| ABB Motors and Generators | Technical Data Sheet | | | |
|---|---|---|---|---|
| | Project | | Location | |
| Department/Author | Customer name | | Customer ref. | Item name **1.00001** |
| Our ref. | Rev/Changed by **A** | Date of issue **1/18/2019** | Saving ident **untitled.xls** | Pages **1(3)** |

| No. | Definition | Data | Unit | Remarks | |
|---|---|---|---|---|---|
| 1 | Product | ***TEFC, 3-phase, squirrel cage induction motor*** | | | |
| 2 | Product code | ***3GBA 092 010-ASDIN*** | | Calc. ref. | 3GZH021009-2 |
| 3 | Type/Frame | ***M2BAX 90SLA 4*** | | | |
| 4 | Mounting | ***IM1001, B3(foot)*** | | | |
| 5 | Rated output $P_N$ | ***1.5*** | kW | | |
| 6 | Service factor | ***1*** | | | |
| 7 | Type of duty | ***S1 100%*** | | | |
| 8 | Rated voltage $U_N$ | ***415*** | VY | +10, -10 % | |
| 9 | Rated frequency $f_N$ | ***50*** | Hz | +5, -5 % | |
| 10 | Rated speed $n_N$ | ***1431*** | r/min | | |
| 11 | Rated current $I_N$ | ***3.5*** | A | | |
| 12 | | | | | |
| 13 | Starting current $I_s/I_N$ | ***6*** | | | |
| 14 | Nominal torque $T_N$ | ***10*** | Nm | | |
| 15 | Locked rotor torque $T_S/T_N$ | ***3.5*** | | | |
| 16 | Maximum torque $T_{max}/T_N$ | ***3.9*** | | | |
| 17 | | | | | |
| 18 | | | | | |

| | Load characteristics | Load % | Current A | Efficiency % | Power factor |
|---|---|---|---|---|---|
| 19 | PLL determined from residual loss | *100* | **3.5** | **85.3 / IE3** | **0.75** |
| 20 | | *75* | **2.8** | **85.2** | **0.66** |
| 21 | | *50* | **2.5** | **82.9** | **0.5** |
| 22 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 23 | Thermal withstand time hot | ***7*** | s | | |
| 24 | Thermal withstand time cold | ***12*** | s | | |
| 25 | Insulation class / Temperature class | ***F / B*** | | | |
| 26 | Ambient temperature | ***50*** | °C | | |
| 27 | Altitude | ***1000*** | m.a.s.l. | | |
| 28 | Degree of protection | ***IP55*** | | | |
| 29 | Cooling system | ***IC411 self ventilated*** | | | |
| 30 | Bearing DE/NDE | ***6205-2Z/C3 - 6204-2Z/C3*** | | | |
| 31 | Sound pressure level (LP dB(A) 1m) | ***64*** | dB(A) | at no-load | |
| 32 | Moment of inertia J = ¼ GD2 | ***0.00486*** | kg-m2 | | |
| 33 | Position of terminal box | ***Top*** | | | |
| 34 | Direction of rotation | ***Bi-directional*** | | | |
| 35 | Weight of rotor | ***6*** | kg | | |
| 36 | Total weight of motor | ***25*** | kg | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| Ex-motors | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| Option | Variant Codes / Definition | | | | |
| 49 | | | | | |
| 50 | | | | | |
| 51 | | | | | |
| 52 | | | | | |

Remarks:

