

Synchronous servo motors

IndraDyn S

MSK - to meet all requirements



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- Project Planning Manual
- Application Manual - For Potentially Explosive Areas

**Compact and powerful**

- Maximum torques up to 495 Nm
- Maximum speeds up to 9,000 rpm
- Encoder systems for a wide and diverse range of applications
- High protection category IP65
- Choice of cooling systems

The particularly outstanding features of the MSK range of motors are its wide power spectrum and narrow size increments. The high torque density of these synchronous servo motors allows a particularly compact design with maximum torques of up to 495 Nm.

Depending on the level of precision required, we can supply the motors with encoder systems for standard or high-precision requirements. Both encoder versions are available in a single-turn and multi-turn configuration. A number of further options, such as the shaft keyway, holding brake, reduced runout and the high protection category IP65 mean that they can be used with fan, liquid cooling and ATEX.

On applications with high levels of continuous power, optional blower units for axial or radial mounting are available for retrofit. Intrinsically safe IP65 blower motors (UL thermally protected F) ensure the reliability of the single-phase blower units, eliminating the need for an external circuit breaker. Optional liquid cooling is available for very high power applications.

Technical data**Electric data**

Type	Maximum speed	Continuous torque at standstill	Maximum torque	Continuous current at standstill	Maximum current	Moment of inertia
	n_{Max}	M_0	M_{Max}	I_0	I_{Max}	J
	[1/min]	[Nm]	[Nm]	[A]	[A]	[kgm ²]
MSK030B-0900	9000	0.4	1.8	1.5	6.8	0.000013
MSK030C-0900		0.8	4			0.00003
MSK040B-0450	6000	1.7	5.1	2	8	0.0001
MSK040B-0600	7500					
MSK040C-0450	6000	2.7	8.1	2.4	9.6	0.00014
MSK040C-0600	7500			3.1	12.4	
MSK043C-0600				12.5	18.5	
MSK050B-0300	4300	3	9	1.8	7.2	0.00028
MSK050B-0450	6000			2.8	11.2	
MSK050B-0600				3.7	14.8	
MSK050C-0300	4700	5	15	3.1	12.4	0.00033
MSK050C-0450	6000			4.7	18.8	
MSK050C-0600				6.2	24.8	
MSK060B-0300	4800			3	12	0.00048
MSK060B-0600	6000			6.1	24.4	

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Type	Maximum speed	Continuous torque at standstill	Maximum torque	Continuous current at standstill	Maximum current	Moment of inertia
	n_{Max}	M_0	M_{Max}	I_0	I_{Max}	J
	[1/min]	[Nm]	[Nm]	[A]	[A]	[kgm ²]
MSK060C-0300	4900	8	24	4.8	19.2	0.0008
MSK060C-0600	6000			9.5	38	
MSK061B-0300	4200	3.5	14	1.9	8.6	0.00044
MSK061C-0200	3100	8	32	3.2	14.4	0.000752
MSK061C-0300	4200			4.3	19.4	
MSK061C-0600	6000			7.7	34.7	
MSK070C-0150	2500	13	33	4.1	16.4	0.00291
MSK070C-0300	5500			8.2	32.8	
MSK070C-0450	6000			12.3	36.9	
MSK070D-0150	2700	17.5	52.5	6.2	24.8	0.00375
MSK070D-0300	4900			11	33	
MSK070D-0450	6000			16.6	49.8	
MSK070E-0150	2200	23	70	6.4	25.6	0.00458
MSK070E-0300	5300		65	15.4	49.3	
MSK070E-0450	6000		60	19.3	57.9	
MSK071C-0200	3500	12	44	5.2	23.4	0.00173
MSK071C-0300	5000			7.3	32.9	
MSK071C-0450	5800			8.9	40.1	
MSK071D-0200	3200	17.5	66	7.3	32.8	0.00255
MSK071D-0300	3800			9.1	40.5	
MSK071D-0450	6000			15.4	69.3	
MSK071E-0200	3400	23	84	10.1	45.5	0.0029
MSK071E-0300	4200			12.5	56.3	
MSK071E-0450	6000			20	90.1	
MSK075C-0200	4100	12	44	6.3	28.4	0.00352
MSK075C-0300	5000			8.4	37.8	
MSK075C-0450	6000			12.6	56.7	
MSK075D-0200	3800	17	64	8.3	37.4	0.0049
MSK075D-0300	4800		66	11.7	52.7	
MSK075D-0450	6000		64	16.5	74.3	
MSK075E-0200	3850	21	88	10.2	45.9	0.00613
MSK075E-0300	5200			14.2	63.9	
MSK075E-0450	6000			86	18.6	
MSK076C-0300	4700	12	43.5	7.2	32.4	0.0043
MSK076C-0450	5000			12.2	54.9	
MSK100A-0200	4400	15	54	9.2	41.4	0.011
MSK100A-0300	5200			10.2	45.9	
MSK100A-0450	6000			12	54	

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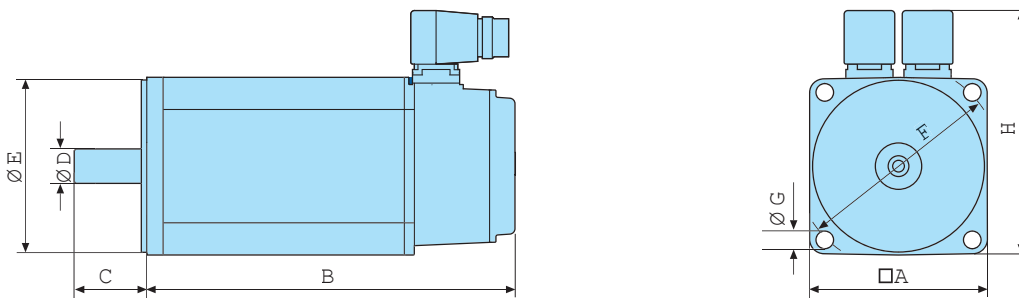
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Electric data

