

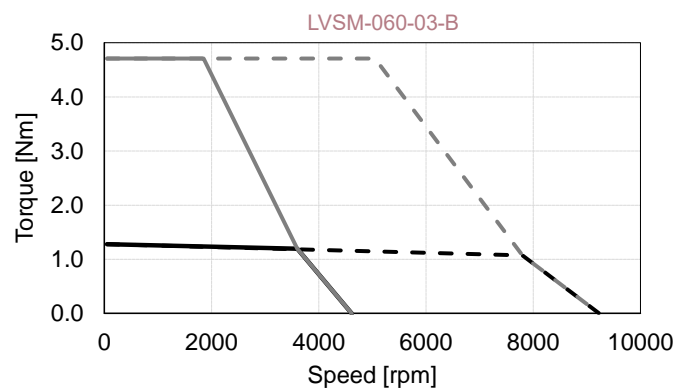
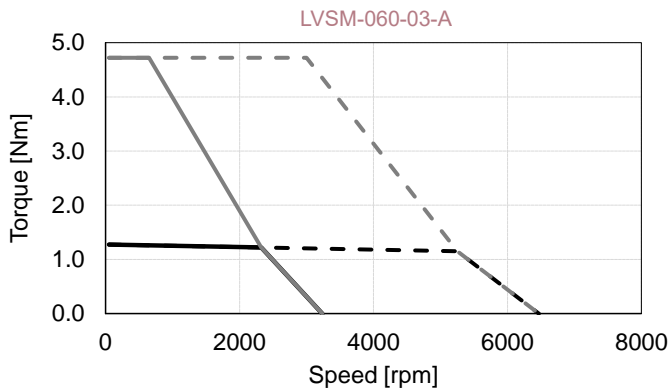
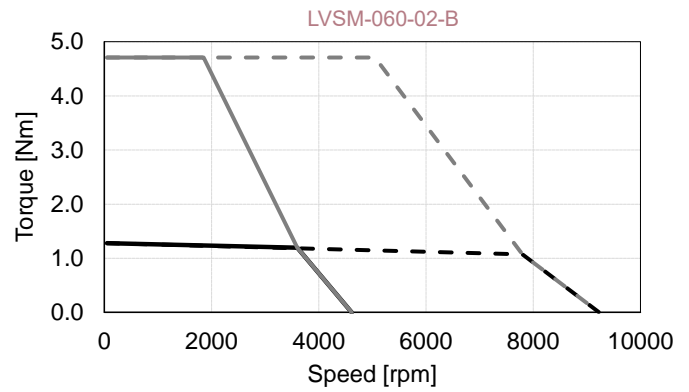
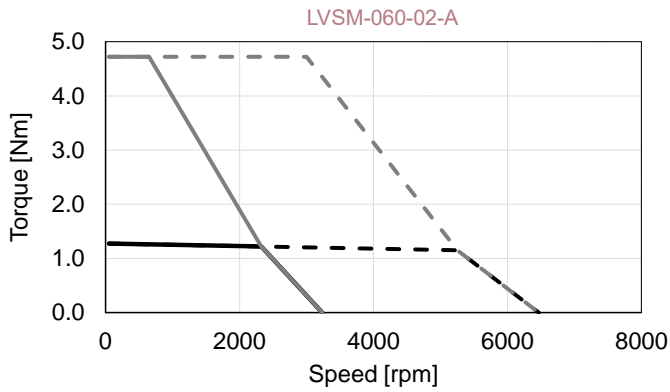
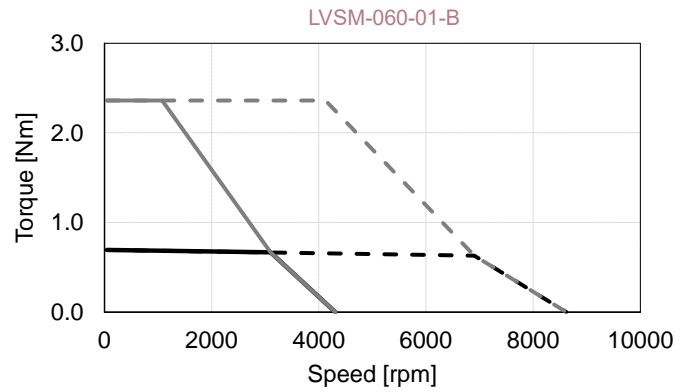
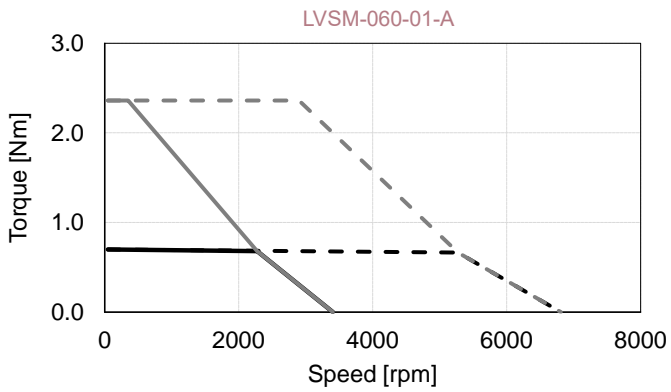
LVSM-060 Technical Information

