



AC BRUSHLESS SERVOMOTORS - DSM5.2x



DSM5 - size TWO Brushless Servomotors are AC PM Synchronous servomotors. They have been designed using the latest generation of magnets and construction techniques to provide very high performance, low cogging and torque ripple. They can be supplied with resolver or Incremental / absolute encoder.

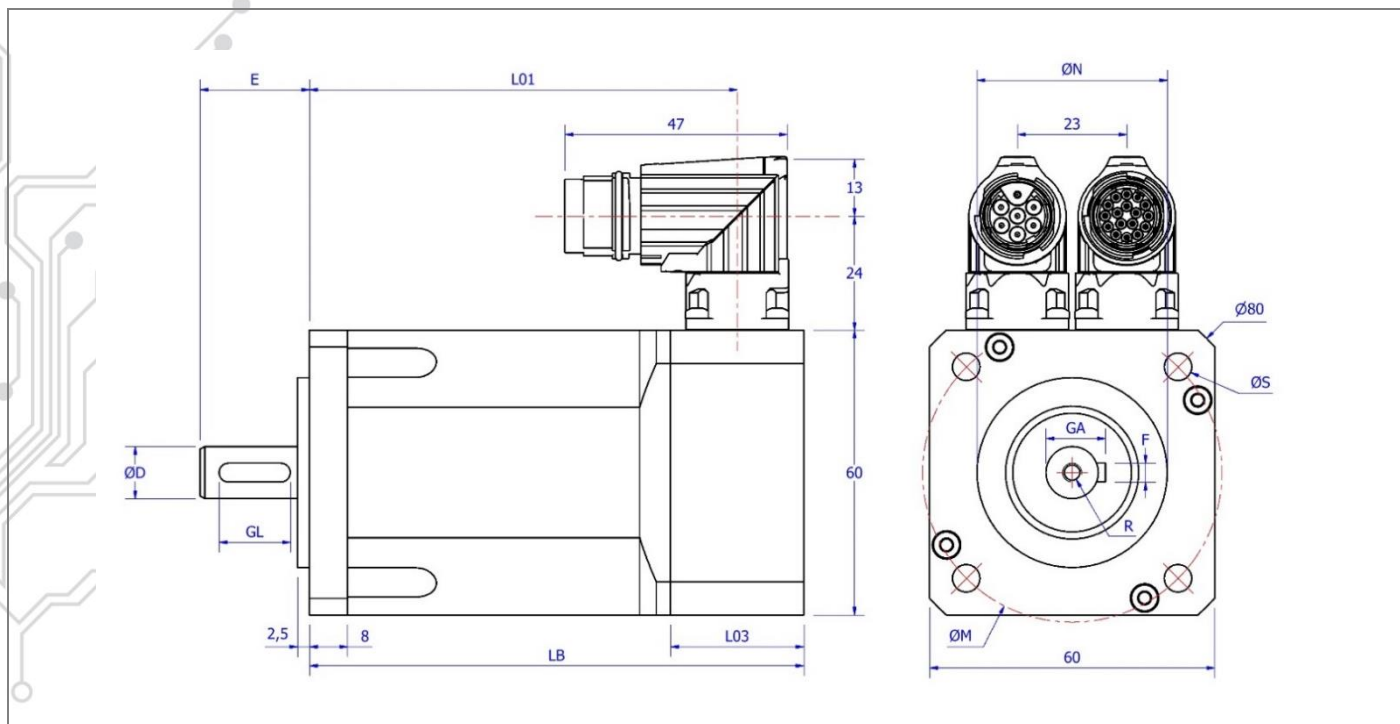
Their main characteristics are:

- Frame size 60mm
- Rare earth magnets for high performance
- 8 pole construction for high torque density
- Low cogging and torque ripple
- Sinusoidal back EMF
- Integrated PTC thermal protection
- Rotatable connectors
- Compact design
- High IP rating
- Smooth finish

