

HPD, LVD, SLVD & TWIN

cost-effective digital servo drives

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HPD, LVD, SLVD & TWIN Series Servo Drives

Economy with flexibility

Based on a rugged, reliable design and well proven in a wide range of industrial environments, Parker's HPD, LVD and SLVD series brushless servo drives provide an extremely cost-effective motion control solution. Used in conjunction with Parker's MB and SMB servo motors, they offer a high-performance package for applications with power requirements from 350W to over 30kW.

LVD & SLVD Series

The LVD and SLVD drive range includes a choice of 9 models with continuous current ratings from 1.25A to 15A and power ratings from 350W to 4.5kW. All 9 models in the range operate directly from 230V AC mains supplies, and use a separate 24V DC supply for

the control circuits. All are equipped with a CANbus connector in addition to the built-in serial interface. Functional capabilities include torque and velocity control, encoder following and cam profile generation.

The LVD Series caters for powers up to 4.5kW with continuous current ratings from 1.25A to 15A. I/O facilities include 8 digital inputs and 6 digital outputs, with two analogue inputs and outputs. RS422 encoder simulation is available up to 4096 pulses/rev.

The SLVD Series is ideal in applications requiring powers up to 2.2kW with restricted I/O requirements, and it offers the benefit of an extremely compact package. With continuous current ratings up to 7A, it provides an economic solution especially in situations where space is limited.





Parker MB Series Servo Motor

HPD, HPD-N & TWIN Series

HPD and HPD-N Series drives are designed for direct operation from 3-phase AC supplies between 90V and 480V. The smaller HPD drive delivers continuous currents up to 25A with rated powers up to 12.5kW. The four drives in the larger HPD-N range have continuous current ratings from 25A to 67A, the largest unit delivering up to 33kW and a peak current of 100A. Used with the Parker MB205-90 motor, this allows peak torques in excess of 200Nm to be produced. An outstanding feature of this unit is the ability to deliver peak current for up to 30 seconds.

Parker SLVD Series Servo Drive

The TWIN servo drive is functionally equivalent to two SLVD drives in a single housing, and it offers an attractive and cost-effective solution particularly in multiaxis installations. Any unit drives two independent servo motors at up to 4.2kW each. The drive is available with continuous current ratings of 2, 5 or 8 amps per axis, giving total rated output powers of 2, 5.2 and 8.4kW respectively. All TWIN drives operate directly from 380-480V 3-phase mains supplies and include a CANbus interface as standard. A separate 24V DC supply is used for the control logic. Either resolver or encoder feedback can be accommodated.



LVD & SLVD Drives

- Rated current up to 15A
- Rated power up to 4.5kW
- 230V AC operation
- Built-in CANbus interface



LVD/SLVD Technical Specifications

Model		SLVD	SLVD	SLVD	SLVD	LVD	LVD	LVD	LVD	LVD
		1	2	5	7	1	2	5	10	15
Power supply voltage	VAC	230±10% 230±10%								
Auxiliary supply voltage	VDC	24 24								
Rated output current	А	1.25	2.5	5	7	1.25	2.5	5	10	15
Peak current output	А	2.5	5	10	14	2.5	5	10	20	30
Rated power	kW	0.35	0.7	1.5	2.2	0.35	0.7	1.5	3	4.5
RS422 encoder simulation	Pulse/rev	4-1024 28-4096								
24V digital inputs		2+2			8					
24V-100mA PNP digital outputs		2 6								
Voltage free contact digital outputs			-				1			
Analogue inputs (15 bit-10 bit)		2 2								
Serial line		RS422/485 RS-422/485								
Digital Bus		CANbus				CANbus				

Dimensions



SLVD





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HPD & HPD-N Drives

- Peak current up to 100A for 30s
- Rated power up to 33kW
- 3-phase 90-480V AC operation



