



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	DSM5.21		DSM5.22		DSM5.23	
		Units	1	2	1	2	1	2
Stall Torque	M ₀	Nm	0,7		1,4		2,0	
Maximum Torque	M _{pk}	Nm	2,4		4,6		6,7	
Stall Current	I ₀	A	1,57	0,96	1,57	0,96	4,6	2,7
Peak current	I _{pk}	A	6,4	3,9	6,4	3,9	19	11
Maximum mechanical revs	N _{mec}	min ⁻¹	8500		8500		8000	
Maximum revs @ 230Vac	N _{MAX}	min ⁻¹	6200	3600	6200	3600	6200	3600
Maximum revs @ 400Vac	N _{MAX}	min ⁻¹	8000	6000	8000	6000	8000	6000
Voltage constant	K _E	V/krpm	27	44	27	44	27	45
Torque constant	K _T	Nm/A	0,45	0,73	0,45	0,73	0,45	0,75
Rotor Inertia	J _R	kg cm ²	0,13		0,23		0,29	
Resist. @ 20°C	R _{U-V}	Ohm	8,6	23	8,6	23	2	5,8
Induct. @ 1 kHz	L _{U-V}	mH	10	27	10	27	3,5	9,8
Mass	m	kg	1,2		1,7		2,2	



Tab. 2

Dimension in mm

Tab. 3

Dimension in mm

Tab. 4

Information

Bold data refers to standard version dimensions.

- 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 $\pm 10\%$
- Continuous ratings apply with a rise of $\Delta T = 100K$ 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

1-3

Product

DSM= PM synchronous motor, self-cooled

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Motor type

Series 5

5

Motor size

Size Two

6

Motor length

1 = Mo 0,70 Nm

2 = Mo 1,40 Nm

3 = Mo 2 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

3 = Heidenhain Encoder EQI1131 Endat Multi Turn 2.2

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 18bit 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

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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)

SANGALLI SERVOMOTORI



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MOTORS & MOTION CONTROL

- **DSM5 BRUSHLESS SERVOMOTORS**
- **DSG SYNCHRONOUS PM GENERATORS**
- **RARE EARTH SC DC SERVOMOTORS**
- **DSW WATER-COOLED**
- **LOW-COST SOLUTIONS**
- **PLANETARY GEARS**
- **CUSTOMISED SOLUTIONS**
- **TORQUE MOTORS**
- **FRAMELESS SPINDLE MOTORS**



ISD : E220486

