

MOT-PM Low Voltage Servo Motor

Combining high dynamics and power density, the MOT-PM synchronous servo motors provide an efficient and economical solution for low voltage applications.



Paired with the ZED low voltage servo drive, the MOT-PM servo motors offer excellent performance and high power density in a compact design.



Motor 40mm Flange

Feature		SM2-40001	SM2-40003
Flange Size	mm	40	40
Power Rating	W	50	100
Rated Current	A	1.50	2.80
Peak Current	A	4.50	
Rated Torque	Nm	0.16	0.32
Peak Torque	Nm	0.48	
Rated Speed	rpm	3000	
No Load Speed	rpm	4500	4300
Voltage	VDC	48	
Feedback		Incremental AB quad, Halls, index	
IP Rating		IP54 (IP65)	
Environmental		Ambient: 0 – 45°C (0 – 70°C storage) Humidity: 10-90% Altitude: 1,000 m (per IEC 61800-5-1)	
Weight (with brake)	kg	0.40 (0.60)	0.6 (0.8)
Size W x H x L (with brake)	mm	40 x 40 x 55.8 (40 x 40 x 76.3)	40 x 40 x 69.8 (40 x 40 x 90.3)

Brake 40mm Flange

Feature		SM2-40001	SM2-40003
Voltage	VDC	24 ± 10%	
Release Voltage	VDC	> 1.5	
Pull-in Voltage	VDC	≤ 16.8	
Power Rating	W	5,3	
Static Torque (min)	Nm	0.32	
Resistance	Ω	108 ± 10%	
Release time	ms	≤ 20	
Pull-in time	ms	≤ 35	

Motor 60mm and 80mm Flange

Feature		SM2-60006	SM2-60013	SM2-80015	SM2-80025	SM2-80035
Flange Size	mm	60	60	80	80	80
Power Rating	W	200	400	480	800	1100
Rated Current	A	6.50	12.00	14.60	22.60	31.50
Peak Current	A	19.50	36.00	46.00	67.00	88.90
Rated Torque	Nm	0.64	1.27	1.53	2.55	3.50
Peak Torque	Nm	1.92	3.81	4.60	7.60	10.50
Rated Speed	rpm	3000				
No Load Speed	rpm	5400	5000	5100	4800	4800
Voltage	VDC	48				
Feedback		Incremental AB quad, Halls, index				
IP Rating		IP54 (IP65)				
Environmental		Ambient: 0 – 45°C (0 – 70°C storage) Humidity: 10-90% Altitude: 1,000 m (per IEC 61800-5-1)				
Weight (with brake)	kg	0.70 (0.96)	1.04 (1.3)	1.44 (2.1)	1.90 (2.58)	2.80 (3.60)
Size W x H x L (with brake)	mm	60 x 60 x 64.5 (60 x 60 x 81.5)	60 x 60 x 84.5 (60 x 60 x 101.5)	80 x 80 x 75 (80 x 80 x 105)	80 x 80 x 92 (80 x 80 x 122)	80 x 80 x 110 (80 x 80 x 140)

Brake 60mm and 80mm Flange

Feature		SM2-60006	SM2-60013	SM2-80015	SM2-80025	SM2-80035
Voltage	VDC	24 ± 10%		24 ± 10%		
Release Voltage	VDC	> 1		> 1.2		
Pull-in Voltage	VDC	≤ 16.8		≤ 16.8		
Power Rating	W	7.4		13.5		
Static Torque (min)	Nm	1.3		4		
Resistance	Ω	78 ± 10%		42.7 ± 10%		
Release time	ms	30		30		
Pull-in time	ms	50		60		

Motor 110mm and 130mm Flange

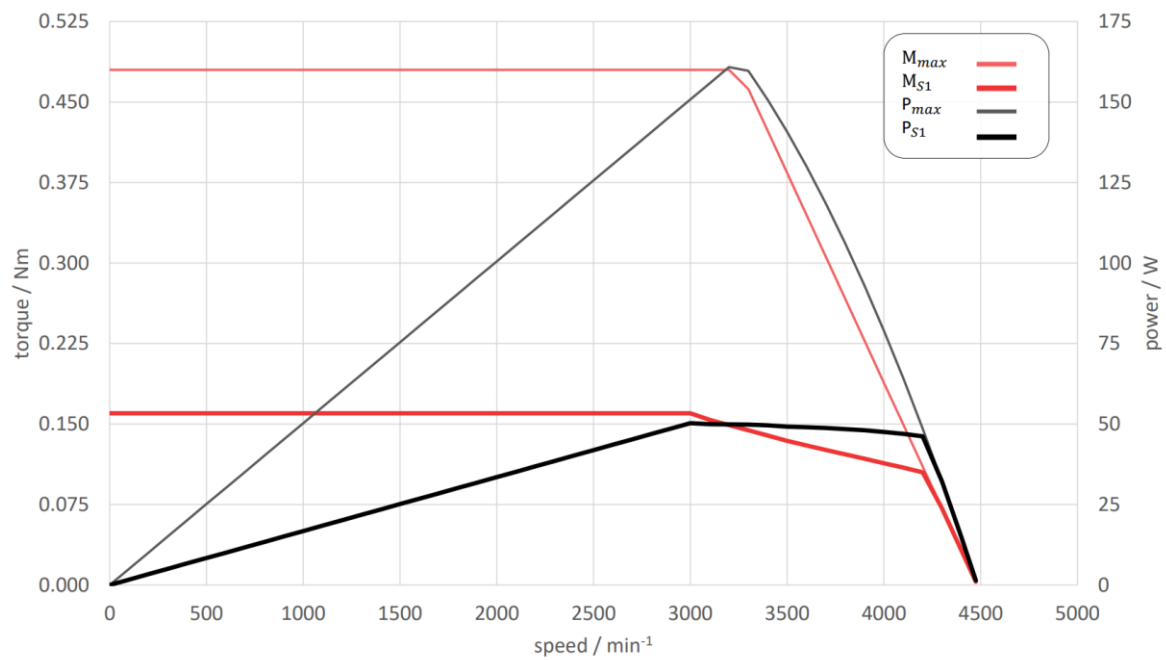
Feature		SM2-11045	SM2-13060	SM2-13095
Flange Size	mm	110	130	130
Power Rating	W	1350	2000	3000
Rated Current	A	37.00	45.30	69.90
Peak Current	A	103.00		
Rated Torque	Nm	4.20	5.97	9.55
Peak Torque	Nm	12.6		
Rated Speed	rpm	3000	3200	
No Load Speed	rpm		3700	
Voltage	VDC	48		
Feedback		Incremental AB quad, Halls, index		
IP Rating		IP54 (IP65)		
Environmental		Ambient: 0 – 45°C (0 – 70°C storage) Humidity: 10-90% Altitude: 1,000 m (per IEC 61800-5-1)		
Weight (with brake)	kg	4.10 (4.50)	5.13 (6.25)	6.23 (7.40)
Size W x H x L (with brake)	mm	110 x 110 x 108 (110 x 110 x 133)	130 x 91.50 (130 x 130 x 116.50)	130 x 106.50 (130 x 130 x 131.50)