Motor Parameters			LVSM-060-01				LVSM-060-02				LVSM-060-03				
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	162	367	217	456	297	632	451	875	472	940	573	1066	
	Stall Torque	T _s	0.70	0.70	0.69	0.69	1.27	1.27	1.28	1.28	1.76	1.76	1.70	1.70	
	Rated Torque	T _r	0.68	0.66	0.67	0.63	1.22	1.15	1.20	1.07	1.64	1.48	1.59	1.38	
	Peak Torque	T _p	2.36	2.36	2.36	2.36	4.72	4.72	4.71	4.71	7.08	7.08	7.07	7.07	
	Rated Speed	N _r	rpm	2275	5275	3100	6900	2325	5250	3600	7800	2750	6050	3450	7400
	No-Load Speed ⁽²⁾	N _{no-load}	rpm	3404	6809	4309	8618	3235	6469	4615	9231	3593	7186	4309	8618
	Torque Constant	K _t	Nm/ A _{rms}	0.08	0.08	0.06	0.06	0.09	0.09	0.06	0.06	0.08	0.08	0.06	0.07
	Voltage Constant ⁽²⁾	K _v	V _{rms} /krpm	4.99	4.99	3.94	3.94	5.25	5.25	3.68	3.68	4.72	4.72	3.94	3.94
ELECTRICAL	Stall Current	I _s	8.60	8.60	10.7	10.7	14.7	14.7	21.2	21.2	22.5	22.5	26.2	26.2	
	Rated Current	I _r	8.50	8.25	10.5	10.1	14.3	13.6	20.2	18.4	21.4	19.7	25.0	22.0	
	Peak Current	I _p	31.0	31.0	39.2	39.2	59.0	59.0	84.0	84.0	98.3	98.3	117.7	117.7	
	Line Resistance ⁽²⁾	R _{LL}	mOhm	350 (±20%)	350 (±20%)	218 (±20%)	218 (±20%)	159 (±20%)	159 (±20%)	71.2 (±20%)	71.2 (±20%)	73.8 (±20%)	73.8 (±20%)	47.8 (±20%)	47.8 (±20%)
	Line Inductance ⁽²⁾	L _{LL}	mH	0.39 (±30%)	0.39 (±30%)	0.24 (±30%)	0.24 (±30%)	0.21 (±30%)	0.21 (±30%)	0.10 (±30%)	0.10 (±30%)	0.11 (±30%)	0.11 (±30%)	0.08 (±30%)	0.08 (±30%)
	Inertia (without brake)	J	kg.cm ²	0.155	0.155	0.155	0.155	0.26	0.26	0.26	0.26	0.37	0.37	0.37	0.37
	Weight (without brake)	W	kg	1.43	1.43	1.43	1.43	1.80	1.80	1.80	1.80	2.16	2.16	2.16	2.16
	Thermal Resistance ⁽²⁾	K _{therm}	C°/W	2.72	2.48	2.76	2.32	2.05	1.82	2.10	1.62	1.86	1.51	1.94	1.43
	Mech. Time Constant	K _{mech}	ms	0.99	0.98	0.98	0.99	0.67	0.67	0.62	0.62	0.55	0.55	0.51	0.51
	Motor Constant	K _m	Nm/VW	0.11	0.12	0.12	0.12	0.18	0.19	0.19	0.21	0.25	0.27	0.25	0.29
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°												

