

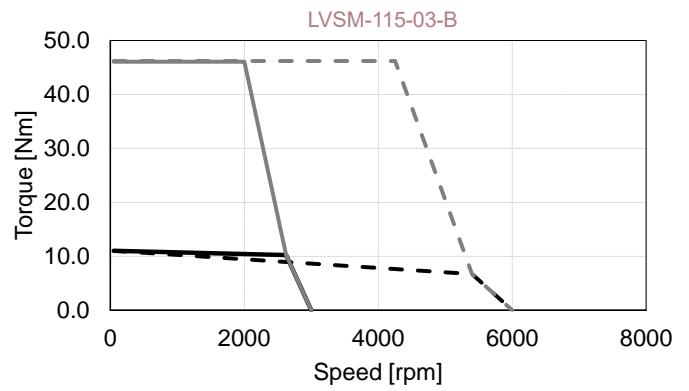
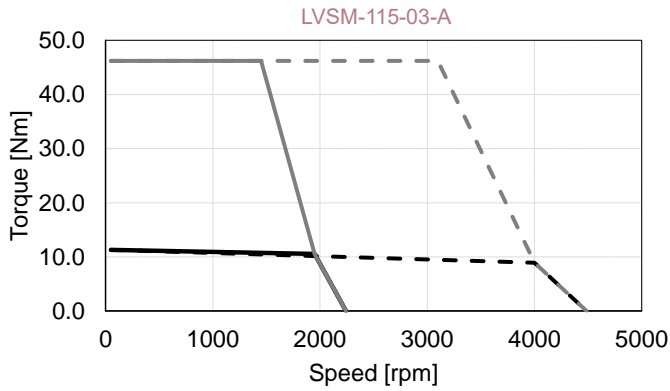
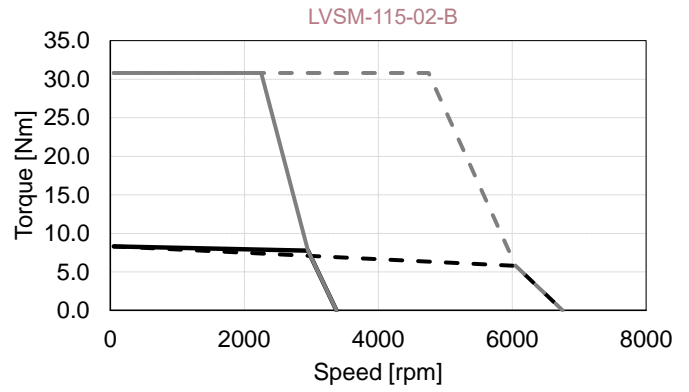
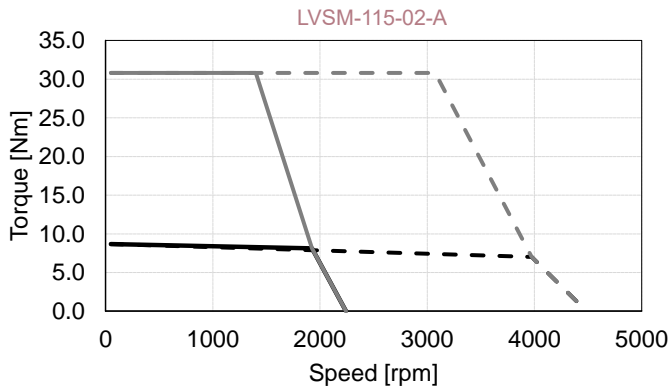
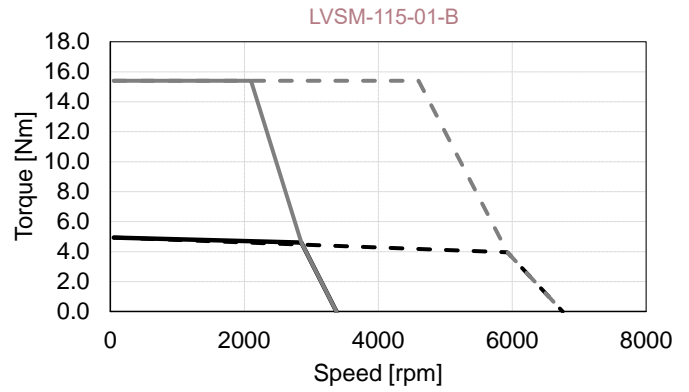
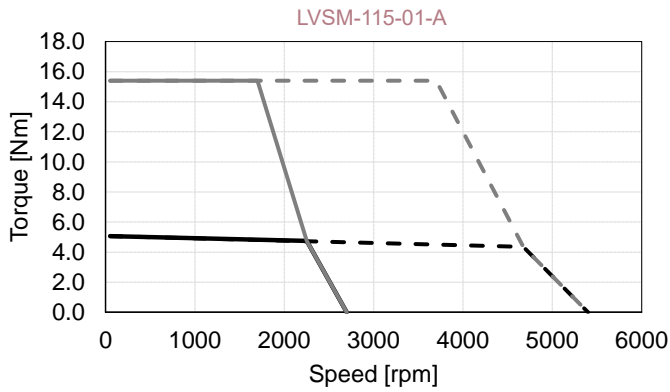
# LVSM-115 Technical Information