Brake 110mm and 130mm Flange

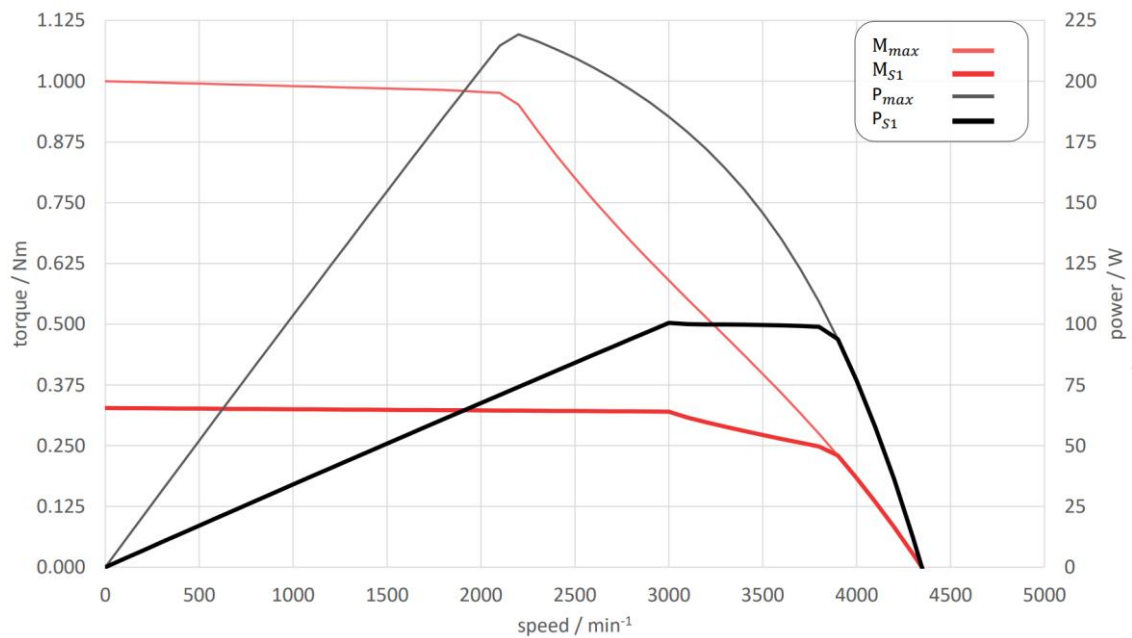
Feature		SM2-11045	SM2-13060	SM2-13095
Voltage	VDC	24 ± 10%	24 ± 10%	
Release Voltage	VDC	> 1.5	> 1.0	
Pull-in Voltage	VDC	≤ 18	≤ 16.8	
Power Rating	W	16.8	16.9	
Static Torque (min)	Nm	12	15	
Resistance	Ω	34 ± 10%	34 ± 10%	
Release time	ms	≤ 60	≤ 60	
Pull-in time	ms	≤ 100	≤ 100	