Technical Data

Tab. 1

Description Winding code	Symbol	Motor Units	DSM5.21		DSM5.22	
			1	2	1	2
Standstill Torque	M ₀	Nm	0,7		1,4	
Maximum Torque	M _{pk}	Nm	2,4		4,6	
Standstill Current	I ₀	A	1,57	0,96	2,8	1,73
Peak current	I _{pk}	A	6,4	3,9	11	6,6
Maximum mechanical revs	N _{mec}	min ⁻¹	8500		8500	
Maximum revs @ 230Vac	N _{MAX}	min ⁻¹	6200	3600	6300	3900
Maximum revs @ 400Vac	N _{MAX}	min ⁻¹	8000	6000	8000	6000
Voltage constant	K _E	V/krpm	27	44	30	49
Torque constant	K _T	Nm/A	0,45	0,73	0,5	0,81
Rotor Inertia	J _R	kg cm ²	0,13		0,23	
Resistance @ 20°C	R _{U-V}	Ohm	8,6	23	3,2	8,4
Inductance @ 1 kHz	L _{U-V}	mH	10	27	5,6	13
Mass	m	kg	1,2		1,7	



Dimension in mm

Tab. 2

Feedback device	EQ1130, TTL 2048ppr, Resolver,			SKM36		
Dimension	LB	L01	L03	LB	L01	L03
DSM5.21	104	90	28	118	104	42
DSM5.22	132	118		146	132	
DSM5.21 Brake	134,4	120,4		148,4	134,4	
DSM5.22 Brake	162,4	148,4		176,4	162,4	

Dimension in mm

Tab. 3

Flange	40/63	56B14	50/70
N	40j6	50j6	50j6
M	63	65	70
S	5,8	M5	5,5

Dimension in mm

Tab. 4

Shaft	Dimension		
D	9j6	11j6	14j6
E	20	23	30
GL	12	15	20

Information Bold data refers to standard version dimensions.

Values in this catalogue are true for the following conditions:

- Max ambient temperature 40° C
- Min ambient temperature 0 °C
- Max Altitude 1000 m (above sea level)
- Insulation class F (materials F & H)
- RMS values
- Insulation system conforms to UL
- IP65 enclosure protection with shaft seal
- Motor Installation B5 – V5
- Cooling IC410
- Typical tolerance value ±10%
- Continuous ratings apply with a rise of ΔT=100K on the windings when fitted on an aluminium plate with dimensions 254 x 254 x 8mm

Sangalli reserves the right to amend the specification of this product without prior notification.

PART NUMBER COMPOSITION

1	2	3	4	5	6	7	8	9	10	11	12
D	S	M	5	2	2	1	1	4	8	x	x

POS.	DESCRIPTION
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1-3 **Product**
DSM= PM synchronous motor, self-cooled

4 **Motor type**
Series 5

5 **Motor size**
Size Two

6 **Motor length**
1 = Mo 0,70 Nm
2 = Mo 1,40 Nm

7 **Voltage**
1 = Winding code 1
2 = Winding code 2

8 **Holding brake**
0 = Without brake
1 = Permanent Magnet Brake $24 \pm 6\% V_{DC}$ $M_{br} = 2Nm$ $11W$ $J_{br} = 0,1kgcm^2$ $m = 300g$

9 **Feedback**
0 = Sensorless
1 = Heidenhain Encoder EQI1130 Endat Multi Turn
4 = Incremental Encoder 2048 PPR + hall
9 = Resolver 2p 7V 10KHz
C = Encoder Sangalli Servomotori ME29 Biss-C MT at battery cell
L = Sick encoder SEL37 Hiperface Multi turn
W = Sick encoder EKS36 17bit NO SIL, DSL
Y = Sick encoder EKM36 18bit Multi turn NO SIL, DSL
Z = Sick encoder SKM36 Hiperface 128i PPT Multi turn

Available on request SIL option on some types of encoders

10 **Connection type**
1 = Cable gland + cable 30-40 cm
8 = M17 7 poles power connector / M17 90° feedback
B = M15 ITEC single connector 9 poles

11-12 **Special version** (*Below some examples, for further details please contact our technical support.*)

48 = Shaft 14 x 30mm and Flange 50/70mm (spigot/PCD)
62 = Shaft 9 x 20mm
66 = IP65 Shaft Protection
90 = Thermal protection PT1000
xx = Special Shaft and Flanges (on request)

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MOTORS & MOTION CONTROL

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- **TORQUE MOTORS**
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ISD : E220486

