

Genesis® LiveDrive®



Motion Redefined

High torque direct-drive actuators for
high throughput robots and machines

Features

- 100 N·m peak torque
- IP67 housing
- High precision encoders with Hiperface DSL®, Hiperface®, Endat 2.2, BiSS-C® protocol
- Compatible with industrial servo drives
- One cable technology (with Hiperface DSL®)
- Integrated holding brake

Benefits

- Reduce machine footprint
- Increase throughput
- Simplify machine design
- Create a maintenance-free system
- Eliminate gearbox components

Specifications

LDD Series

Models	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
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Size

Parameter	Unit	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Outer Diameter	mm	177.5	177.5	177.5	177.5	177.5	177.5	177.5	177.5
Length	mm	124	124	124	124	124	124	124	124
Mass	kg	11.5	11.5	11.5	11.6	11.0	11.0	11.0	10.9
Rotor Inertia	kg·m ²	0.0099	0.0099	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098

Performance

Parameter	Unit	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Nominal Voltage	VAC	200-230	200-230	200-230	200-230	200-230	200-230	200-230	200-230
Rated Power	W	272	272	272	272	272	272	272	272
Rated Torque	N·m	26	26	26	26	26	26	26	26
Peak Torque	N·m	100	100	100	100	100	100	100	100
Rated Current	A	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Peak Current	A	25	25	25	25	25	25	25	25
Rated speed	rpm	100	100	100	100	100	100	100	100
Maximum speed	rpm	710	710	710	710	710	710	710	710
Rated angular acceleration	rad/s ²	2600	2600	2600	2600	2600	2600	2600	2600
Max. Winding Temp	°C	105	105	105	105	105	105	105	105

Electrical

Parameter	Unit	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Phase Resistance ¹	mΩ	1760	1760	1760	1760	1760	1760	1760	1760
Torque Constant ²	N·m/A	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Back EMF Constant ²	V/krpm	283	283	283	283	283	283	283	283

Mechanical

Parameter	Unit	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Allowable thrust load ^{3,4}	N	720	720	720	720	720	720	720	720
Allowable radial load ³	N	1350	1350	1350	1350	1350	1350	1350	1350
Allowable moment load ³	N·m	120	120	120	120	120	120	120	120
Torsional rigidity	N·m/arcmin	102700	102700	102700	102700	102700	102700	102700	102700
Operating Noise	dBA	<65	<65	<65	<65	<65	<65	<65	<65
Protection Class	-	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67

Operation

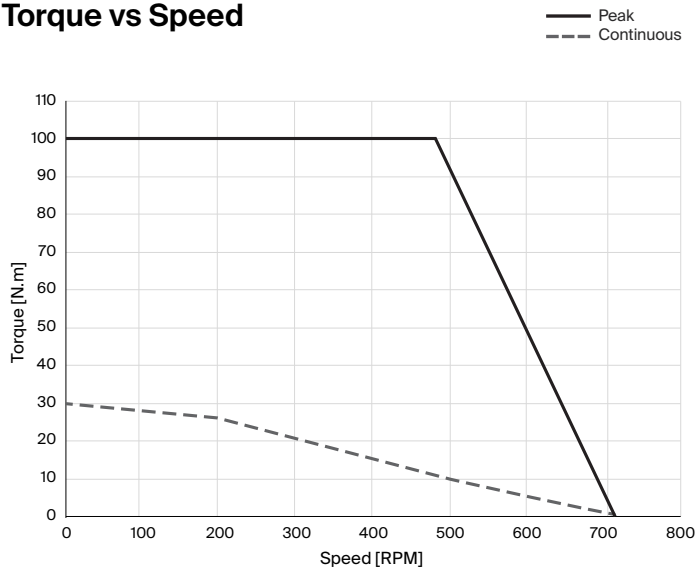
Parameter	Unit	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Operating Ambient Temperature	°C	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)	0 to 40 (no freezing)
Operating Humidity	% RH	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)	20% to 80% (no condensation)
Heat sink	mm	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum	305 x 305 x 12.7 Aluminum
Servo Drive Requirements ⁵		Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz	Compatible with industry servo drives Minimum PWM frequency 8 kHz

