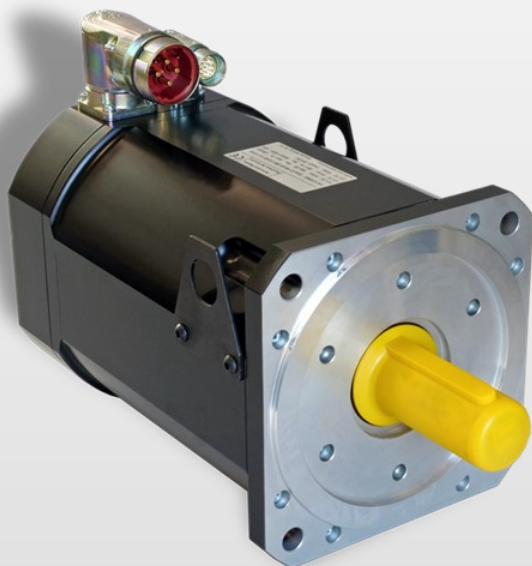




AC BRUSHLESS SERVOMOTORS - DSM5.6x



DSM5 - size SIX 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.

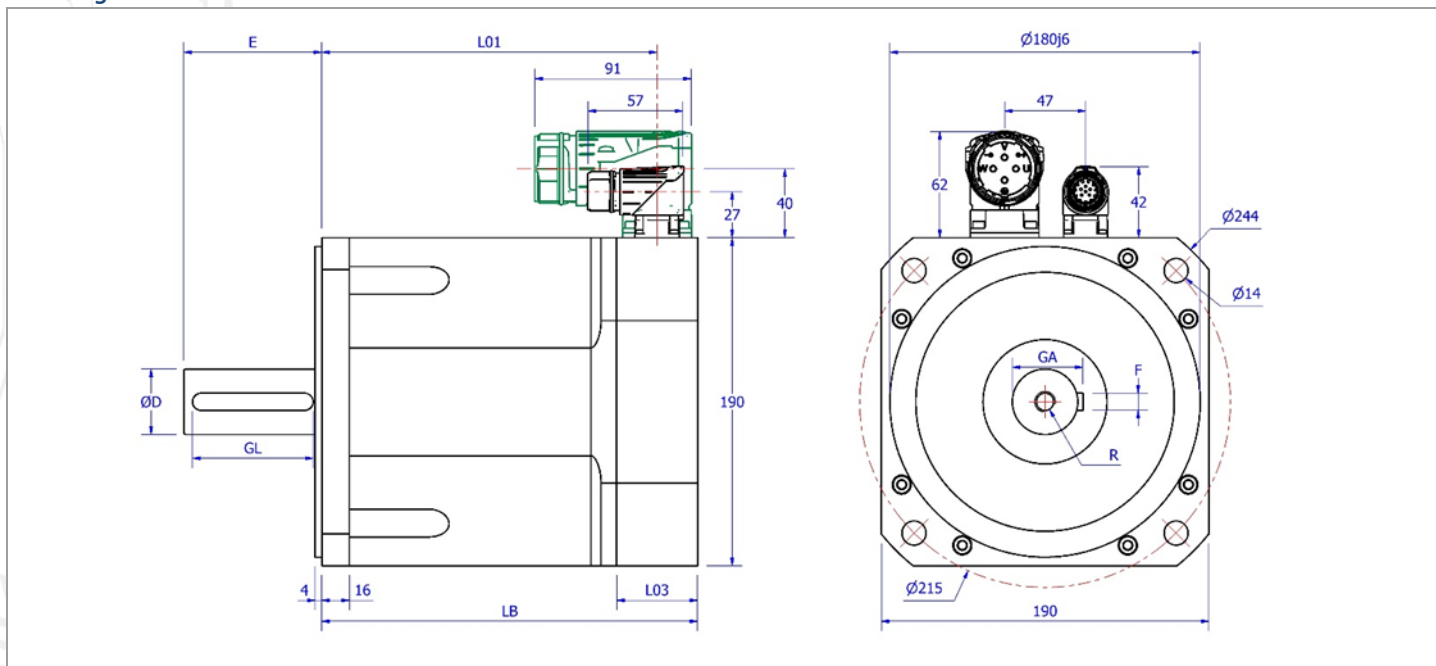
Their main characteristics are:

- Frame size 190 mm
- 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	
		Units	1	2	1	2	1	2	1	2
Stall Torque	M_0	Nm	15		28		50		70	
Maximum Torque	M_{pk}	Nm	40		72		130		180	
Stall current	I_0	A	11	9,1	24	13	28	18	39	26
Peak current	I_{pk}	A	37	27	72	38	87	55	120	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	1,31	1,65	1,17	2,22	1,79	2,8	1,79	2,68
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	



Dimension in mm

Tab. 2

Feedback device	TTL 2048ppr, Resolver			SinCos, SKM36		
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	

Dimension 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

INFORMATION - Bold data refers to standard version dimensions.

The following accessories are available on request:

- 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 457 x 457 x 15mm

PART NUMBER COMPOSITION

1	2	3	4	5	6	7	8	9	10	11	12
D	S	M	5	6	2	1	0	4	9	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 = Permanent Magnet Brake $24 \pm 6\% V_{DC}$ $M_{br} = 72Nm$ $35W$ $J_{br} = 43,6 \text{ kgcm}^2$ $m=6,9kg$
 2 = Spring Brake $24 \pm 6\% V_{DC}$ $M_{br} = 50Nm$ $62W$ $J_{br} = 5,04kgcm^2$ $m=5,0kg$
- 9 Feedback**
 0 = Sensorless
 4 = Incremental Encoder 2048 PPR + hall
 6 = Incremental Encoder 4096 PPR + hall
 7 = Encoder sin-cos 1 Vpp 2048 with CD channels
 9 = Resolver 2p 7V 10KHz
 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
- 10 Connection type**
 7 = M23 90° 6 poles power connector / M23 90° feedback
 9 = M40 90° 6 poles power connector / M23 90° feedback connector (Currents >20A)
- 11-12 Special versions** *(Below some examples, for further details please contact our technical support.)*
 26 = Shaft without key
 66 = Shaft sealing ring
 90 = PT1000 Thermal protection
 xx = Special Shaft and Flanges (on request)



SANGALLI SERVOMOTORI

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



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