Speed/Torque Curves

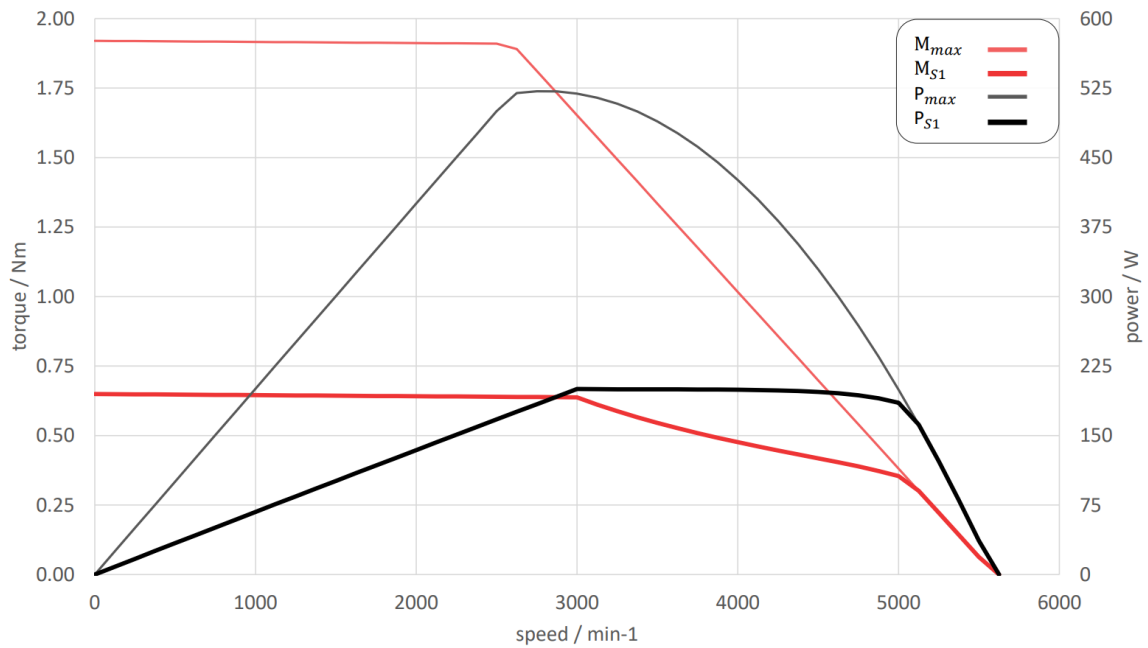
SM2-40001, 50W



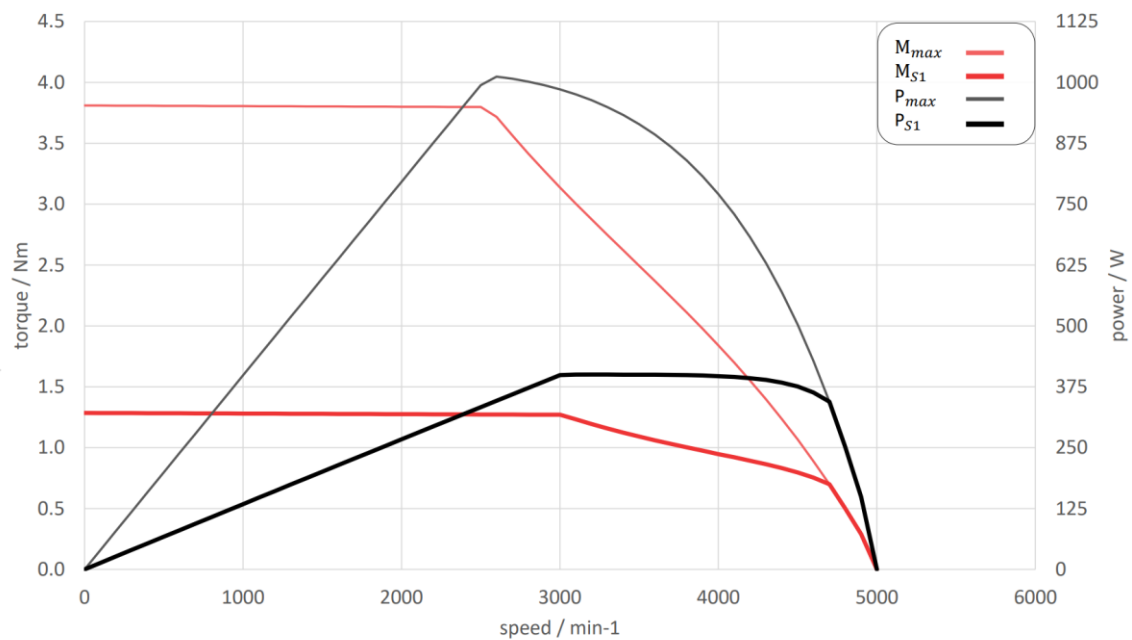
SM2-40003, 100W



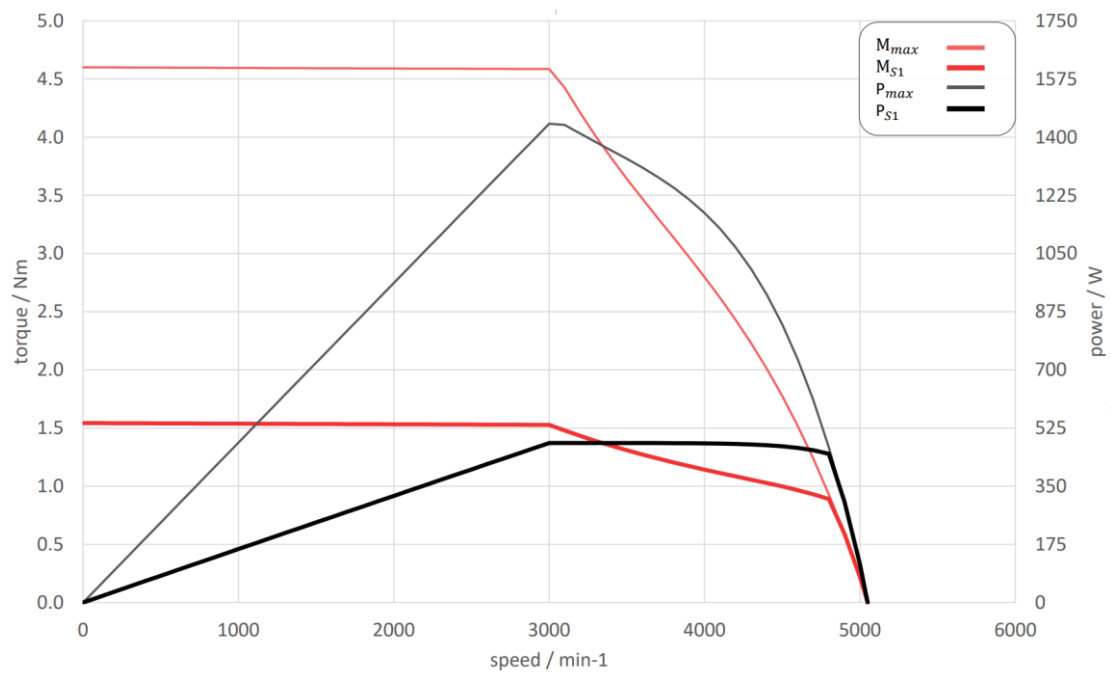
SM2-60006, 200W



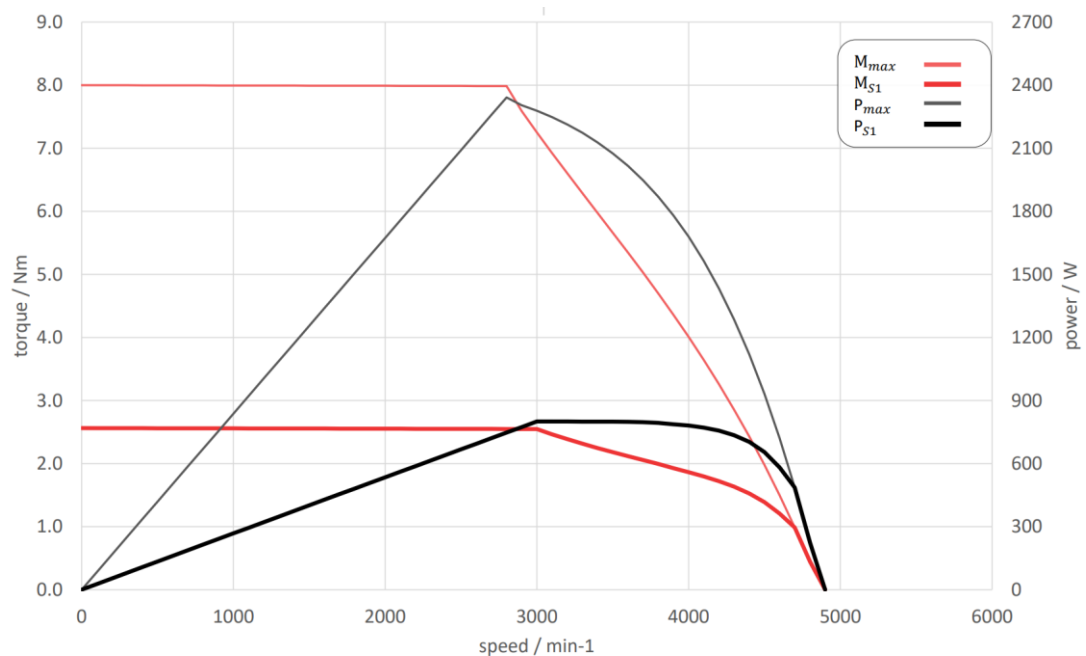