Features

Parameter	1840B-E17-BA	1840B-D17-BA	1840B-H17-BA	1840B-B17-BA	1840B-E17-NA	1840B-D17-NA	1840B-H17-NA	1840B-B17-NA
Encoder Type	Endat 2.2 Single turn	Hiperface DSL® Single turn	Hiperface® Single turn	BiSS-C® Single turn	Endat 2.2 Single turn	Hiperface DSL® Single turn	Hiperface® Single turn	BiSS-C® Single turn
Encoder Resolution	19 bit	20 bit	128 sine/cosine periods per revolution	20 bit	19 bit	20 bit	128 sine/cosine periods per revolution	20 bit
Integrated Holding Brake	9 N·m	9 N·m	9 N·m	9 N·m	No Brake	No Brake	No Brake	No Brake
Temperature Sensors	(2) PT1000 RTD	(1) PT1000 RTD	(1) PT1000 RTD	(2) PT1000 RTD	(3) PT1000 RTD	(1) PT1000 RTD	(2) PT1000 RTD	(3) PT1000 RTD
Connector Interface	M23 power M12 encoder	M23 one cable technology	M23 power M12 encoder	M23 power M12 encoder	M23 power M12 encoder	M23 one cable technology	M23 power M12 encoder	M23 power M12 encoder

- Line to line at motor terminals
- Normalized to 25°C ambient temperature
- Single allowable load in continuous operation. For simultaneous axial, radial and moment load please consult with Genesis applications engineering
- In compression only, for tension loads contact Genesis applications engineering
- Performance depends on tuning parameters and may vary slightly between servo drive models. For additional details, contact applications engineering

Torque vs Speed



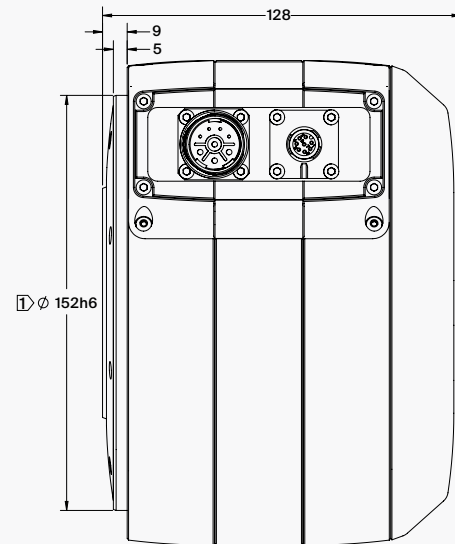
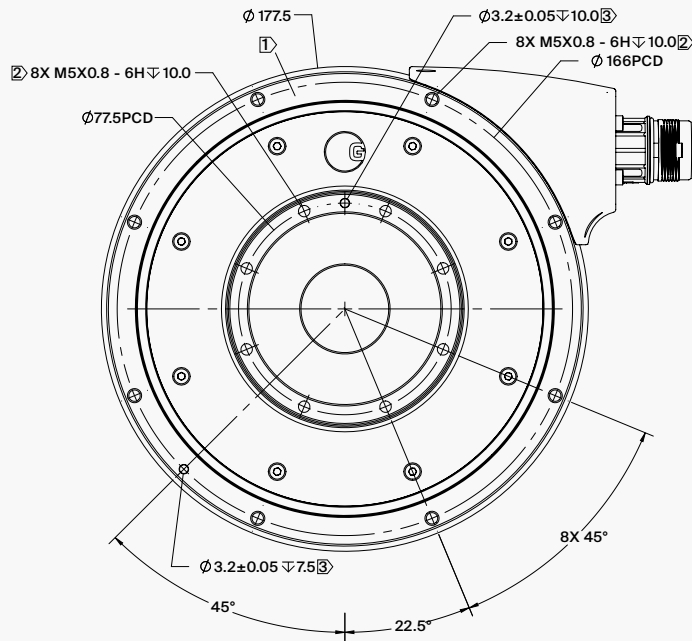
Field Cables

M23 Power Cable

	straight	90deg	3m	5m	10m
102750	■		■		
102751	■			■	
102752	■				■
102753		■	■		
102754		■		■	
102755		■			■

M12 Encoder Cable

	straight	90deg	3m	5m	10m
102744	■		■		
102745	■			■	
102746	■				■
102747		■	■		
102748		■		■	
102749		■			■