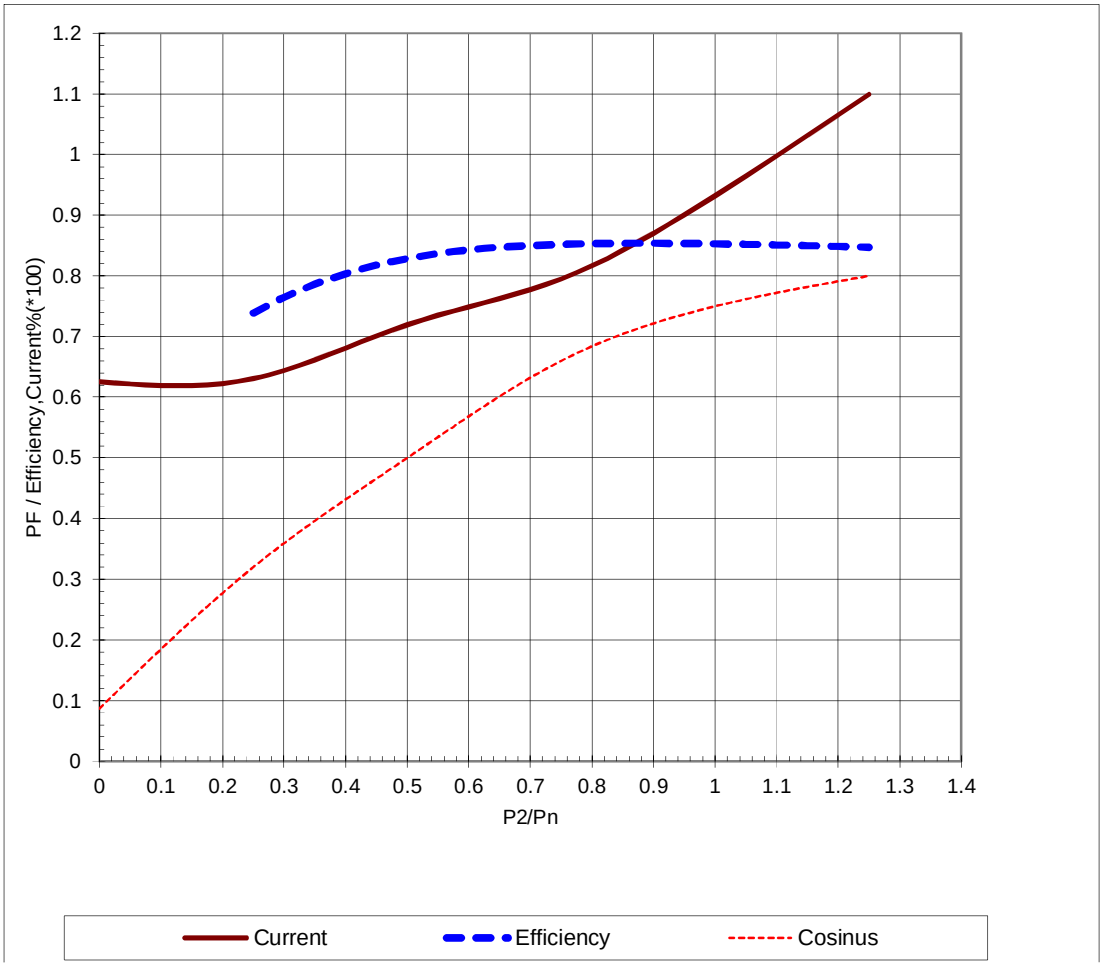
Data based on situation 12/21/2015

All performance values are subject to IS/IEC tolerances

| ABB Motors and Generators | Load Curves | | |
|---|---|---|---|
| | Project | Location | |
| Department/Author | Customer name | Customer ref. | Item name **1.00001** |
| Our ref. | Rev/Changed by / Date of issue **A** **1/18/2019** | Saving ident **untitled.xls** | Pages **2(3)** |

| | | | |
|---|---|---|---|
| Product | **TEFC, 3-phase, squirrel cage induction motor** | | |
| Type/Frame | **M2BAX 90SLA 4** | Calc. ref. | **3GZH021009-2** |
| Product code | **3GBA 092 010-ASDIN** | | |
| Rated output $P_N$ | **1.5** kW | | |
| Type of duty | **S1 100%** | | |

| | | | | | |
|---|---|---|---|---|---|
| Voltage (V) | **415** | Current $I_N$ (A) | **3.5** | Power factor at $P_N$ | **0.75** |
| Frequency (Hz) | **50** | Speed (r/min) | **1431** | Efficiency (%) at $P_N$ | **85.3** |