SM2-60013, 400W



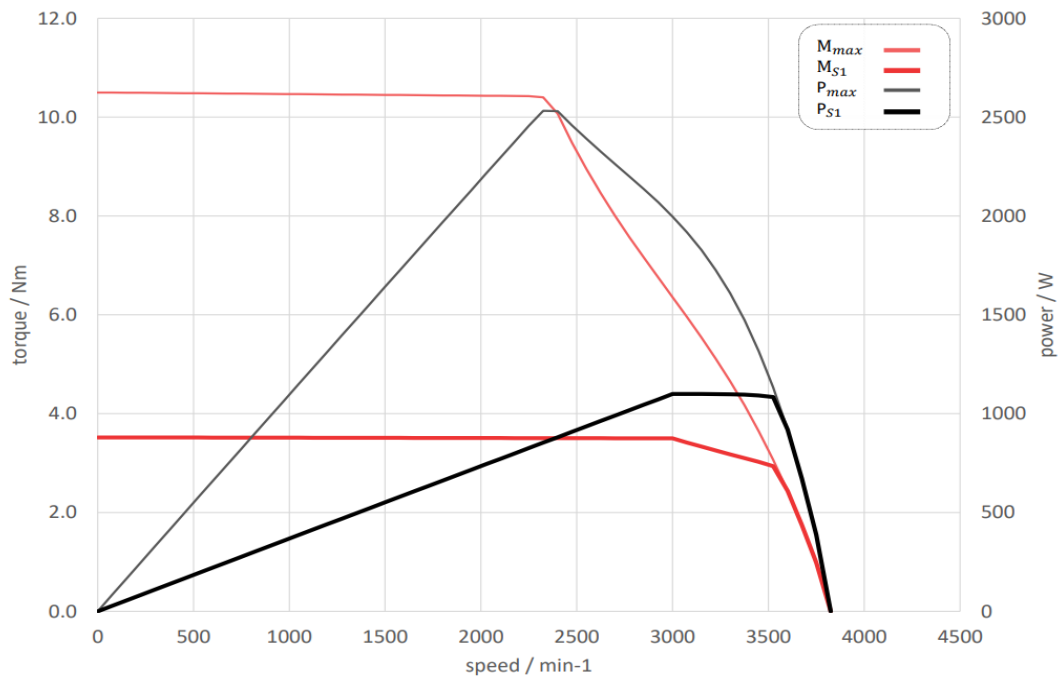
SM2-80015, 480W



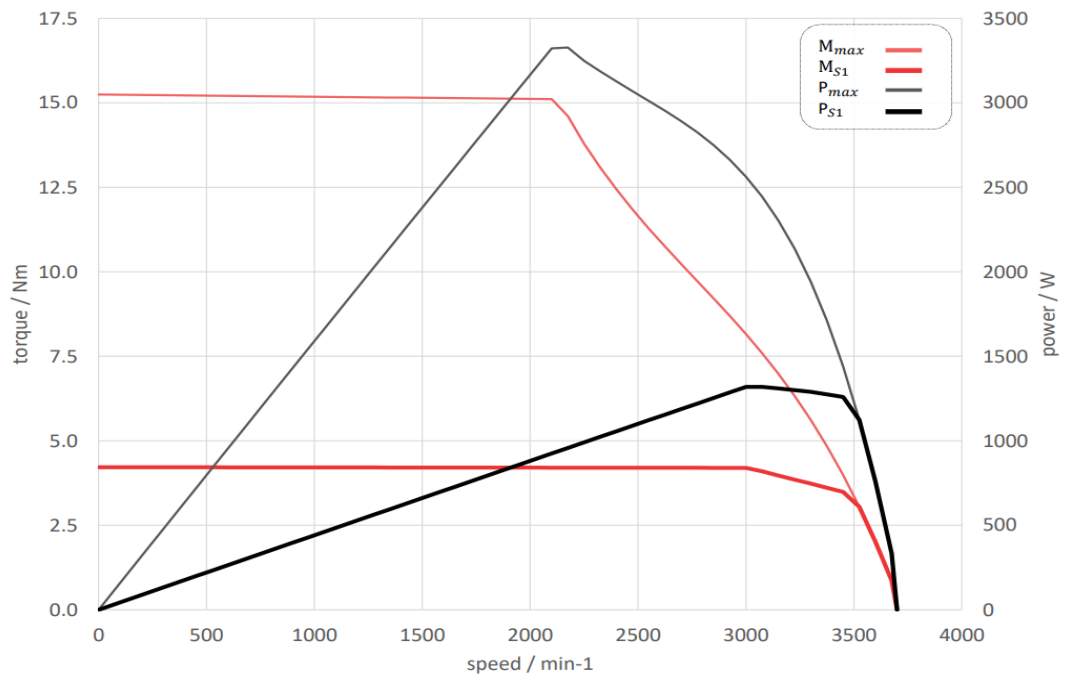
SM2-80025, 800W



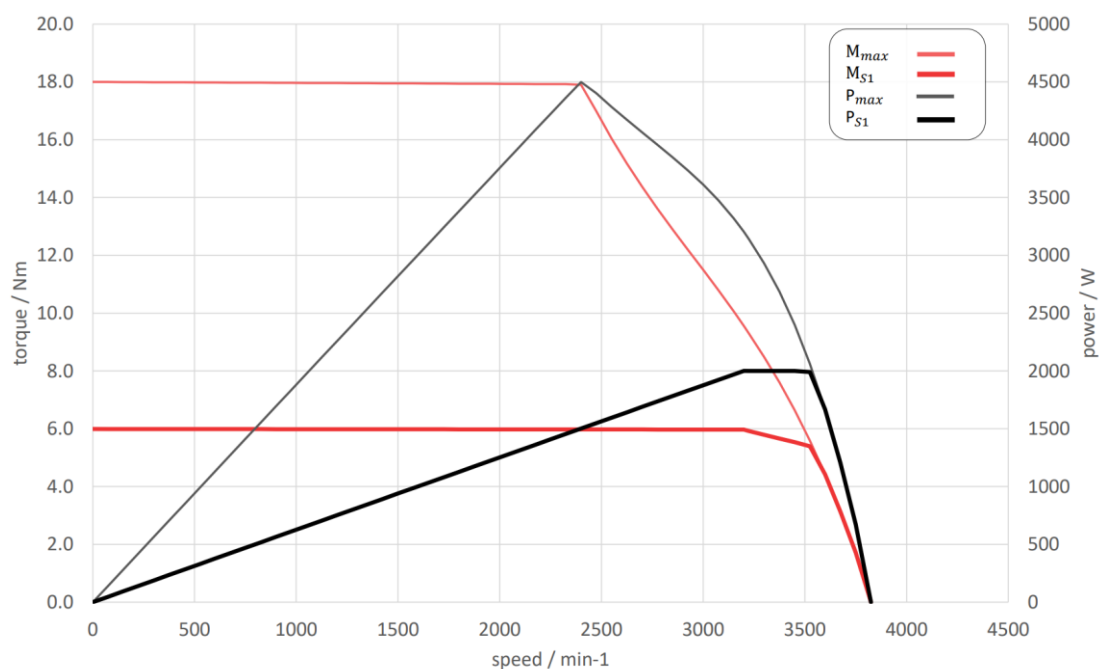
SM2-80035, 1100W



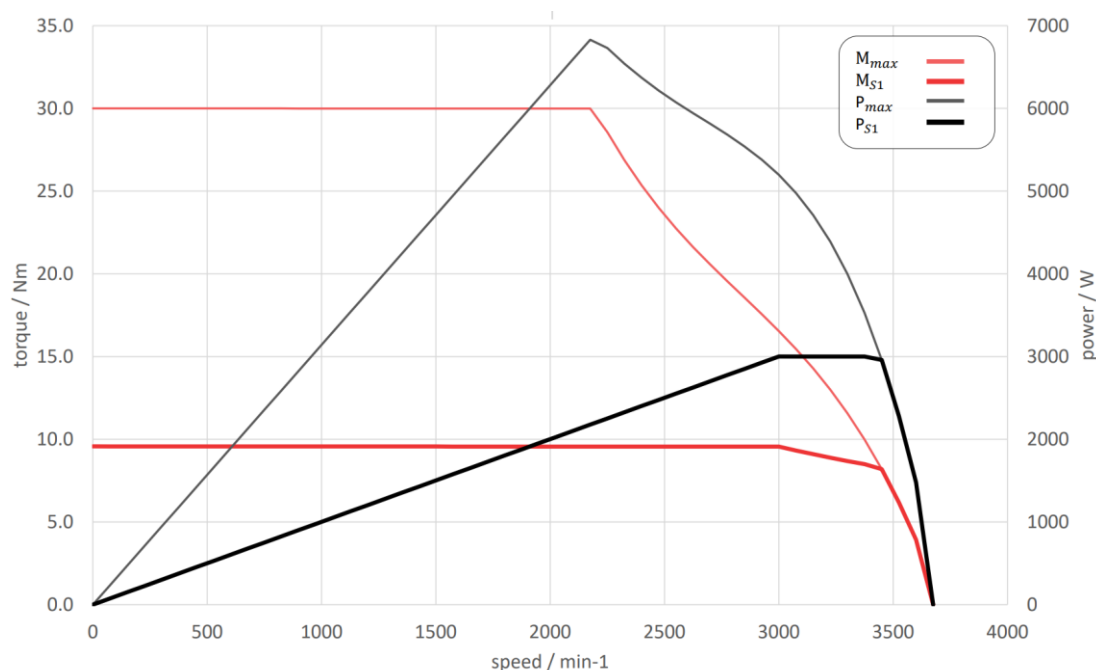
