

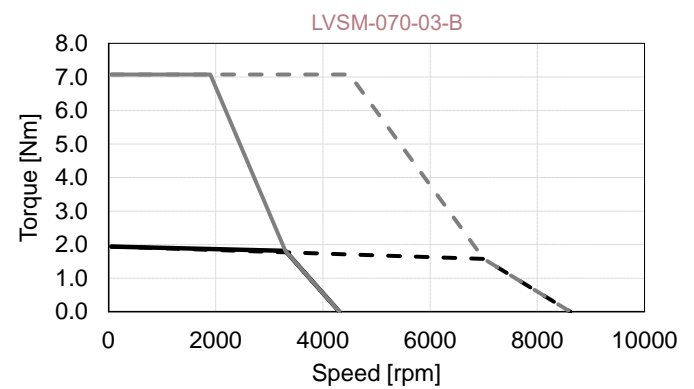
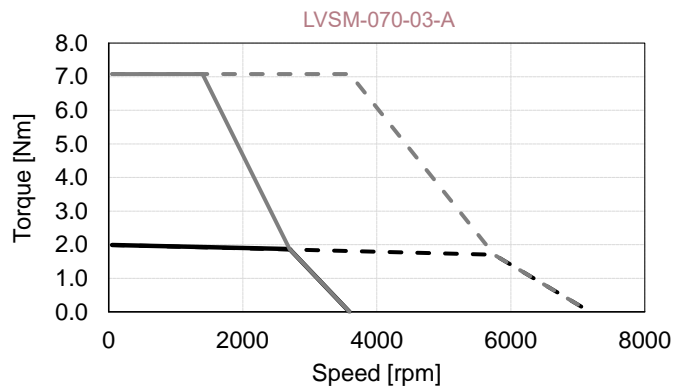
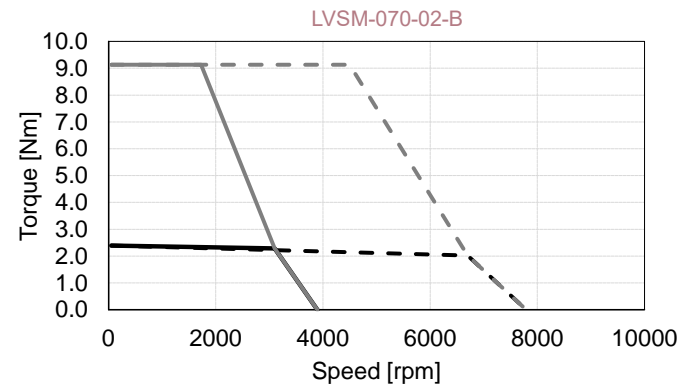
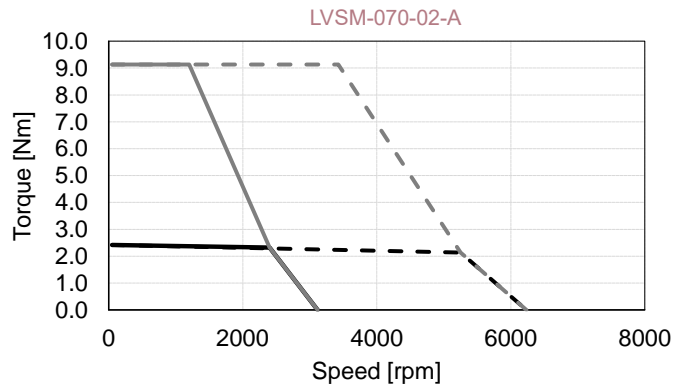
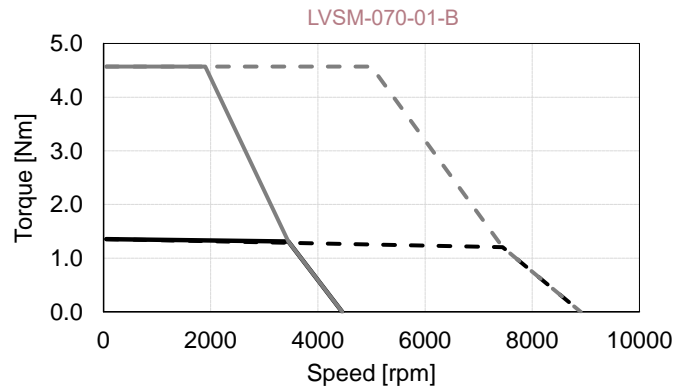
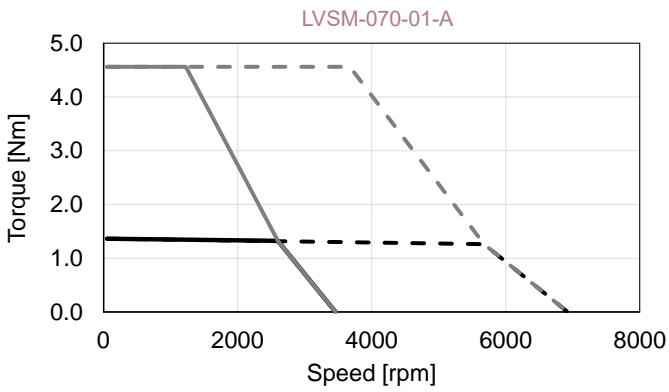
LVSM-070 Technical Information

