

Data sheet for three-phase Squirrel-Cage-Motors SIMOTICS



Motor type : 1AV2090B SIMOTICS XP - 90 S - IM B5 - 4p

Client order no.	Item-No.	Offer no.
Order no.	Consignment no.	Project

Remarks

Electrical data II 3D Ex tc IIIB T 120°C Dc -/-

U	Δ / Y	f	P	P	I	n	M	η ³⁾			cosφ ³⁾			I _A /I _N	M _A /M _N	M _K /M _N	IE-CL
[V]		[Hz]	[kW]	[hp]	[A]	[1/min]	[Nm]	4/4	3/4	2/4	4/4	3/4	2/4	I _I /I _N	T _I /T _N	T _B /T _N	
DOL duty (S1) - 155(F) to 130(B)																	
400	Y	50	1.10	-/-	2.50	1425	7.4	81.4	81.8	80.0	0.78	0.70	0.56	5.6	2.3	2.9	IE2
Converter duty (S9) - 155(F) to 130(B)																	
49	Y	5	0.05		1.79	115	3.78				0.58	Type of converter	Voltage source converter, general.				
205	Y	25	0.43		2.15	690	5.95				0.77						
380	Y	50	0.84		2.1	1445	5.55				0.75						
380	Y	100	0.66		1.59	2900	2.17				0.83						
IM B5 / IM 3001			FS 90 S				IP55			IEC/EN 60034		IEC, DIN, ISO, VDE, EN					
Environmental conditions : -20 °C - +40 °C / 1000 m									Locked rotor time (hot / cold) : 19 s 25.4 s								

Mechanical data

Sound level (SPL / SWL) at 50Hz 60Hz	56 / 68 dB(A) ^{2) 3)}	58 / 70 dB(A) ^{2) 3)}	Vibration severity grade	A
Moment of inertia	0.0028 kg m ²		Thermal class	F
Bearing DE NDE	6205 2Z C3	6004 2Z C3	Duty type	S1
bearing lifetime			Direction of rotation	bidirectional
L _{10mh} F _{Rad, min} for coupling operation 50 60Hz ¹⁾	40000 h	32000 h	Frame material	aluminum
Regreasing device	Without		Net weight of the motor (IM B3)	13 kg
Grease nipple	-/-		Coating (paint finish)	Standard paint finish C2
Type of bearing	Preloaded bearing DE		Color, paint shade	RAL7030
Condensate drainage holes	Without		Motor protection	(B) 3 PTC thermistors - for tripping (2 terminals)
External earthing terminal	With (standard)		Method of cooling	IC411 - self ventilated, surface cooled

Terminal box

Terminal box position	right	Max. cross-sectional area	1.5 mm ²
Material of terminal box	Aluminium	Cable diameter from ... to ...	9 mm - 17 mm
Type of terminal box	TB1 E00	Cable entry	1xM25x1,5-1xM16x1,5
Contact screw thread	M4		

Notes: I_A/I_N = locked rotor current / current nominal 1) L_{10mh} according to DIN ISO 281 10/2010 3) Value is valid only for DOL operation with motor design IC411
M_A/M_N = locked rotor torque / torque nominal 2) at rated power / at full load
M_K/M_N = break down torque / nominal torque

responsible dep.	technical reference	created by	approved by	Technical data are subject to change! There may be discrepancies between calculated and rating plate values.	Link documents
IN LVM		SPC			
SIEMENS	document type				document status
	datasheet				released
	title				document number
	1MB1021-0EB09-0FB5-Z				
© INNOMOTICS 2023	B43+M4A				rev.
					951
		creation date		language	Page
		2023-12-14		en	1/2

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Special design

B43	Version for converter operation with operating data on voltage-source DC link converter	M4A	400 VY for 50 Hz
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	title 1MB1021-0EB09-0FB5-Z			document number			
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