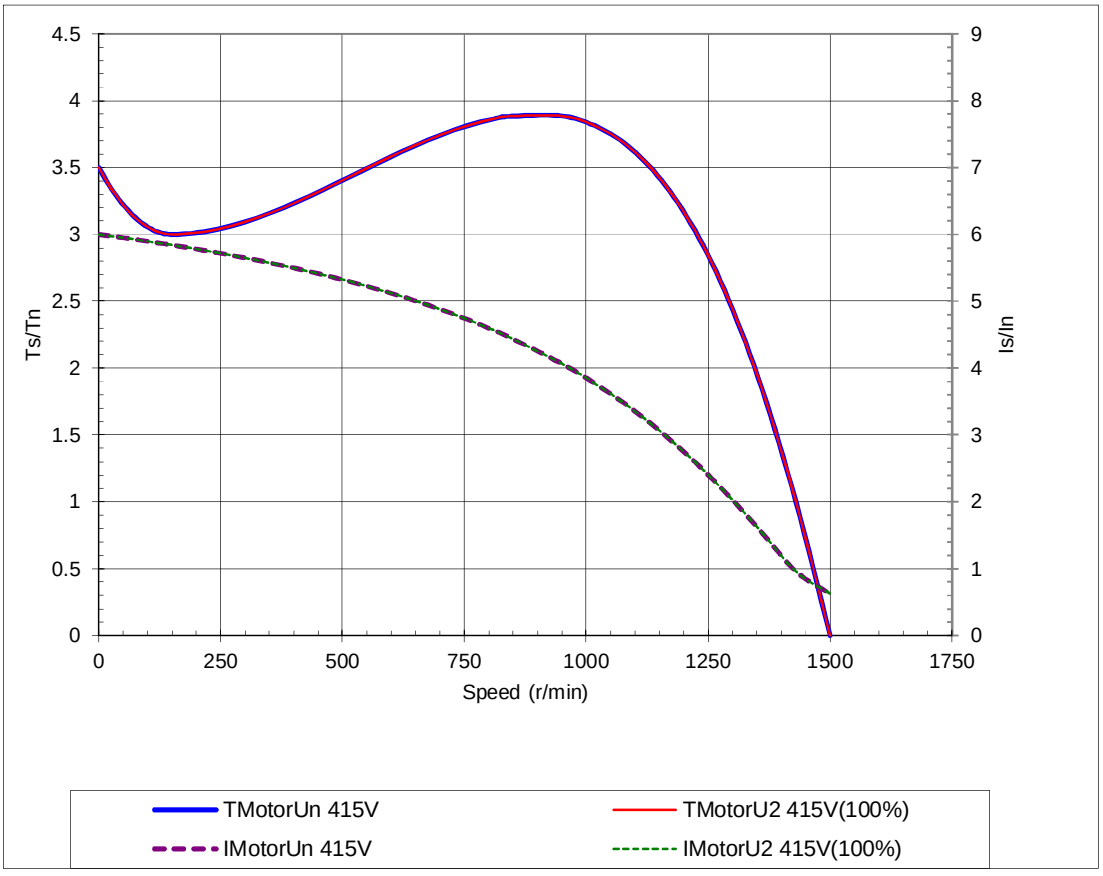

Data based on situation 12/21/2015

All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004

| ABB Motors and Generators | Starting Curves | | |
|---|---|---|---|
| | Project | Location | |
| Department/Author | Customer name | Customer ref. | Item name **1.00001** |
| Our ref. | Rev/Changed b Date of issue **A** **1/18/2019** | Saving ident **untitled.xls** | Pages **3(3)** |

| | | | | | |
|---|---|---|---|---|---|
| Type of product | **TEFC, 3-phase, squirrel cage induction motor** | | | | |
| Type/Frame | **M2BAX 90SLA 4** | | Calc. ref. | 3GZH021009-2 | |
| Product code | **3GBA 092 010-ASDIN** | | Frequency (Hz) | **50** | |
| Rated output $P_N$ | **1.5** kW | | Rated current $I_N$ | **3.5** | A |
| Type of duty | **S1 100%** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| $J_{motor}$ (kgm2) | **0.0049** | Voltage (V) 100% | ***415*** | Voltage (V) | ***415V(100%)*** |
| $J_{load}$ (kgm2) | | $T_{start}/T_N$ | ***3.5*** | $T_{start}/T_N$ | ***3.5*** |
| Speed (r/min) | **1431** | Starting time (s) | | Starting time (s) | |
| $T_N$ (Nm) | **10** | Speed (r/min) | | Speed (r/min) | ***939*** |
| $T_{load}$ (Nm) | | $I_s/I_n$ | ***6*** | $I_s/I_n$ | ***6*** |
| | | $T_{max}/T_n$ | ***3.9*** | $T_{max}/T_n$ | ***3.9*** |



