


ABB Motors and Generators		Technical Data Sheet - DOL			
		Project	Location		
Department/Author		Customer name	Customer ref.		Item name <b>1,00002</b>
Our ref.		Rev/Changed by <b>A</b>	Date of issue <b>19/09/2019</b>	Saving ident <b>untitled.xls</b>	Pages <b>1(3)</b>
No.	Definition	Data	Unit	Remarks	
1	Product	<b>TEFC, 3-phase, squirrel cage induction motor</b>			
2	Product code	<b>3GAA 091 500-ASJ</b>		Calc. ref.	3GF021009-704
3	Type/Frame	<b>M3AA 90L 2</b>			
4	Mounting	<b>IM1001, B3(foot)</b>			
5	Rated output P <sub>N</sub>	<b>1,5</b>	kW		
6	Service factor	<b>1</b>			
7	Type of duty	<b>S1(IEC) 100%</b>			
8	Rated voltage U <sub>N</sub>	<b>440</b>	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f <sub>N</sub>	<b>60</b>	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n <sub>N</sub>	<b>3512</b>	r/min		
11	Rated current I <sub>N</sub>	<b>2,5</b>	A		
12	No-load current	<b>0,91</b>	A		
13	Starting current I <sub>s</sub> /I <sub>N</sub>	<b>8,8</b>		Meet IEC 60034-12, N	
14	Nominal torque T <sub>N</sub>	<b>4,1</b>	Nm		
15	Locked rotor torque T <sub>s</sub> /T <sub>N</sub>	<b>2,2</b>			
16	Maximum torque T <sub>max</sub> /T <sub>N</sub>	<b>3,6</b>			
17	Minimum torque T <sub>min</sub> /T <sub>N</sub>	<b>2,0</b>			
18	Speed at minimum torque	<b>540</b>	r/min		
	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	<b>100</b>	<b>2,5</b>	<b>85,5 / IE3</b>	<b>0,89</b>
20		<b>75</b>	<b>2,0</b>	<b>85,6</b>	<b>0,86</b>
21		<b>50</b>	<b>1,51</b>	<b>84,8</b>	<b>0,77</b>
22		<b>Start</b>	<b>22,0</b>		<b>0,49</b>
23	Maximum starting time from hot	<b>11</b>	s		
24	Maximum starting time from cold	<b>19</b>	s		
25	Insulation class / Temperature class	<b>F / B</b>			
26	Ambient temperature	<b>45</b>	°C		
27	Altitude	<b>1000</b>	m.a.s.l.		
28	Enclosure	<b>IP55</b>			
29	Cooling system	<b>IC411 self ventilated</b>			
30	Bearing DE/NDE	<b>6205-2Z/C3 - 6204-2Z/C3</b>			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	<b>65</b>	dB(A)	at load	
33	Moment of inertia J = ¼ GD <sup>2</sup>	<b>0,0027</b>	kg-m <sup>2</sup>		
34	Balancing				
35	Vibration class				
36	Position of terminal box	<b>Top</b>			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	<b>CW or CCW</b>			
40	Weight of rotor	<b>4</b>	kg		
41	Total weight of motor	<b>16</b>	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
<b>Option Variant Codes / Definition</b>					
49	<b>+002 Restamping voltage, frequency and output, continuous duty</b>				
50					
51					
52					
Remarks:					
Data based on situation 08/02/2019					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					