Motor Parameters			LVSM-070-01				LVSM-070-02				LVSM-070-03				
Winding Type	Symbols	Units	A		B		A		B		A		B		
PERFORMANCE	DC Bus Voltage	V _{dc}	24	48	24	48	24	48	24	48	24	48	24	48	
	Rated Power	P _r	0.36	0.75	0.47	0.94	0.58	1.18	0.74	1.42	0.65	1.36	0.78	1.52	
	Stall Torque	T _s	1.36	1.36	1.20	1.20	2.42	2.42	2.39	2.39	3.25	3.25	3.27	3.27	
	Rated Torque	T _r	1.32	1.26	1.31	1.21	2.32	2.14	2.28	2.02	3.10	2.94	3.13	2.84	
	Peak Torque	T _p	4.56	4.56	4.57	4.57	9.13	9.13	9.13	9.13	13.7	13.7	13.7	13.7	
	Rated Speed	N _r	rpm	2600	5675	3450	7450	2400	5250	3100	6700	2000	4400	2375	5100
	No-Load Speed ⁽²⁾	N _{no-load}	rpm	3463	6926	4453	8905	3117	6234	3896	7792	2597	5195	2970	5941
	Torque Constant	K _t	Nm/ A _{rms}	0.08	0.08	0.06	0.06	0.09	0.09	0.07	0.07	0.11	0.11	0.09	0.09
	Voltage Constant ⁽²⁾	K _v	V _{rms} /krpm	4.90	4.90	3.81	3.81	5.44	5.44	4.36	4.36	6.53	6.53	5.71	5.71
ELECTRICAL	Stall Current	I _s	16.9	16.9	19.1	19.1	26.9	26.9	33.1	33.1	30.1	30.1	34.6	34.6	
	Rated Current	I _r	16.6	16.0	21.2	19.8	26.1	24.4	32.1	28.8	29.2	27.8	33.6	30.7	
	Peak Current	I _p	57.9	57.9	74.3	74.3	104.0	104.0	130.0	130.0	130.0	130.0	149.0	149.0	
	Line Resistance ⁽²⁾	R _{LL}	mOhm	108 (±20%)	108 (±20%)	74 (±20%)	74 (±20%)	60 (±20%)	60 (±20%)	40 (±20%)	40 (±20%)	56 (±20%)	56 (±20%)	41 (±20%)	41 (±20%)
	Line Inductance ⁽²⁾	L _{LL}	mH	0.17 (±30%)	0.17 (±30%)	0.10 (±30%)	0.10 (±30%)	0.10 (±30%)	0.10 (±30%)	0.07 (±30%)	0.07 (±30%)	0.10 (±30%)	0.10 (±30%)	0.07 (±30%)	0.07 (±30%)
	Inertia (without brake)	J	kg.cm ²	0.035	0.035	0.035	0.035	0.69	0.69	0.69	0.69	0.93	0.93	0.93	0.93
	Weight (without brake)	W	kg	1.91	1.91	1.91	1.91	2.71	2.71	2.71	2.71	3.47	3.47	3.48	3.48
	Thermal Resistance ⁽²⁾	K _{therm}	C°/W	2.09	1.77	1.80	1.47	1.48	1.26	1.39	1.12	1.27	1.13	1.27	1.07
	Mech. Time Constant	K _{mech}	ms	0.07	0.07	0.08	0.08	0.63	0.63	0.66	0.66	0.55	0.55	0.52	0.52
	Motor Constant	K _m	Nm/VW	0.20	0.21	0.17	0.18	0.31	0.33	0.30	0.34	0.38	0.40	0.39	0.43
FEEDBACK	Pole Number	2n	10												
	Input Voltage	V _{rms}	5												
	Frequency	kHz	4.5												
	Input Current	mA	58												
	Transformation Ratio		0.5±10%												
	Null Voltage	mV _{max}	30												
	Phase Shift	Deg	-15°±2°												