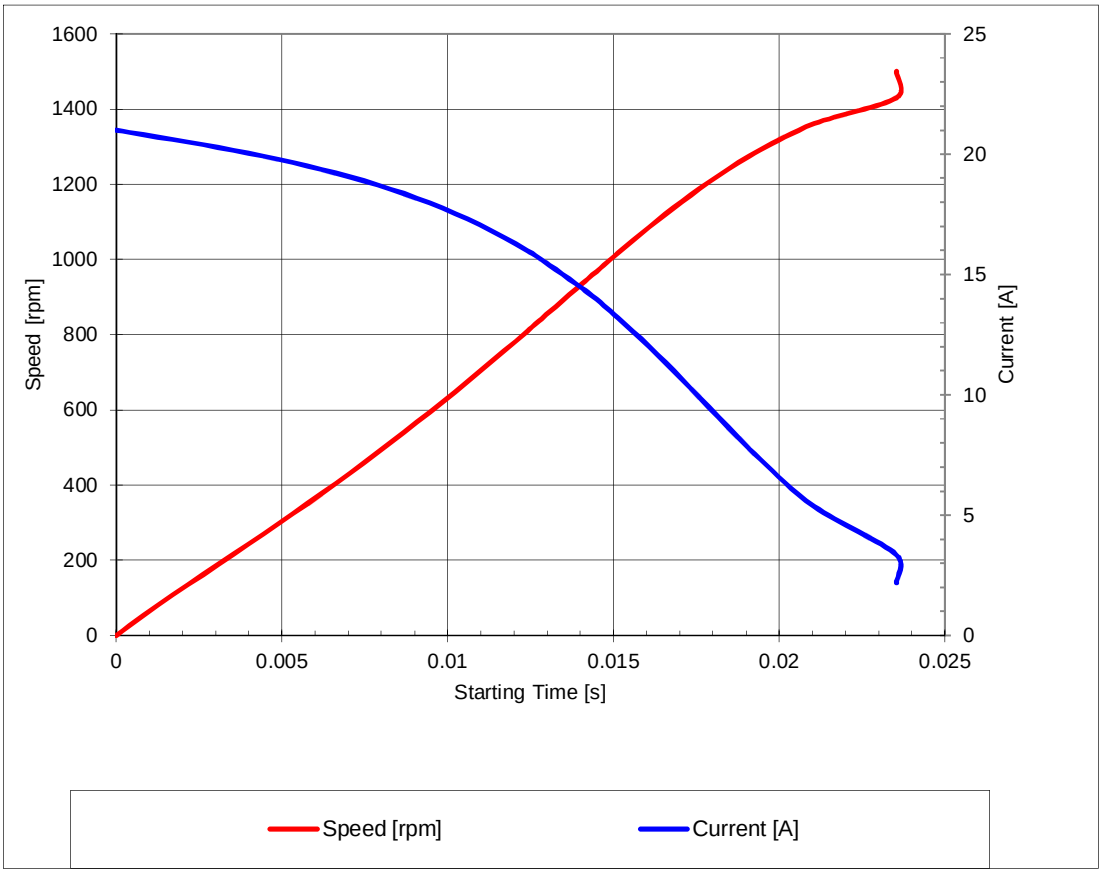

Data based on situation 12/21/2015

All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004

| ABB Motors and Generators | Current & Speed Vs Time | | |
|---|---|---|---|
| | Project | Location | |
| Department/Author | Customer name | Customer ref. | Item name **1.00001** |
| Our ref. | Rev/Changed b Date of issue **A** **1/18/2019** | Saving ident **untitled.xls** | Pages **4(3)** |

| | | | | | |
|---|---|---|---|---|---|
| Type of product | **TEFC, 3-phase, squirrel cage induction motor** | | | | |
| Type/Frame | **M2BAX 90SLA 4** | | Calc. ref. | 3GZH021009-2 | |
| Product code | **3GBA 092 010-ASDIN** | | Frequency (Hz) | **50** | |
| Rated output $P_N$ | **1.5** kW | | Rated current $I_N$ | **3.5** | A |
| Type of duty | **S1 100%** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| $J_{motor}$ (kgm2) | **0.0049** | Voltage (V) 100% | ***415*** | Voltage (V) | ***415V(100%)*** |
| $J_{load}$ (kgm2) | | $T_{start}/T_N$ | ***3.5*** | $T_{start}/T_N$ | ***3.5*** |
| Speed (r/min) | **1431** | Starting time (s) | | Starting time (s) | |
| $T_N$ (Nm) | **10** | Speed (r/min) | | Speed (r/min) | ***939*** |
| $T_{load}$ (Nm) | | $I_s/I_n$ | ***6*** | $I_s/I_n$ | ***6*** |
| | | $T_{max}/T_n$ | ***3.9*** | $T_{max}/T_n$ | ***3.9*** |



