



ACD Series



Direct drive,
zero cogging
coreless motor



Precise homing
through index pulse



Smooth motion even
at low speeds
(low velocity ripple)



Low cogging torque

ACD62

Specifications

ACD62 Specifications		ACD62-60		ACD62-84	
Model	Units	D	Y	D	Y
Table diameter	mm	62		62	
Table height	mm	60		84	
Number of poles		8		8	
Continuous torque	Nm	0.115	0.115	0.341	0.341
Peak torque	Nm	0.40	0.40	1.19	1.19
Cogging torque	Nm	0	0	0	0
Torque constant	Nm/Arms	0.024	0.042	0.071	0.123
Back EMF constant	Vpeak/rpm	0.002	0.004	0.006	0.011
Continuous current	Arms	4.8	2.8	4.8	2.8
Peak current	Arms	16.8	9.7	16.8	9.7
Continuous thermal power	W	16.9	11.6	23.2	16.9
Peak thermal power	W	206.6	141.6	283.7	207.4
Max bus voltage	Vdc	330.0	330.0	330.0	330.0
Resistance ^①	ohms	0.73	1.51	1.01	2.21
Inductance ^①	mH	0.073	0.195	0.144	0.316
Electrical time constant	ms	0.10	0.13	0.14	0.14
Motor constant	Nm/Sqrt(W)	0.028	0.034	0.071	0.083
Mass	kg	0.50	0.50	0.80	0.80
Rotor Inertia	kg·m ²	0.0000216	0.0000216	0.0000394	0.0000394
Rec. max speed @48V DC (DIGITAL/SINCOS)	rpm	1,200	1,200	1,200	1,200
AB-1620 optical SINCOS encoder	lines	1,620	1,620	1,620	1,620
DIGITAL Resolution (at 64 X interpolation)	Counts/rev	103,680	103,680	103,680	103,680
SINCOS Resolution (at 512 X interpolation)	Counts/rev	829,440	829,440	829,440	829,440
SINCOS Resolution (at 4096 X interpolation)	Counts/rev	6,635,520	6,635,520	6,635,520	6,635,520
Accuracy	arc sec	+/- 30	+/- 30	+/- 30	+/- 30
Repeatability	arc sec	+/- 3	+/- 3	+/- 3	+/- 3
Axial runout ^②	um	12	12	12	12
Radial runout ^②	um	10	10	10	10
Max axial load ^③	N	10		10	
Max moment load ^③	Nm	10		10	

① Terminal to terminal, at 25 Deg C.

② Values are based on axis of rotation (bearings) runout only. Surface or tabletop runout is not part of the specification.

③ Please contact our sales representative for inverted mount application.

ACD120

Specifications

ACD120 Specifications		ACD120-80		ACD120-175	
Model	Units	D	Y	D	Y
Table diameter	mm	120		120	
Table height	mm	80		175	
Number of poles		12		12	
Continuous torque	Nm	1.846	1.846	9.216	9.216
Peak torque	Nm	6.46	6.46	32.25	32.25
Cogging torque	Nm	0	0	0	0
Torque constant	Nm/Arms	0.362	0.627	1.807	3.132
Back EMF constant	Vpeak/rpm	0.031	0.054	0.154	0.268
Continuous current	Arms	5.1	2.9	5.1	2.9
Peak current	Arms	17.9	10.3	17.9	10.3
Continuous thermal power	W	46.7	40.2	104.7	104.5
Peak thermal power	W	572.6	492.2	1282.1	1280.6
Max bus voltage	Vdc	330.0	330.0	330.0	330.0
Resistance ¹	ohms	1.80	4.64	4.02	12.07
Inductance ¹	mH	0.628	1.900	1.873	5.619
Electrical time constant	ms	0.35	0.41	0.47	5.06
Motor constant	Nm/Sqrt(W)	0.270	0.291	0.901	0.901
Mass	kg	3.20	3.20	7.00	7.00
Rotor Inertia	kg·m ²	0.0010780	0.0010780	0.0032075	0.0032075
Rec. max speed @48V DC (DIGITAL/SINCOS)	rpm	952	952	220	220
AB-2868 optical SINCOS encoder	lines	2,868	2,868	2,868	2,868
DIGITAL Resolution (at 64 X interpolation)	Counts/rev	183,552	183,552	183,552	183,552
SINCOS Resolution (at 512 X interpolation)	Counts/rev	1,468,416	1,468,416	1,468,416	1,468,416
SINCOS Resolution (at 4096 X interpolation)	Counts/rev	11,747,328	11,747,328	11,747,328	11,747,328
Accuracy	arc sec	+/- 30	+/- 30	+/- 30	+/- 30
Repeatability	arc sec	+/- 3	+/- 3	+/- 3	+/- 3
Axial runout ²	um	15	15	15	15
Radial runout ²	um	10	10	10	10
Max axial load ³	N	150		150	
Max moment load ³	Nm	10.0		10.0	