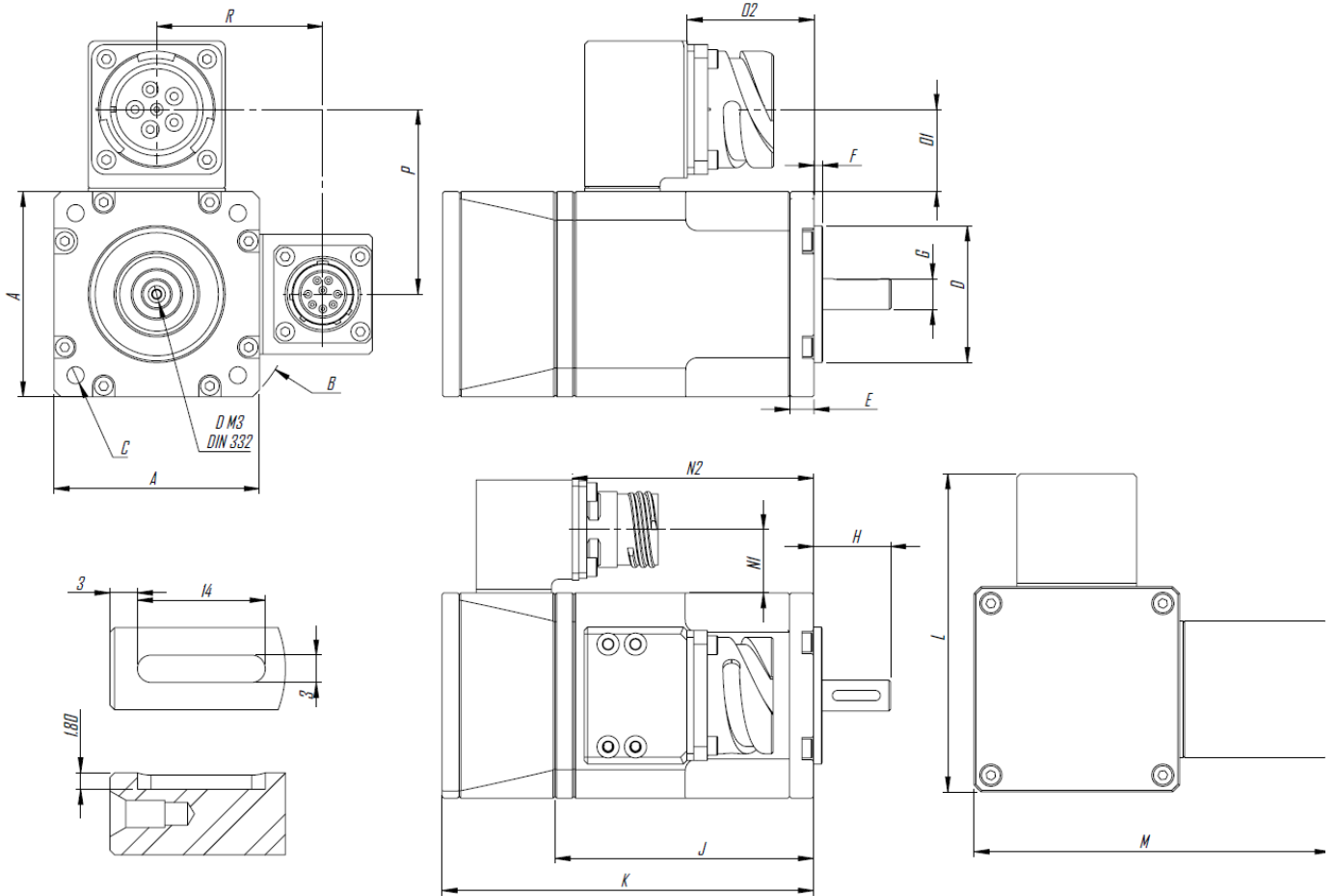
1. All performance and electrical specifications are obtained at 25°C ambient and may change ±10%. 2. Rated data with reference aluminum plate 250mm x 250mm x 6mm (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

LVSM-060 Torque-Speed Curves

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



LVSM-060 Outline Drawing



Symbols	Units	Frensiz			Frenli		
		LVSM-060-01	LVSM-060-02	LVSM-060-03	LVSM-060-01	LVSM-060-02	LVSM-060-03
A	mm	60	60	60	60	60	60
B	mm	Ø82	Ø82	Ø82	Ø82	Ø82	Ø82
C	mm	Ø 5 on Ø67	Ø 5 on Ø67	Ø 5 on Ø67	Ø 5 on Ø67	Ø 5 on Ø67	Ø 5 on Ø67
D	mm	Ø40	Ø40	Ø40	Ø40	Ø40	Ø40
E	mm	7	7	7	7	7	7
F	mm	2.5	2.5	2.5	2.5	2.5	2.5
G	mm	Ø 9	Ø 9	Ø 9	Ø 9	Ø 9	Ø 9
J	mm	78	96	116	78	96	116
K	mm	109	129	149	153	173	193
L	mm	93	93	93	93	93	93
M	mm	104	104	104	104	104	104
N1	mm	19	19	19	19	19	19
N2	mm	71	91	111	116	136	156
O1	mm	23	23	23	23	23	23
O2	mm	37	57	77	37	57	77
P	mm	54	54	54	54	54	54
R	mm	49	49	49	49	49	49

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