	Motor phase current (rms)			4		10	Arms
Vdi	Digital input voltage range			3		28	Vdc
ldi	Digital input supply current			4	6	8	mA
Vdo	Digital output voltage range			1		30	Vdc
Ido	Digital output volage range			•		50	mA
Vai	Analog input voltage range			-10		10	Vdc
Rai	Analog input impedance				47		KΩ
Vao	Analog output voltage range			0		10	Vdc
lao	Analog output current range					10	mA
Prt	Protections / Diagnostics / alarms Over/Under v			voltage, Shor	t circuit, Ove	rheating, Bre	eak phase
Mpr	Quote range (1/128 step)			3,638 / +2,147		1/128s	
Psp	User program memor	y (functional blocks)			250		
Clp	Mathematical calculat	ion resolution			32		bit
		Mechanica	I Specifications				
FDh	Height				100.4		mm
FDI	Depth				119.0		mm
FDw	Width	DS3041(A), DS3044, DS3073			17.5 (22.7)		
		DS3044A, DS3073A, DS3048(A), DS3076(A),			35.0		mm
		DS3078(A), DS3084(A), DS3087(A), DS3098					
FDnw		DS3041(A), DS3044(A), DS3073(A)			185 (220)		g
	Weight DS3048(A), DS3076(A), DS3078(A), DS3084(A), DS3087(A), DS3098			A),	295 (350)		

Note: The A suffix (ex. DS3076**A**) identifies the AC power supply versions

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