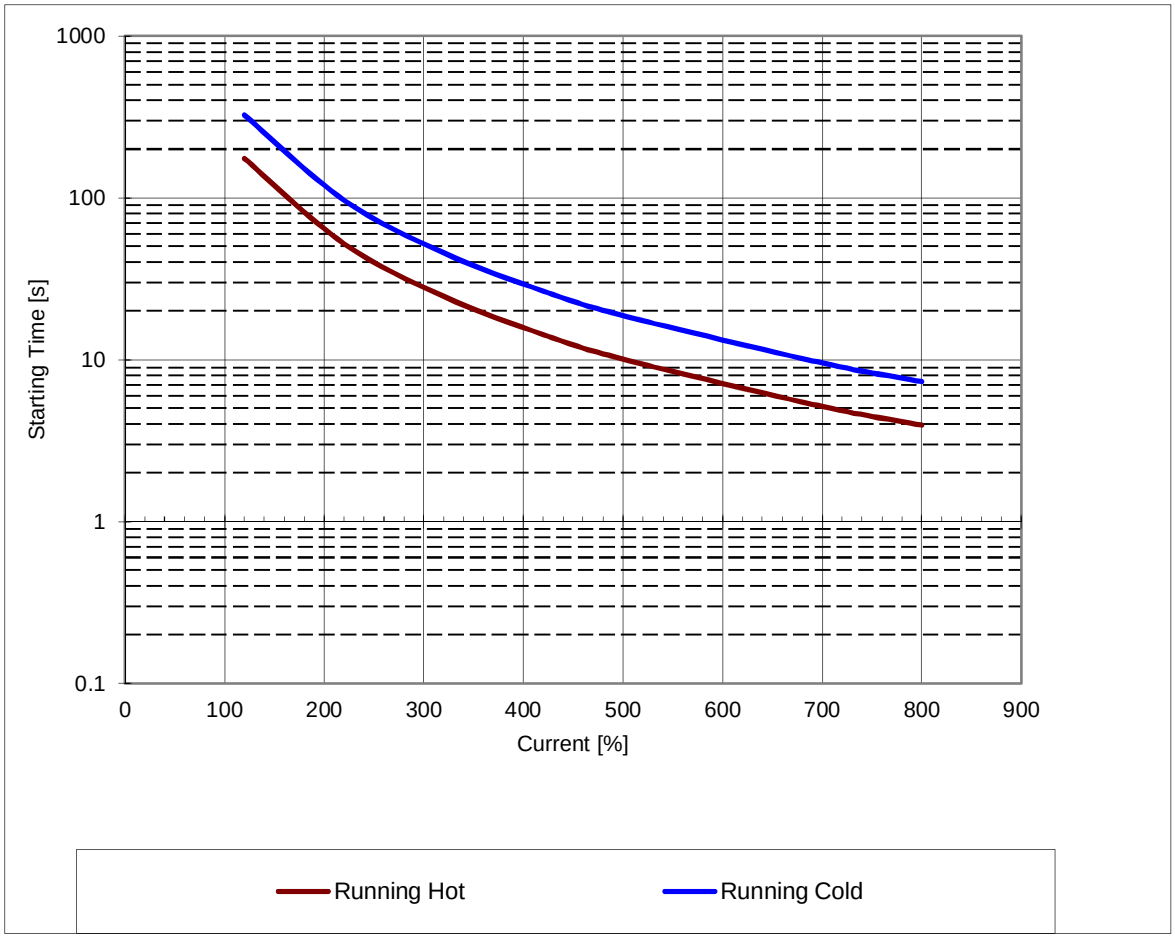

Data based on situation 12/21/2015

All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004

| ABB Motors and Generators | Thermal Withstand Curve | | |
|---|---|---|---|
| | Project | Location | |
| Department/Author | Customer name | Customer ref. | Item name **1.00001** |
| Our ref. | Rev/Changed b Date of issue **A** **1/18/2019** | Saving ident **untitled.xls** | Pages **5(3)** |

| | | | | |
|---|---|---|---|---|
| Type of product | **TEFC, 3-phase, squirrel cage induction motor** | | | |
| Type/Frame | **M2BAX 90SLA 4** | Calc. ref. | 3GZH021009-2 | |
| Product code | **3GBA 092 010-ASDIN** | Frequency (Hz) | **50** | |
| Rated output $P_N$ | **1.5** kW | Rated current $I_N$ | **3.5** | A |
| Type of duty | **S1 100%** | | | |

| | | | | | |
|---|---|---|---|---|---|
| $J_{motor}$ (kgm2) | **0.0049** | Voltage (V) 100% | ***415*** | Voltage (V) | ***415V(100%)*** |
| $J_{load}$ (kgm2) | | $T_{start}/T_N$ | ***3.5*** | $T_{start}/T_N$ | ***3.5*** |
| Speed (r/min) | **1431** | Starting time (s) | | Starting time (s) | |
| $T_N$ (Nm) | **10** | Speed (r/min) | | Speed (r/min) | ***939*** |
| $T_{load}$ (Nm) | | $I_s/I_n$ | ***6*** | $I_s/I_n$ | ***6*** |
| | | $T_{max}/T_n$ | ***3.9*** | $T_{max}/T_n$ | ***3.9*** |




Data based on situation 12/21/2015

All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004