¹ Terminal to terminal, at 25 Deg C.

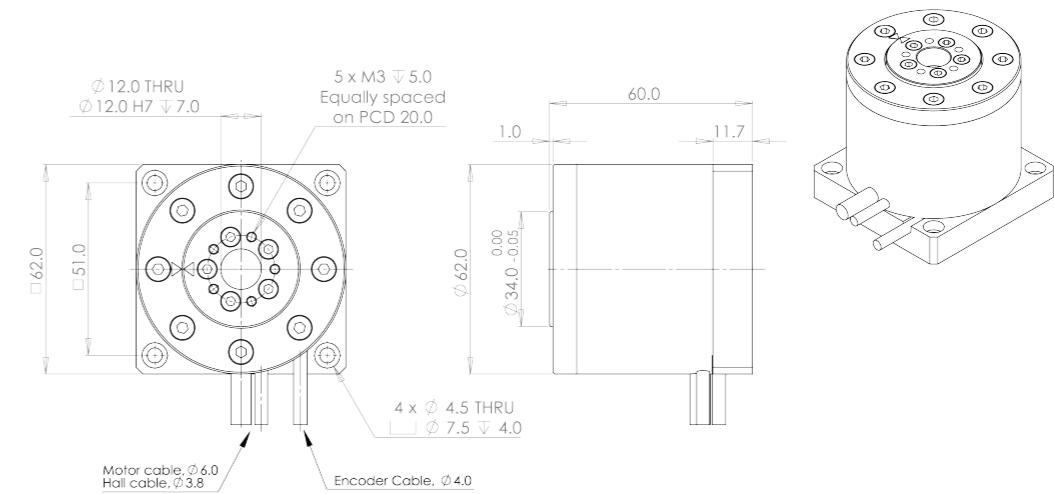
² Values are based on axis of rotation (bearings) runout only. Surface or tabletop runout is not part of the specification.

³ Please contact our sales representative for inverted mount application.

