

Synchronous servo motors

IndraDyn S

MSK - meets all requirements



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Documentation

Project Planning
Manual
Application description
for potentially
explosive areas



Compact and powerful

- Maximum torques up to 495 Nm
- Stepped maximum speeds 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 class IP65 mean that they can be used with fan, liquid cooling and ATEX. On applications with high levels of continuous power, 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

Electrical data

Type	Maximum speed	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	0.00013		
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			12.5			3.1	12.4
MSK043C-0600							3.6	
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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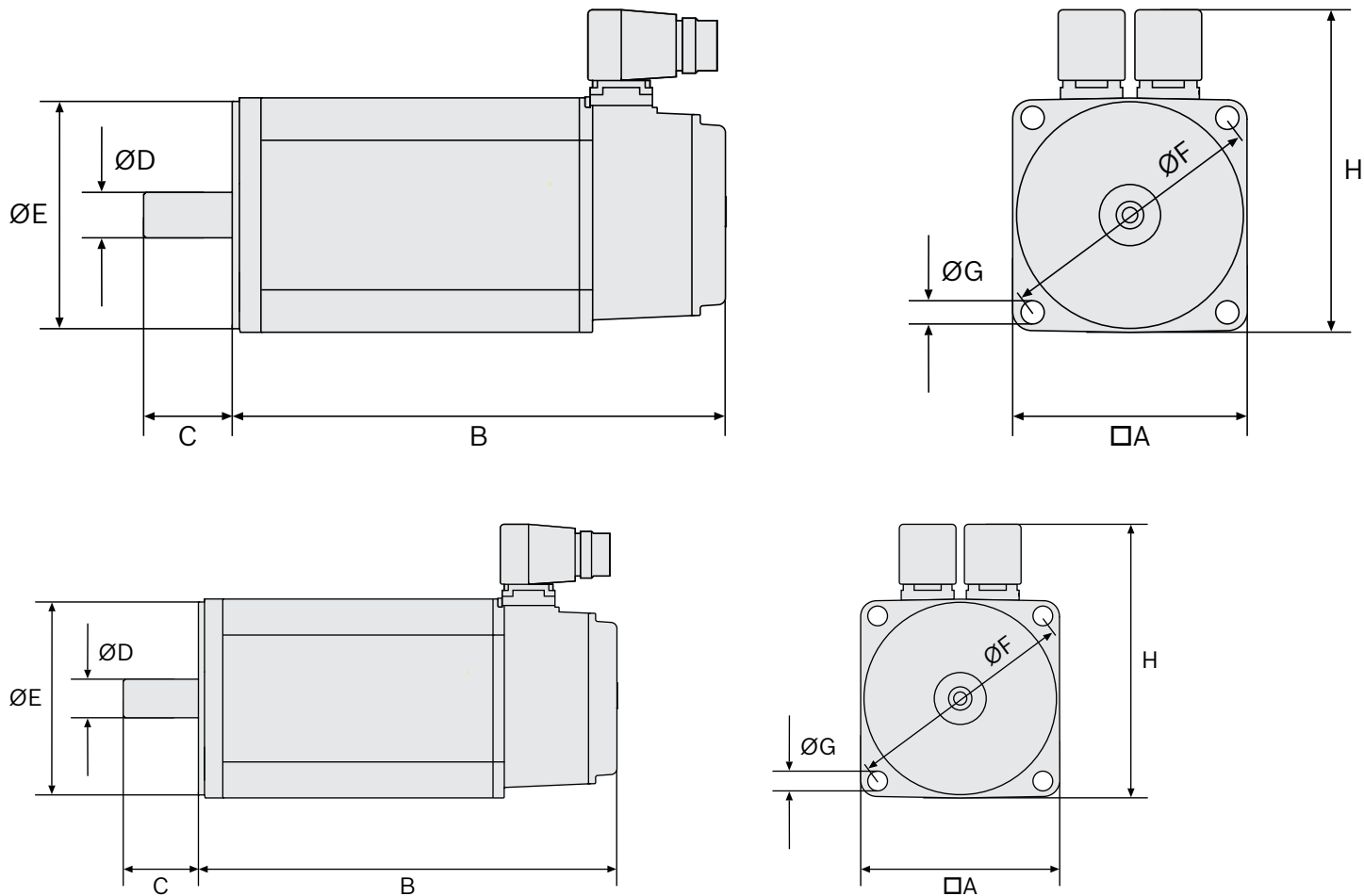
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Type	Maximum speed	Torque at standstill	Maximum torque	Continuous current at standstill	Maximum current	Moment of inertia
	n Max	M 0	M Max	I 0	I Max	J
	[1/min]	[Nm]	[Nm]	[A]	[A]	[kgm ²]
MSK060C-0300	4900	8	24	4.8	19.2	0.0008
MSK060C-0600	6000			9.5	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	86	
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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All the specifications relate to the basic version of the motor with encoder S1 and without holding brake.
Values at 750 V DC bus

Dimensions

Type	A	B	C	$\varnothing D$	$\varnothing E$	$\varnothing F$	$\varnothing G$	H	Mass
	[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									
MSK040C-0600									
MSK043C-0600									

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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Mass
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
MSK050B-0300	98	173	40	19	95	115	9	134.5	4
MSK050B-0450									
MSK050B-0600		203							5.4
MSK050C-0300									
MSK050C-0450									
MSK050C-0600									
MSK060B-0300	116	181	50	24	130	156	156	5.7	
MSK060B-0600									
MSK060C-0300		226						8.4	
MSK060C-0600									
MSK061B-0300		223	5.7						
MSK061C-0200									
MSK061C-0300		264	40	19				8.3	
MSK061C-0600									

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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Mass
	[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
MSK076C-0450									

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Type	A	B	C	Ø D	Ø E	Ø F	Ø G	H	Mass							
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]							
MSK100A-0200	192	302	60	32	130	215	14	262	23							
MSK100A-0300																
MSK100A-0450																
MSK100B-0200		368							34							
MSK100B-0300																
MSK100B-0400																
MSK100B-0450		434							45.1							
MSK100C-0200																
MSK100C-0300																
MSK100C-0450		502							56							
MSK100D-0200																
MSK100D-0300																
MSK100D-0350		192							350	80	38	180	215	14	262	28.3
MSK101C-0200																
MSK101C-0300																
MSK101C-0450																
MSK101D-0200	410		40													
MSK101D-0300																
MSK101D-0450																
MSK101E-0200	501		53.5													
MSK101E-0300																
MSK101E-0450																
MSK103A-0300	260	186	110	48	250	300	18	337	18							
MSK103B-0300		211							22.5							
MSK103D-0300		265							31.6							
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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It must be remembered that our products are subject to a natural process of wear and aging.