SM2-11045, 1350W



SM2-13060, 2000W



SM2-13095, 3000W



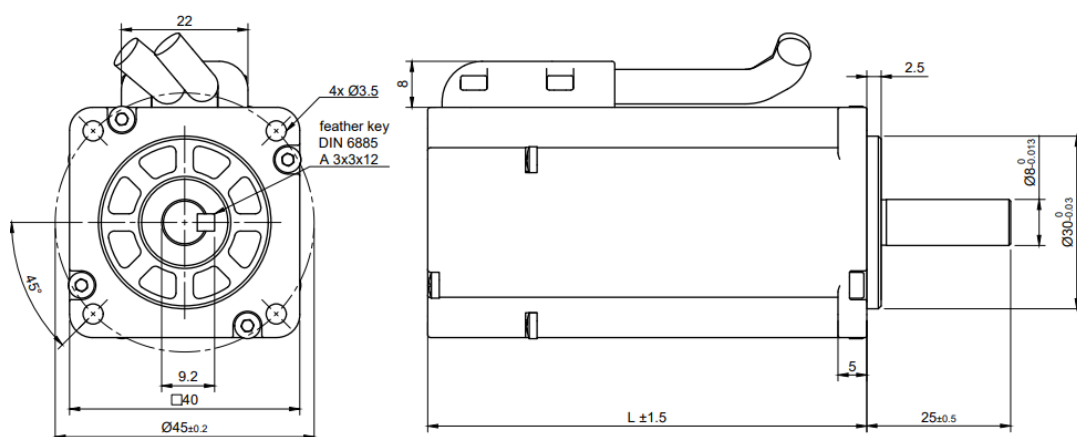
Please note:

The specified values of the parameters are subject to tolerances due to fluctuations in the properties and dimensions of the materials used.

Therefore, the values are the respective average value, whereby deviations of +/- 10% are permitted for torques, currents and speeds. In the case of inductance, there can also be an angle-dependent fluctuation.