Type	Maximum speed		Continuous torque at standstill		Maximum torque		Continuous current at standstill		Maximum current		Moment of inertia	
	n_{Max}		M_0		M_{Max}		I_0		I_{Max}		J	
	[1/min]		[Nm]		[Nm]		[A]		[A]		[kgm ²]	
MSK100B-0200	4100		28	102	14.7		66.2		0.0192			
MSK100B-0300					17.4		78.3					
MSK100B-0400	4500				24.5		106.7					
MSK100B-0450					28.5		110.7					
MSK100C-0200	3500		38	148	17.7		79.7		0.0273			
MSK100C-0300	4500				21.6		97.2					
MSK100C-0450	4000				35.4		159.3					
MSK100D-0200	2000		48	187	13		58.5		0.035			
MSK100D-0300					20.7		93.2					
MSK100D-0350	3000			185		29.9		135				
MSK101C-0200	3300		32	110	14.9		67.1		0.0065			
MSK101C-0300	4500				18.7		84.2					
MSK101C-0450	5800				25.1		113					
MSK101D-0200	3400		50	160	22.2		99.9		0.00932			
MSK101D-0300	4600				30.6		137.7					
MSK101D-0450	6000				41.7		187.7					
MSK101E-0200	3500		70	231	32.1		144.5		0.0138			
MSK101E-0300	4600				41.6		187.4					
MSK101E-0450	6000				58.3		262.4					
MSK103A-0300	5200		21	54	12.5		40		0.00442			
MSK103B-0300	4700		28	85	17		63		0.00594			
MSK103D-0300	4600		46	138	26.3		94.7		0.00894			
MSK131B-0200	3200		85	250	36.7		165		0.0232			
MSK131D-0200	3000		160	495	65.2		293.4		0.0382			

All the specifications relate to the basic version of the motor with encoder S1 and without holding brake. Values at 750 V DC bus and 60K temperature rise

Dimensions



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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Weight
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
MSK030B-0900	54	152.5	20	9	40	63	4.5	98.5	1.3
MSK030C-0900		188							1.9
MSK040B-0450	82	155.5	30	14	50	95	6.6	124.5	2.8
MSK040B-0600		185.5							3.6
MSK040C-0450			185.5	3.6					
MSK040C-0600		185.5			3.6				
MSK043C-0600	185.5		3.6						
MSK050B-0300		98		173	40	19	95	115	134.5
MSK050B-0450	173		40						
MSK050B-0600				173	40	19	95	115	134.5
MSK050C-0300	203		5.4						
MSK050C-0450				203	5.4				
MSK050C-0600	203		5.4						
MSK060B-0300		116		181	50	24	95	130	156
MSK060B-0600	181		50						
MSK060C-0300				226	8.4				
MSK060C-0600	226		8.4						
MSK061B-0300				223	5.7				
MSK061C-0200	264		8.3						
MSK061C-0300				264	8.3				
MSK061C-0600	264		8.3						

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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Weight							
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]							
MSK070C-0150	140	238	58	32	130	165	11	202	11.7							
MSK070C-0300																
MSK070C-0450																
MSK070D-0150		268							14							
MSK070D-0300																
MSK070D-0450																
MSK070E-0150		298							16.2							
MSK070E-0300																
MSK070E-0450																
MSK071C-0200		272							13.9							
MSK071C-0300																
MSK071C-0450																
MSK071D-0200		312							18							
MSK071D-0300																
MSK071D-0450																
MSK071E-0200		352							23.5							
MSK071E-0300																
MSK071E-0450																
MSK075C-0200		307							14.8							
MSK075C-0300																
MSK075C-0450																
MSK075D-0200		347							19							
MSK075D-0300																
MSK075D-0450																
MSK075E-0200		387							22.5							
MSK075E-0300																
MSK075E-0450																
MSK076C-0300		292.5							50	24	110				180	13.8
MSK076C-0450																

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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Weight							
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]							
MSK100A-0200	192	302	60	32	130	215	14	211.5	23							
MSK100A-0300																
MSK100A-0450																
MSK100B-0200		368							60	32	130	215	14	211.5	34	
MSK100B-0300																
MSK100B-0400																
MSK100B-0450		434							60	32	130	215	14	211.5	45.1	
MSK100C-0200																
MSK100C-0300																
MSK100C-0450		502							60	32	130	215	14	211.5	56	
MSK100D-0200																
MSK100D-0300																
MSK100D-0350		260							350	80	38	180	300	18	262	28.3
MSK101C-0200																
MSK101C-0300																
MSK101C-0450	410		80	38	180	300	18	262	40							
MSK101D-0200																
MSK101D-0300																
MSK101D-0450	501		80	38	180	300	18	262	53.5							
MSK101E-0200																
MSK101E-0300																
MSK101E-0450	186		211	80	38	180	300	18	255							18
MSK103A-0300																
MSK103B-0300																
MSK103D-0300	265		211	80	38	180	300	18	255							22.5
MSK131B-0200																
MSK131D-0200																
MSK131B-0200	260	470	110	48	250	300	18	337	84							
MSK131D-0200		610							116							

All the specifications relate to the basic version of the motor with encoder S1 and without holding brake.

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