SANGALLI SERVOMOTORI

AC brushless Servomotors DSM5.6x

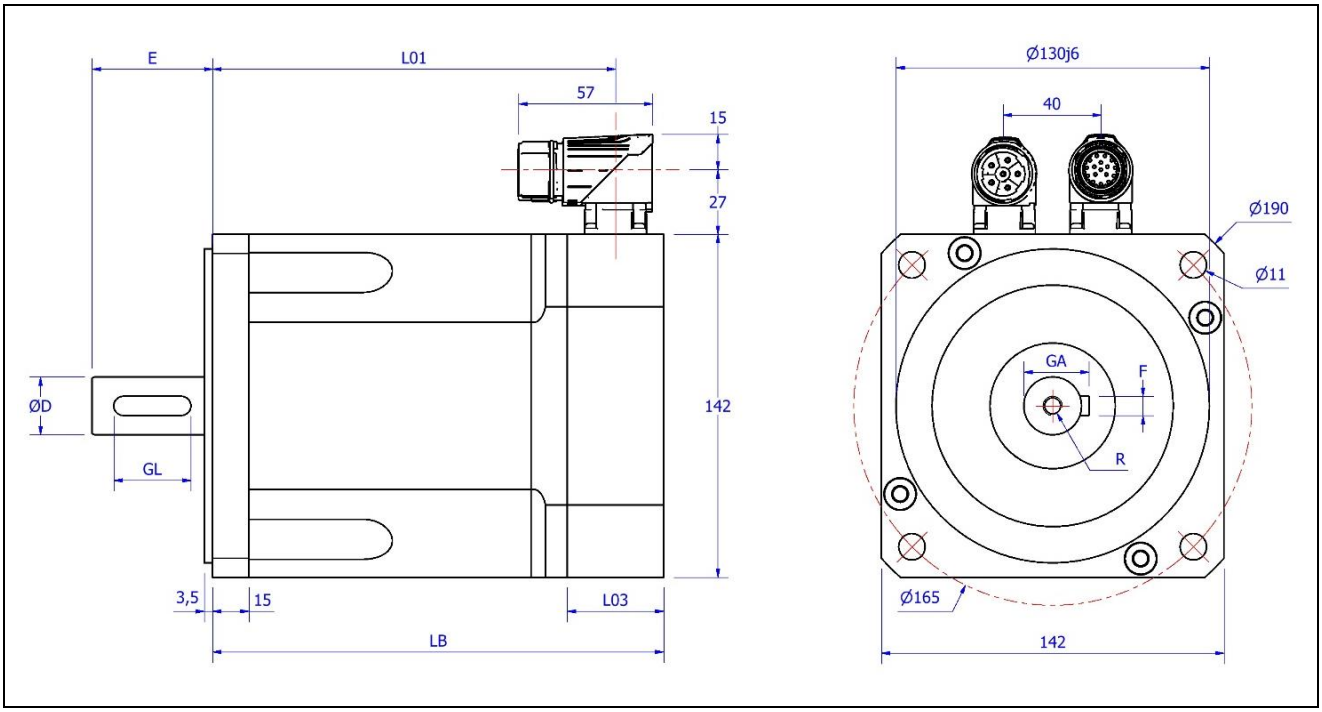
DSM5 size Six Brushless Servomotors are AC PM Synchronous servomotors. They have been designed using latest generation of magnets and construction techniques to provide very high performance, low cogging and torque ripple. They can be supplied with resolver or Incremental / absolute encoder.

Their main characteristics are:

- Frame size 190mm
- 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*	**DSM5.61**		**DSM5.62**		**DSM5.63**		**DSM5.64**	
		UM	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Stall Torque	M_0	Nm	**15**		**28**		**50**		**70**	
Maximum Torque	Mpk	Nm	42	38	72	72	127	130	177	184
Stall Current	I_0	A	12	9	24	12,5	28	18	39	26
Peak current	I_{pk}	A	37	27	72	38	84	55	117	80
Maximum mechanical revs	N_{mec}	min-1	5500		5500		4500		4500	
Maximum revs @ 230Vac	N_{MAX}	min^{-1}	2300	1800	2400	1300	1800	1100	1800	1200
Maximum revs @ 400Vac	N_{MAX}	min^{-1}	4000	3000	4000	2500	3000	2000	3000	2000
Voltage constant	K_E	V/krpm	79	100	72	134	108	169	108	162
Torque constant	K_T	Nm/A	1,32	1,66	1,17	2,22	1,78	2,8	1,78	2,7
Rotor Inertia	J_R	kg cm^2	54		91		177		264	
Resist. @ 20°C	R_{U-V}	Ohm	0,6	0,95	0,26	0,74	0,16	0,36	0,09	0,16
Induct. @ 1 kHz	L_{U-V}	mH	3,4	6,5	2,1	5,3	1,3	3,2	0,8	1,8
Mass	m	kg	17		23		36		50	



Dimensions in mm *Tab. 2*

Feedback device	**TTL 2048 ppr, Resolver**			**SinCos, EKS36**		
Dimension	LB	L01	L03	LB	L01	L03
DSM5.61	163	139,5	27	183	159,5	47
DSM5.62	198	174,5		218	194,5	
DSM5.63	288	264,5	47	288	264,5	
DSM5.64	334,5	334,5		334,5	334,5	
DSM5.61 Brake	233,5	210	27	253,5	230	
DSM5.62 Brake	268,5	245		288,5	265	
DSM5.63 Brake	358,5	335	47	358,5	335	
DSM5.64 Brake	428,5	405		428,5	405	

Dimensions in mm *Tab. 3*

Shaft	**Dimension**	
D	32k6	38k6
E	58	80
GL	45	70
GA	35	41
F	10	10
R	M12 x 22	M12 x 28

Values in this catalogue are true for the following conditions:

- Max Temperature ambient 40° C
- Min temperature ambient 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 seal
- Motor Installation B5 – V5
- Cooling IC0041
- Typical tolerance value ±10%
- Continuous ratings apply with a rise of ΔT=100K on the windings when fitted on an aluminium plate with dimensions 457 x 457 x 15mm

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	6	2	2	0	9	5	x	x

Pos. Description

1-3 **Product**
DSM = PM synchronous motor, self-cooled
DSF = PM synchronous motor, forced air-cooled
DSW = PM synchronous motor, water-cooled

4 **Motor type**
Series 5

5 **Motor Size**
Size Six

6 **Motor Length**
1 = Mo 15Nm
2 = Mo 28Nm
3 = Mo 50Nm
4 = Mo 70Nm

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

8 **Holding brake**
0 = Without brake
1 = With holding brake Mb = 72 Nm - 40 W - 24 VDC PM - Jb = 46 kgcm^2 - mb = 8 kg

9 **Feedback**
0 = Sensor-less
4 = Encoder 2048ppr TTL LD + hall sensors
6 = Encoder 4096ppr TTL LD + hall sensors
7 = Encoder 1Vpp + position sin-cos
9 = Resolver size 15 2p 7V 10KHz
W = Sick encoder EKS36 Hiperface DSL single-turn no SIL 17bit
Y = Sick encoder EKM36 Hiperface DSL multi-turn no SIL 17bit
Z = Sick encoder SKM36 Hiperface 128ppr multi-turn

10 **Connection type**
7 = M23 connectors 90° rotatable
9 = M40 connector 90° rotatable I > 20A power, feedback M23

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- 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