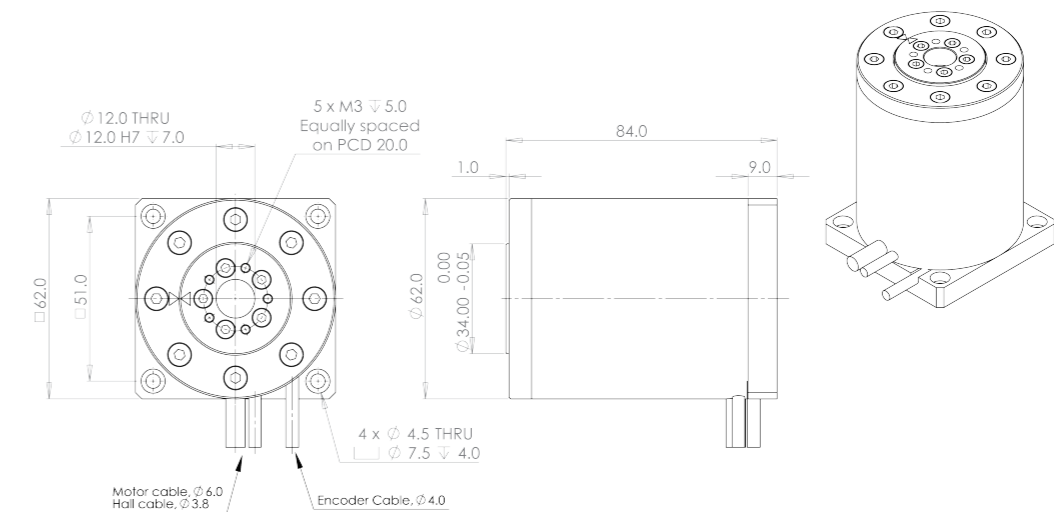
ACD62

Dimensions

ACD62-60-MS



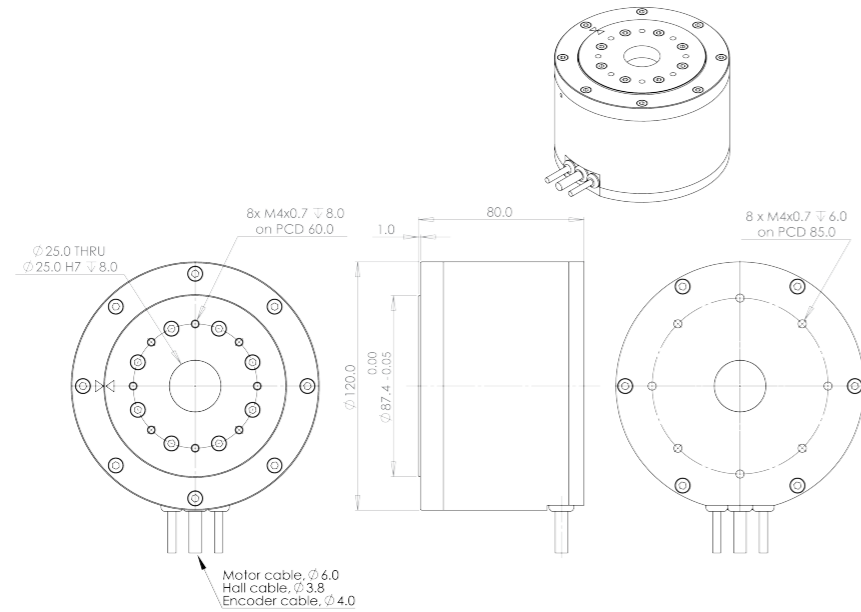
ACD62-84-MS



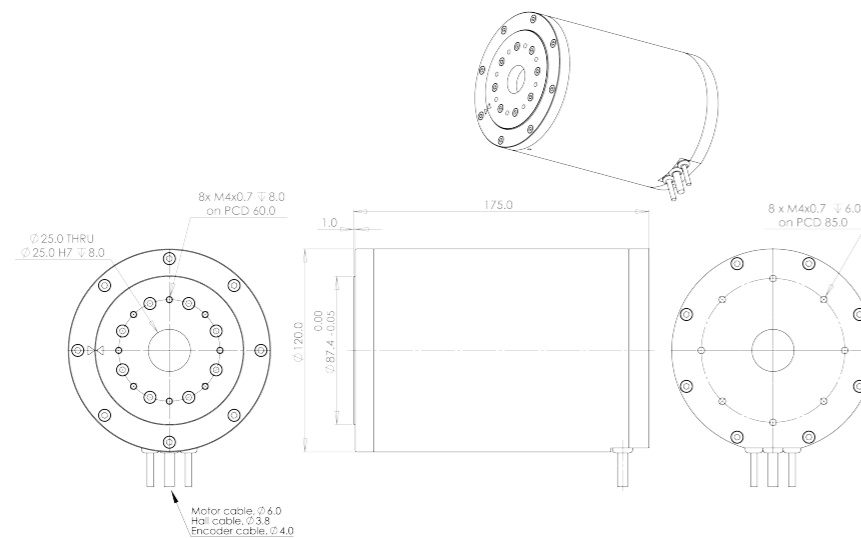
ACD120

Dimensions

ACD120-80