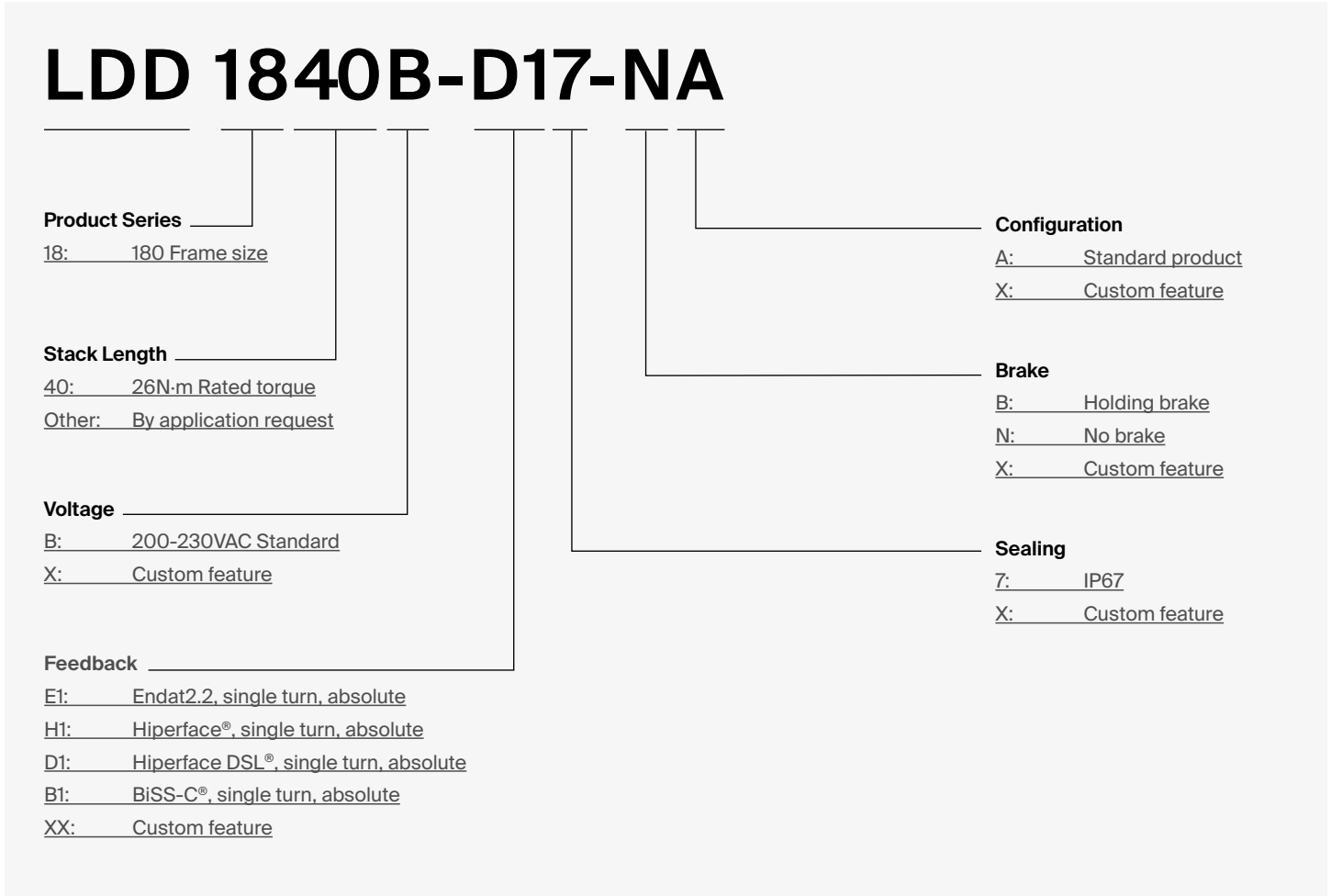


*LDD 1840B with M23 and M12 connectors shown. One Cable Technology (M23 only) on some models.

- 1 Mounting (thermal and structural) interface.
- Recommended $\sqrt{0.03}$ & $\frac{1}{16}$ for mating surface
 - Apply thermal paste between mounting surface to assist
- 2 Recommended use of class 12.9 fasteners with loctite for mounting
- Torque M5 bolts to 76N-m

- 3 Location feature for 3mm dowel pin to aid mounting of motor and aligning bolt holes (use is optimal)
- 4 Dimensions apply to all LDD 1840B models. Hiperface DSL® model includes single M23 connector only

Product Nomenclature



Engineered Solutions

Optimize the performance and features of an LDD actuator for your application with an engineered solution specified in collaboration with our applications team. LiveDrive engineered solutions will service the most demanding market needs.

How to Order

To receive a quote or place an order please contact sales or visit the website.

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