HPD/HPD-N Technical Specifications

Model		HPD	HPD	HPD	HPD	HPD	HPD-N	HPD-N	HPD-N	HPD-N
		2	5	8	16	24	25	35	45	67
Power supply voltage	VAC	3 phase 90 - 480			3 phase 90-460					
Auxiliary supply voltage	V	24DC (optional)			220AC					
Rated output current	А	2	5	8	16	25	25	35	45	67
Peak current output	A	4 4Sec	10 4Sec	16 4Sec	32 4Sec	50 4Sec	50 4Sec	53 30Sec	67 30Sec	100 30Sec
Rated power	kW	1	2.5	4.2	8.3	12.5	12.5	18	23	33
Braking resistor power	W	120 240			400					
RS422 encoder simulation	Pulse/rev	128-16384			128-16384					
24V digital inputs		8			8					
24V-100mA PNP digital outputs		6				6				
Voltage free contact digital outputs		1				1				
Analogue inputs (15 bit-10 bit)		2				2				
Analogue outputs		2				2				
Serial link		RS422/485			RS-422/485					

Dimensions





TWIN Drives

- Two independent axes
- Rated current up to 2 x 8A
- Rated power up to 2 x 4.2kW
- 3-phase 380-480V AC operation



TWIN Technical Specifications

Model		TWIN2	TWIN5	TWIN8				
Rated output current	Α	2 + 2	5 + 5	8 + 8				
Peak output current (4s)	Α	4 + 4	10 + 10	16 + 16				
Rated output power	kW	1 + 1	2.6 + 2.6	4.2 + 4.2				
Power stage dissipation	W	50	120	175				
AC mains input	VAC	3-phase 380-480 ±10%						
Logic supply input	VDC	24 ±10%, 2A						
Control electronics dissipation	W	21						
Mean power dump dissipation	W	120						
Operating temperature range	°C	0 - 45						
Switching frequency	kHz	8						
Protection class		IP20						
Digital inputs		2						
Fieldbus support		CANopen, SBC-CAN (ProfiBus-DP& DeviceNet via bridge)						

Dimensions





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Typical Applications







MB & SMB Series Brushless Servo Motors

Parker manufactures a range of servo motors designed to provide optimum performance when used in conjunction with LVD, SLVD and HPD drives. All motors in the range are three-phase designs using high quality neodymium-iron-boron magnets and are equipped with resolver feedback.

MB Series motors cover an exceptionally wide power range - there is a choice of 20 models in five frame sizes from 56 to 205mm. Stall torques range from 0.2Nm to 90Nm with peak torque ratings up to 400Nm. These motors have a conventional finned housing and the larger frame sizes are available with either a shaftdriven or motorised cooling fan. MB56 and MB70 motors are 4-pole designs, the larger sizes have 8 poles.

Available options depend on frame size and include:

- Static holding brake
- Choice of flange type and shaft diameter
- Up to 5 alternative windings
- Standard, medium and high inertia versions
- IP64 or IP65 protection
- 'EEx-e' increased safety rating
- Shaft-driven or motorised cooling

SMB Series motors are 'salient pole' designs that offer a very high specific torque - up to 30% higher than motors using conventional technology. SMB motors are available in four frame sizes from 60 to 142mm, and even the smallest SMB60 motor has a stall torque rating of 1.4Nm. They have a smooth surface finish to minimize retained contamination and are manufactured with a recessed mounting flange to simplify the installation of a gearbox. SMB motors all have 8 poles. Options available with SMB motors include the following (depending on model):

- Static holding brake
- Choice of flange type
- Up to 3 alternative windings
- Choice of shaft diameter with optional keyway
- IP64 or IP65 protection



SMB Series 60, 82, 100 & 142mm flanges Torque range 1.4 - 15Nm



MB56 Series 56mm flange Torque range 0.2 - 0.6Nm



MB70 Series 70mm flange Torque range 0.5 - 2Nm

MB105 Series 96, 105 & 116mm flanges Torque range 2.2 - 8Nm

MB145 Series 145mm flange Torque range 4.5 - 28Nm

MB205 Series 205mm flange Torque range 28 - 90Nm

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