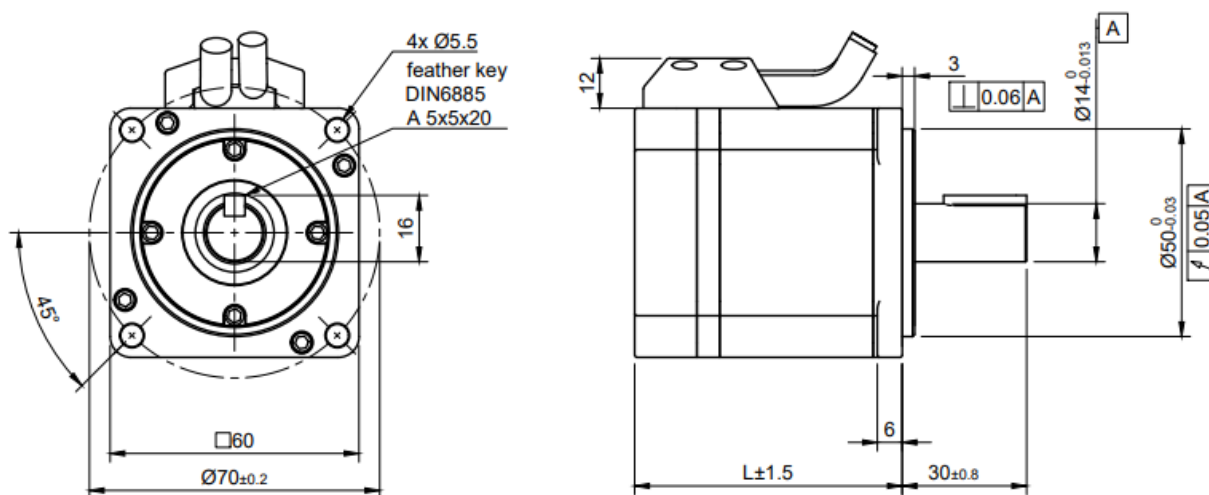
Dimensions

SM2-40



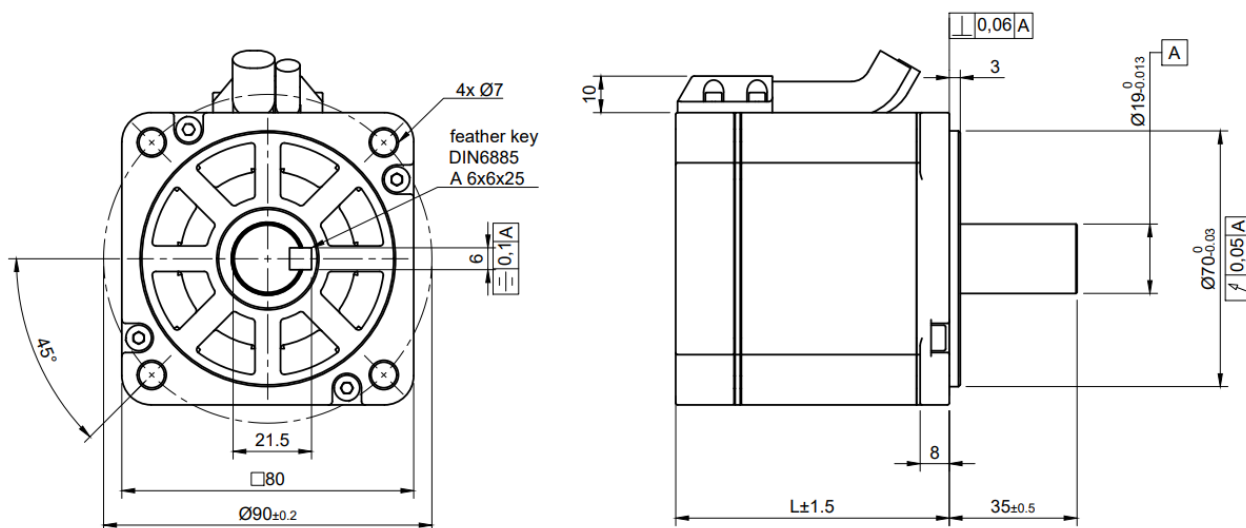
□ 40mm				
	SM2-40001		SM2-40003	
Brake	no	yes	no	yes
Length	55.80	76.30	69.80	90.30

SM2-60



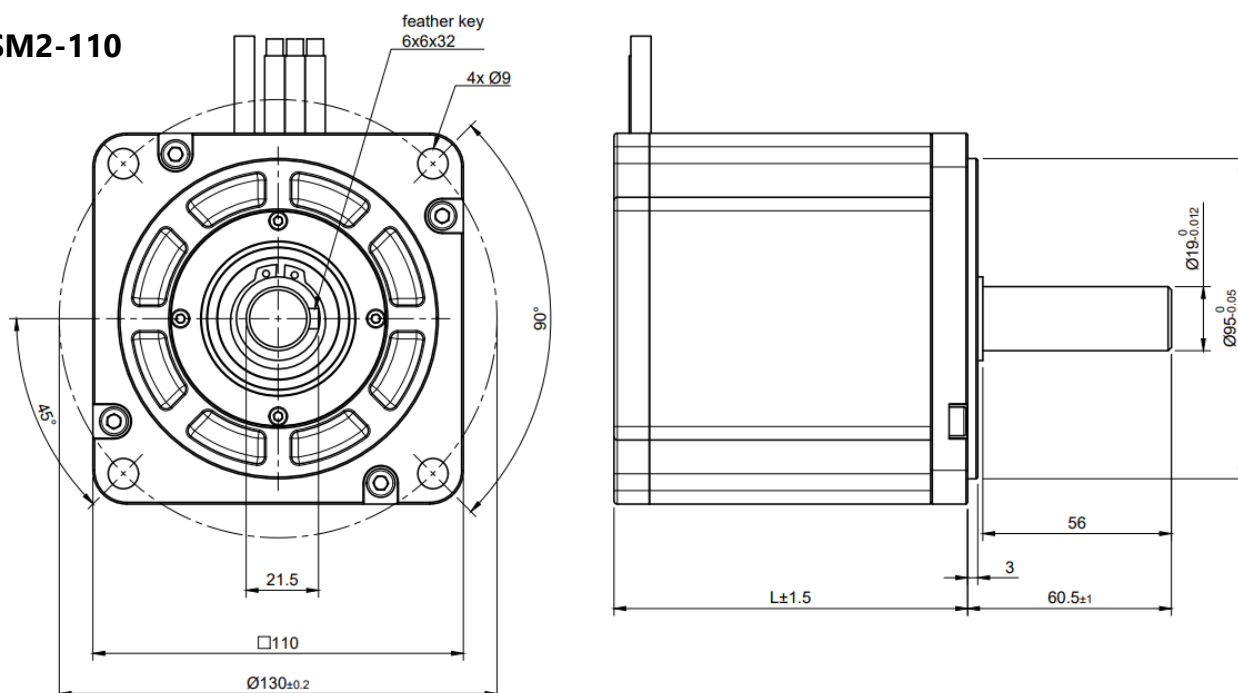
□ 60mm				
	SM2-60006		SM2-60013	
Brake	no	yes	no	yes
Length L [mm]	64.50	81.50	84.50	101.50