Motor Parameters			LVSM-115-01				LVSM-115-02				LVSM-115-03				
Winding Type	Symbols	Units	A		B		A		B		A		B		
PERFORMANCE	DC Bus Voltage	V <sub>dc</sub>	24	48	24	48	24	48	24	48	24	48	24	48	
	Rated Power	P <sub>r</sub>	1.12	2.13	1.37	2.46	1.64	2.92	2.39	3.66	2.16	3.73	2.81	3.80	
	Stall Torque	T <sub>s</sub>	5.06	5.06	4.94	4.94	8.7	8.7	8.3	8.32	11.3	11.3	11.0	11.0	
	Rated Torque	T <sub>r</sub>	4.74	4.35	4.60	3.96	8.1	7.0	7.7	5.78	10.6	8.9	10.2	6.7	
	Peak Torque	T <sub>p</sub>	15.4	15.4	15.4	15.4	30.8	30.8	30.8	30.8	46.2	46.2	46.1	46.2	
	Rated Speed	N <sub>r</sub>	rpm	2250	4675	2850	5925	1925	3975	2950	6050	1950	4000	2625	5400
	No-Load Speed <sup>(2)</sup>	N <sub>no-load</sub>	rpm	2700	5399	3376	6751	2243	4486	3376	6751	2243	4486	3000	6000
	Torque Constant	K <sub>t</sub>	Nm/ A <sub>rms</sub>	0.10	0.10	0.08	0.08	0.12	0.12	0.08	0.08	0.13	0.12	0.09	0.09
	Voltage Constant <sup>(2)</sup>	K <sub>v</sub>	V <sub>rms</sub> /krpm	6.29	6.29	5.03	5.03	7.57	7.57	5.03	5.03	7.57	7.57	5.66	5.66
ELECTRICAL	Stall Current	I <sub>s</sub>	48.7	48.7	59.3	59.3	69.7	69.7	99.5	99.5	90.3	90.3	117.3	117.3	
	Rated Current	I <sub>r</sub>	46.4	43.0	56.5	49.4	66.4	58.2	95	73	86	74	112	76	
	Peak Current	I <sub>p</sub>	152	152	190	190	254	254	381	381	381	381	507	507	
	Line Resistance <sup>(2)</sup>	R <sub>LL</sub>	mOhm	17 (±20%)	17 (±20%)	11 (±20%)	11 (±20%)	9 (±20%)	9 (±20%)	4 (±20%)	4 (±20%)	5 (±20%)	5 (±20%)	3 (±20%)	3 (±20%)
	Line Inductance <sup>(2)</sup>	L <sub>LL</sub>	mH	0.07 (±30%)	0.07 (±30%)	0.05 (±30%)	0.05 (±30%)	0.05 (±30%)	0.05 (±30%)	0.02 (±30%)	0.02 (±30%)	0.03 (±30%)	0.03 (±30%)	0.02 (±30%)	0.02 (±30%)
	Inertia (without brake)	J	kg.cm <sup>2</sup>	2.15	2.15	2.15	2.15	3.9	3.9	3.9	3.9	5.65	5.65	5.65	5.65
	Weight (without brake)	W	kg	6.31	6.31	6.31	6.31	9.18	9.18	9.18	9.18	12.11	12.11	12.11	12.11
	Thermal Resistance <sup>(2)</sup>	K <sub>therm</sub>	C°/W	1.30	0.90	1.17	0.71	1.07	0.67	0.87	0.48	0.94	0.53	0.73	0.38
	Mech. Time Constant	K <sub>mech</sub>	ms	0.40	0.40	0.40	0.40	0.27	0.27	0.27	0.27	0.23	0.23	0.23	0.23
	Motor Constant	K <sub>m</sub>	Nm/VW	0.69	0.75	0.69	0.79	1.13	1.29	1.14	1.48	1.47	1.71	1.47	2.17
FEEDBACK	Pole Number	2n	10												
	Input Voltage	V <sub>rms</sub>	4												
	Frequency	kHz	5												
	Input Current	mA	26												
	Transformation Ratio		0.5±10%												
	Null Voltage	mV <sub>max</sub>	30												
	Phase Shift	Deg	-8°±2°												