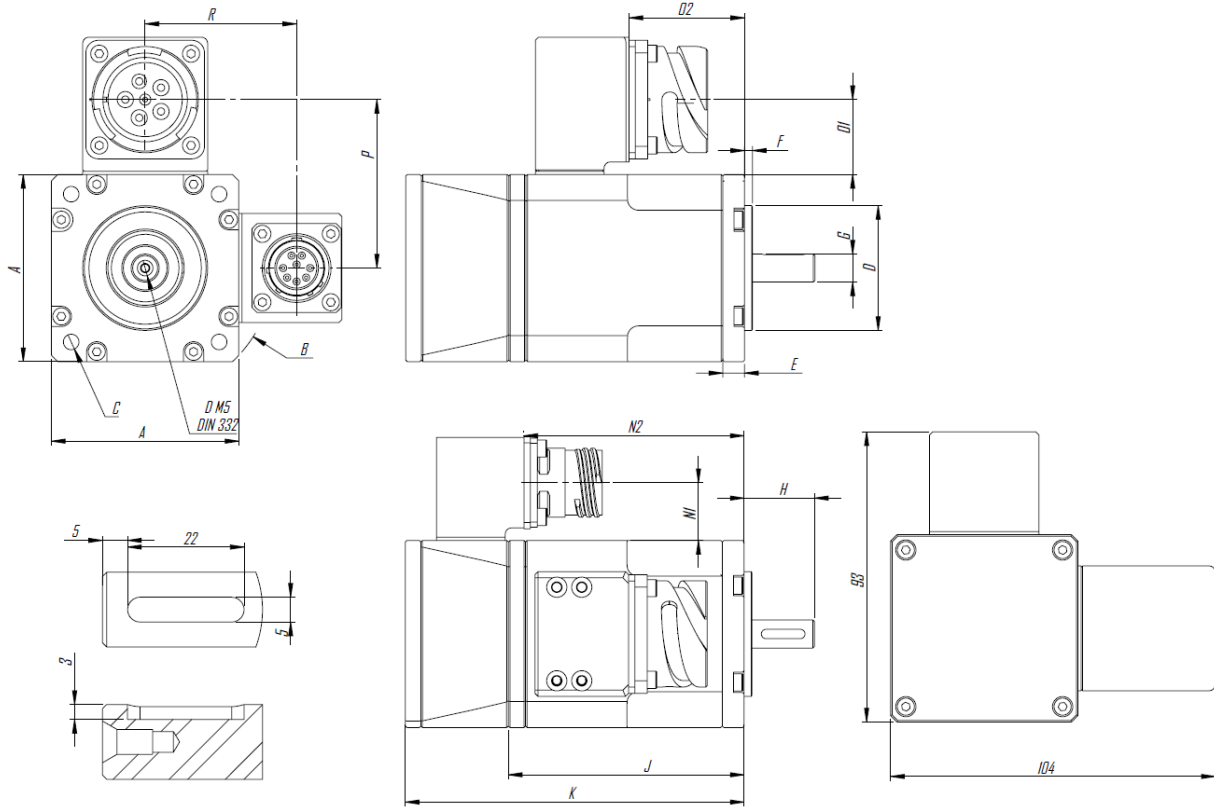
1. All performance and electrical specifications are obtained at 25°C ambient and may change ±10%. 2. Rated data with reference aluminum plate 250mm x 250mm x 6mm (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

LVSM-070 Torque-Speed Curves

Tr: Rated Torque — @Tr 24V - - - @Tr 48V
 Tp: Peak Torque — @Tp 24V - - - @Tp 48V



LVSM-070 Outline Drawing



Symbols	Units	Frensiz			Frenli		
		LVSM-070-01	LVSM-070-02	LVSM-070-03	LVSM-070-01	LVSM-070-02	LVSM-070-03
A	mm	70	70	70	70	70	70
B	mm	Ø94	Ø94	Ø94	Ø94	Ø94	Ø94
C	mm	Ø 6 on Ø75	Ø 6 on Ø75	Ø 6 on Ø75	Ø 6 on Ø75	Ø 6 on Ø75	Ø 6 on Ø75
D	mm	Ø60	Ø60	Ø60	Ø60	Ø60	Ø60
E	mm	7	7	7	7	7	7
F	mm	2.5	2.5	2.5	2.5	2.5	2.5
G	mm	Ø14	Ø14	Ø14	Ø14	Ø14	Ø14
J	mm	84	118	151	84	118	151
K	mm	115	149	181	150	184	216
L	mm	103	103	103	103	103	103
M	mm	115	115	115	115	115	115
N1	mm	19	19	19	19	19	19
N2	mm	78	112	145	115	149	182
O1	mm	25	25	25	25	25	25
O2	mm	38	72	104	38	72	104
P	mm	60	60	60	60	60	60
R	mm	54	54	54	54	54	54

Power - Signal Connector

Power Connector (CB2-20-22-PC-FM)

Pin	Function	Description
A	A	Phase A
B	-	-
C	C	Phase C
D	-	-
E	B	Phase B
F	GND	GND

Signal Connector (D38999/20WC8PN)

Pin	Function	Description
A	R1	Ref (+)
B	R2	Ref (-)
C	S1	Cos (+)
D	S3	Cos (-)
E	S2	Sin (+)
F	S4	Sin (-)
G	NTC	Thermal Sensor
H	NTC	Thermal Sensor