SM2 80



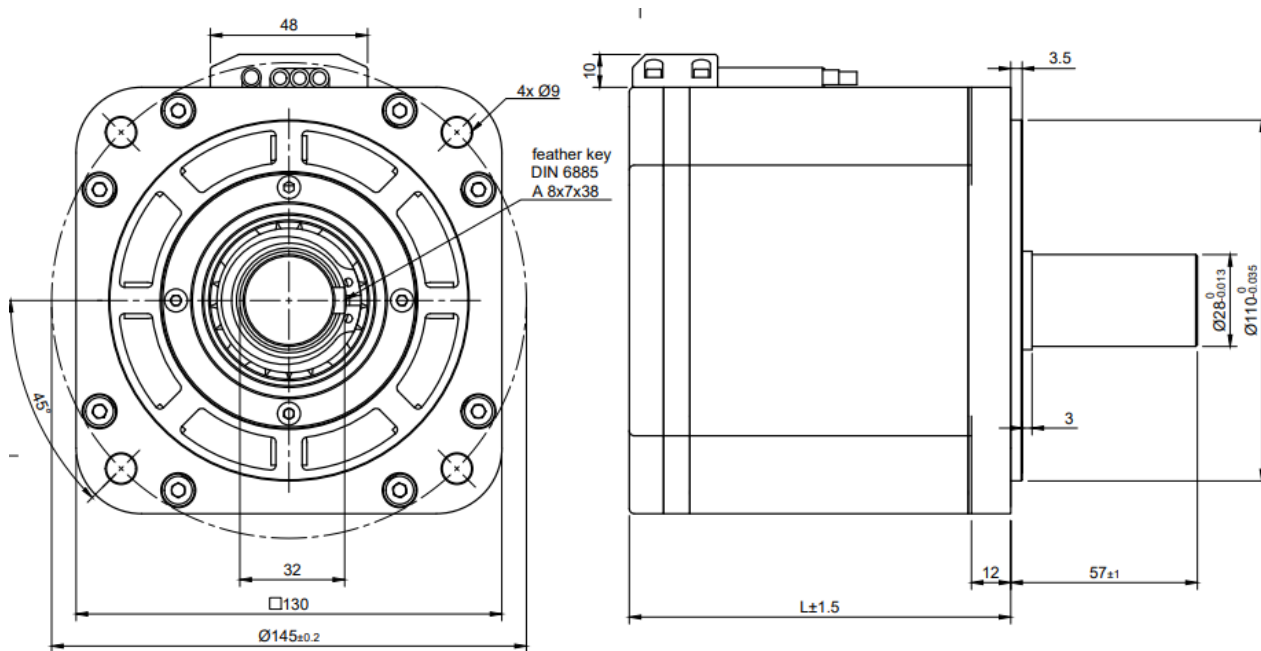
□ 80mm						
	SM2-80015		SM2-80025		SM2-80035	
Brake	no	yes	no	yes	no	yes
Length L [mm]	75.00	105.00	92.00	122.00	110	140

SM2-110



□ 110mm		
	SM2-11045	
Brake	no	yes
Length L [mm]	108.00	133.00

SM2-130



$\square 130\text{mm}$				
	SM2-13060		SM2-13095	
Brake	no	yes	no	yes
Length L [mm]	91.50	116.50	106.50	131.50

Ordering Information

	SM2	-	60	006	4	30	0	5	AB	0	M
SM2 Servo Motor											
Frame Size											
40	40 mm										
60	60 mm										
80	80 mm										
11	110 mm										
13	130 mm										
Torque											
001	0.16 Nm (40mm, 50W)										
003	0.32 Nm (40mm, 100W)										
006	0.64 Nm (60mm, 200W)										
013	1.27 Nm (60mm, 400W)										
015	1.53 Nm (80mm, 480W)										
025	2.55 Nm (80mm, 800W)										
035	3.50 Nm (80mm, 1.1kW)										
042	4.20 Nm (110mm, 1,4kW)										
060	6.00 Nm (130mm, 2 kW)										
095	9.55 Nm (130mm, 3 kW)										
DC Bus Voltage											
2	24 VDC (optional)										
4	48 VDC										
Rated Speed											
30	3000 rpm										
32	3200 rpm (2 + 3 kW)										
Shaft											
0	Smooth										
2	Keyway										
IP Rating											
4	IP40										
5	IP54										
Feedback											
AB	Incremental encoder AqB, Res.4096 ppr + Halls										
Brake											
0	No brake										
B	With brake										
Connector											
F	0.35 m cable with flying leads										
M	0.35 m cable with connector for ZED-drive, Power+Feedback+Brake										

Contact STXI Motion to learn how our solutions can give you optimal performance from your machines.