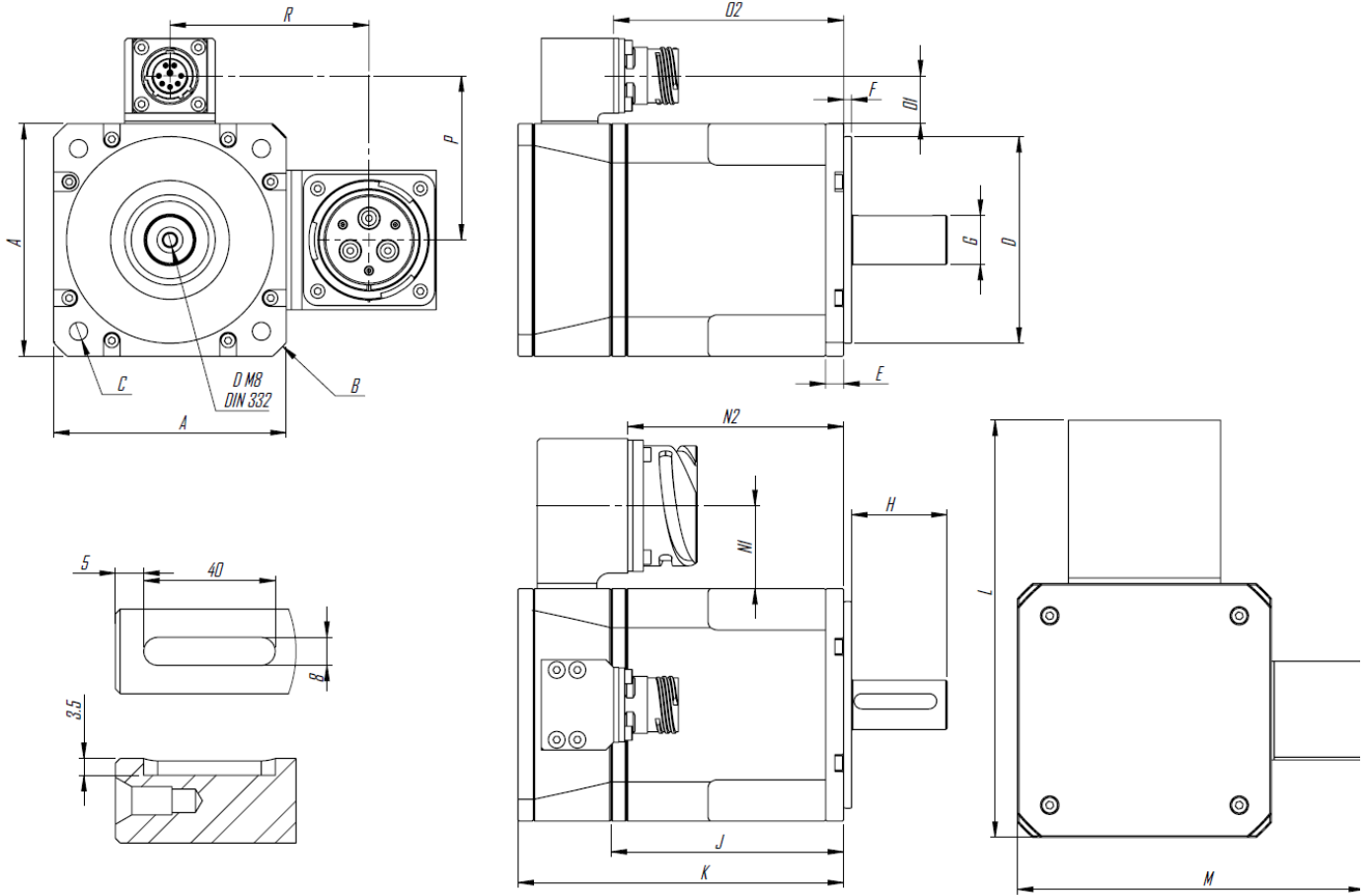
1. All performance and electrical specifications are obtained at 25°C ambient and may change ±10%. 2. Rated data with reference aluminum plate 300mm x 300mm x 12mm (maximum winding temperature is 120°C). 3. Higher torque and speed values as well as dimensions on request.

# LVSM-115 Torque-Speed Curves

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



# LVSM-115 Outline Drawing



Symbols	Units	Frensiz			Frenli		
		LVSM-115-01	LVSM-115-02	LVSM-115-03	LVSM-115-01	LVSM-115-02	LVSM-115-03
A	mm	115	115	115	115	115	115
B	mm	Ø156	Ø156	Ø156	Ø156	Ø156	Ø156
C	mm	Ø9 on Ø130	Ø9 on Ø130	Ø9 on Ø130	Ø9 on Ø130	Ø9 on Ø130	Ø9 on Ø130
D	mm	Ø95	Ø95	Ø95	Ø95	Ø95	Ø95
E	mm	10	10	10	10	10	10
F	mm	3	3	3	3	3	3
G	mm	Ø24	Ø24	Ø24	Ø24	Ø24	Ø24
J	mm	98	138	178	98	138	178
K	mm	141	181	221	189	229	269
L	mm	187	187	187	187	187	187
M	mm	147	147	147	147	147	147
N1	mm	38	38	38	38	38	38
N2	mm	92	132	172	140	180	220
O1	mm	19	19	19	19	19	19
O2	mm	98	138	178	146	186	226
P	mm	75	75	75	75	75	75
R	mm	96	96	96	96	96	96

# Power - Signal Connector

Power Connector (CB2-36-3-PC-FM)

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

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