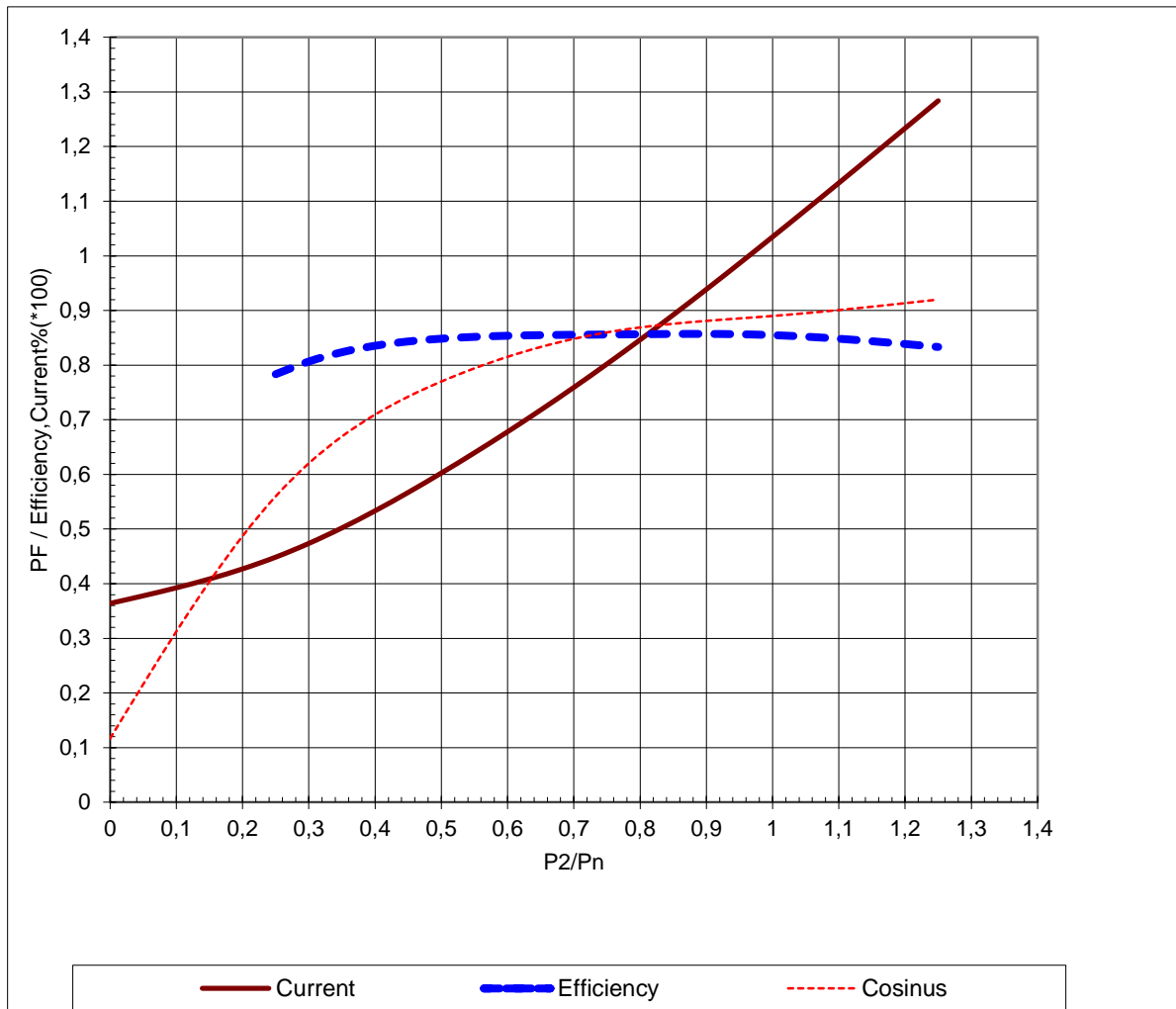
Project \_\_\_\_\_ Location \_\_\_\_\_

Department/Author \_\_\_\_\_ Customer name \_\_\_\_\_ Customer ref. \_\_\_\_\_ Item name **1,00002**

Our ref. \_\_\_\_\_ Rev/Changed by **A** Date of issue **19/09/2019** Saving ident **untitled.xls** Pages **2(3)**

Product **TEFC, 3-phase, squirrel cage induction motor**  
 Type/Frame **M3AA 90L 2** Calc. ref. **3GZF021009-704**  
 Product code **3GAA 091 500-ASJ**  
 Rated output  $P_N$  **1,5** kW  
 Type of duty **S1(IEC) 100%**

Voltage (V) **440** Current  $I_N$  (A) **2,5** Power factor at  $P_N$  **0,89**  
 Frequency (Hz) **60** Speed (r/min) **3512** Efficiency (%) at  $P_N$  **85,5**