ACD120-175



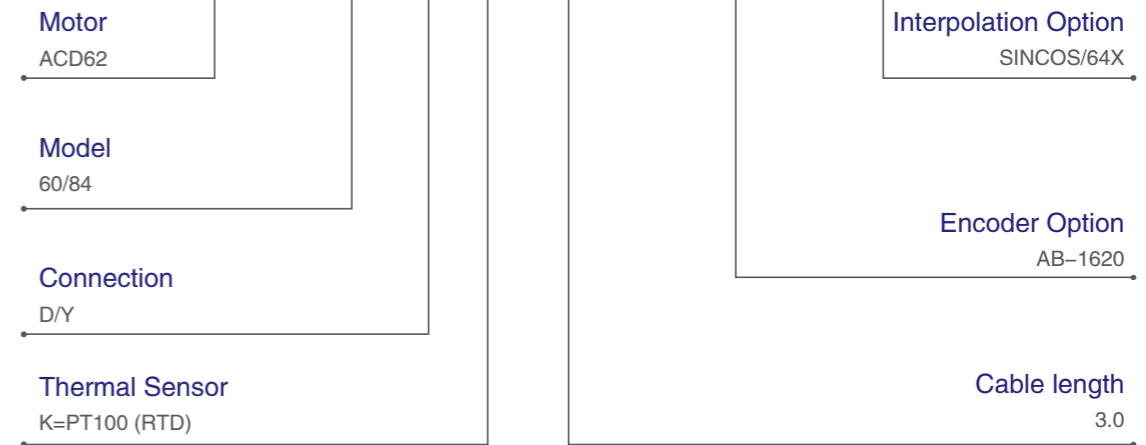
ACD

Part Numbering

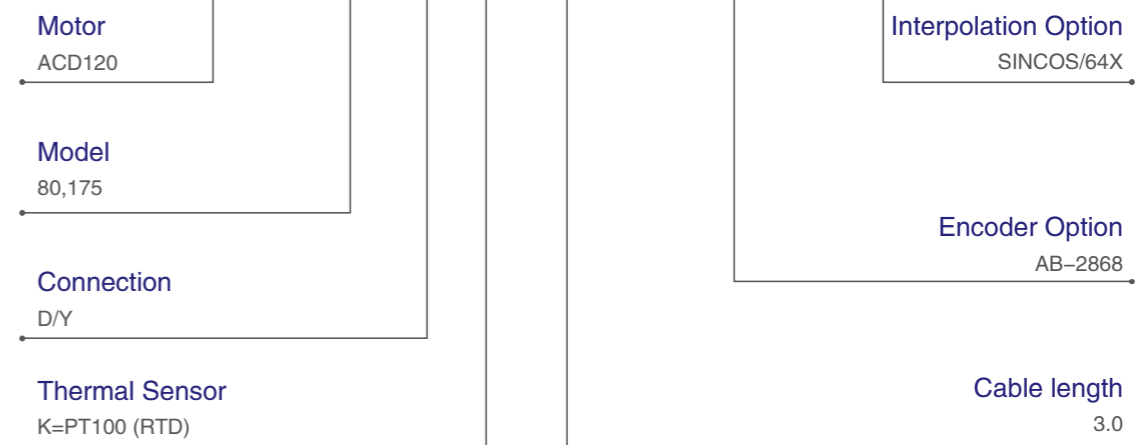


Coil

ACD120-80-Y-K-3.0-AB-2868-SINCOS



ACD120-80-Y-K-3.0-AB-2868-SINCOS



Torque-Speed-Curve