Load characteristics (IEC 60034-2-1:2014)  
 Data based on situation 08/02/2019

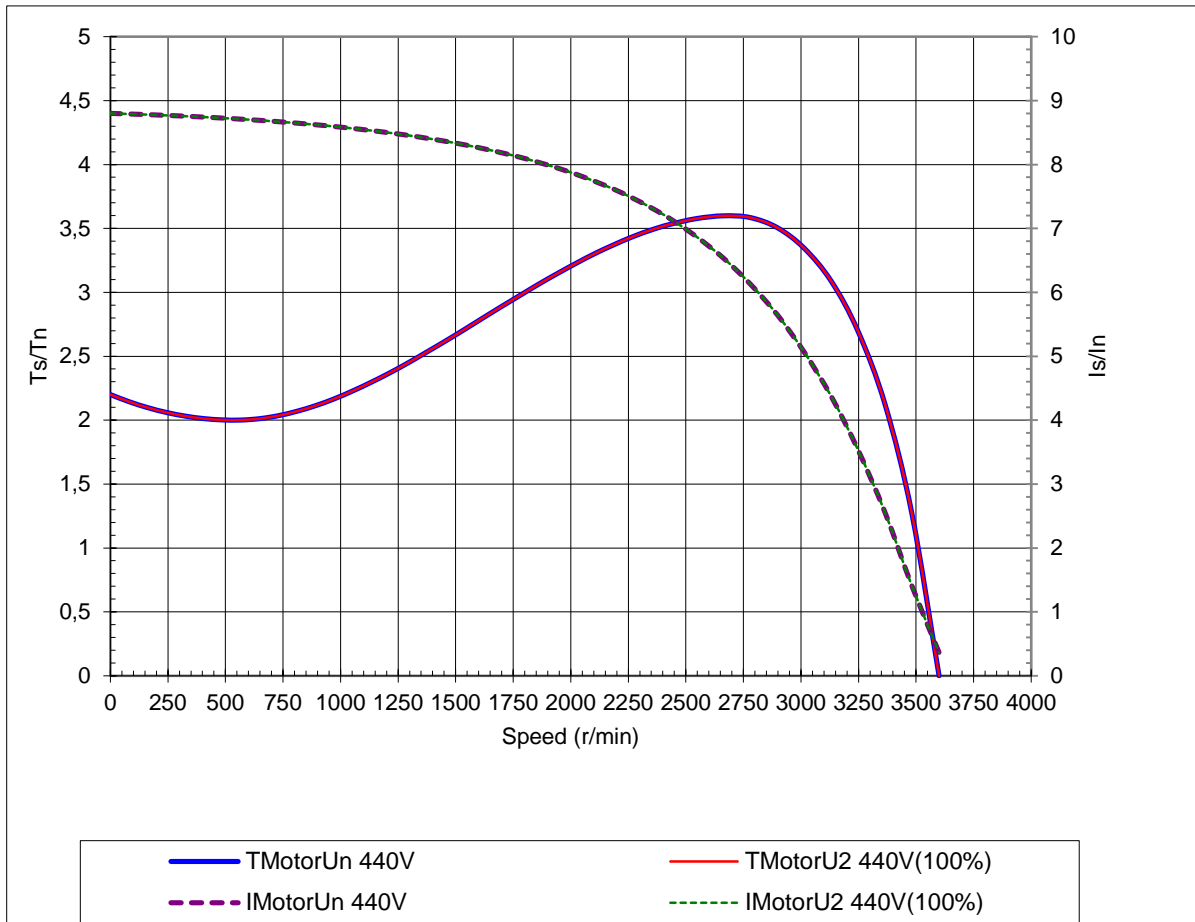
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Type of product	<b>TEFC, 3-phase, squirrel cage induction motor</b>		
Type/Frame	<b>M3AA 90L 2</b>	Calc. ref.	3GZF021009-704
Product code	<b>3GAA 091 500-ASJ</b>	Frequency (Hz)	<b>60</b>
Rated output P <sub>N</sub>	<b>1,5 kW</b>	Rated current I <sub>N</sub>	<b>2,5 A</b>
Type of duty	<b>S1(IEC) 100%</b>		

J <sub>motor</sub> (kgm2)	<b>0,0027</b>	Voltage (V) 100%	<b>440</b>	Voltage (V)	<b>440V(100%)</b>
J <sub>load</sub> (kgm2)		T <sub>start</sub> /T <sub>N</sub>	<b>2,2</b>	T <sub>start</sub> /T <sub>N</sub>	<b>2,2</b>
Speed (r/min)	<b>3512</b>	Starting time (s)		Starting time (s)	
T <sub>N</sub> (Nm)	<b>4,1</b>	Speed (r/min)		Speed (r/min)	
T <sub>load</sub> (Nm)		I <sub>s</sub> /I <sub>n</sub>	<b>8,8</b>	I <sub>s</sub> /I <sub>n</sub>	<b>8,8</b>
Nbr. of Consecutive Starts at UN		T <sub>max</sub> /T <sub>n</sub>	<b>3,6</b>	T <sub>max</sub> /T <sub>n</sub>	<b>3,6</b>



Load characteristics (IEC 60034-2-1:2014)  
Data based on situation 08/02/2019

All data subject to tolerances in accordance with IEC