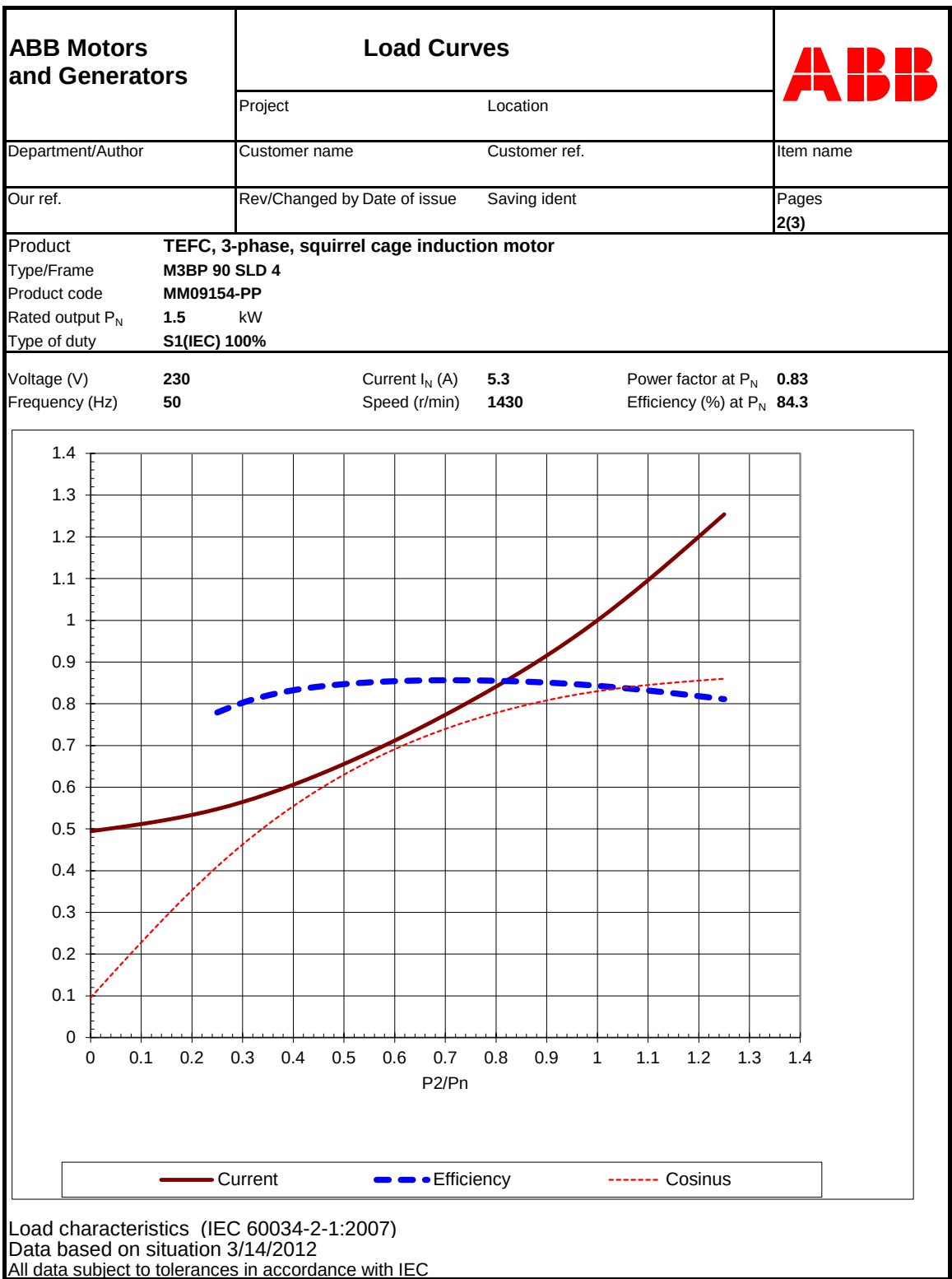


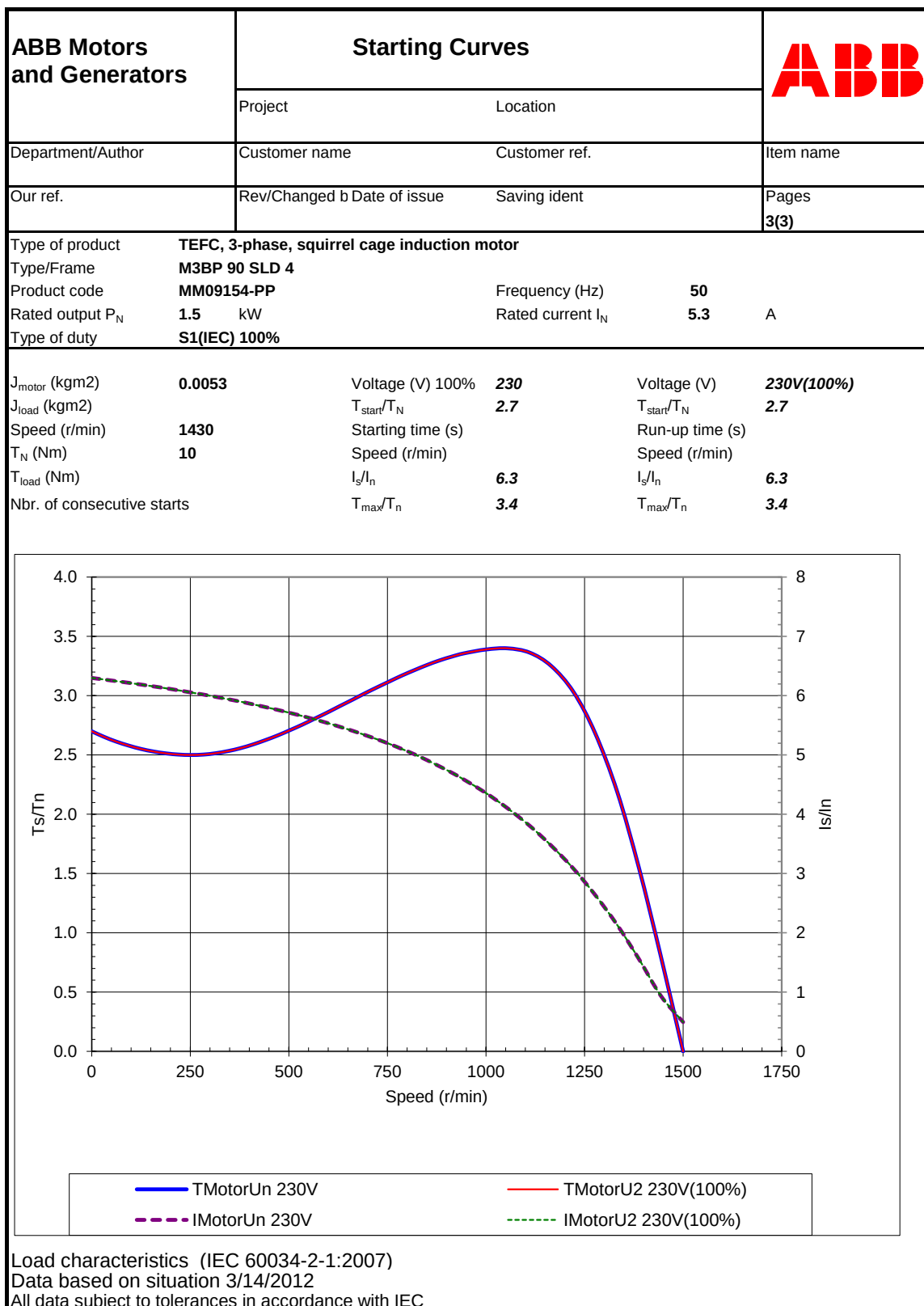
|                              |  |                            |               |               |  |                                                                                     |
|------------------------------|--|----------------------------|---------------|---------------|--|-------------------------------------------------------------------------------------|
| ABB Motors<br>and Generators |  | Technical Data Sheet - DOL |               |               |  |  |
|                              |  | Project                    |               | Location      |  |                                                                                     |
| Department/Author            |  | Customer name              |               | Customer ref. |  | Item name                                                                           |
| Our ref.                     |  | Rev/Changed by             | Date of issue | Saving ident  |  | Pages<br>1(3)                                                                       |

| No. | Definition                                         | Data                                                | Unit      | Remarks                            |              |
|-----|----------------------------------------------------|-----------------------------------------------------|-----------|------------------------------------|--------------|
| 1   | Product                                            | <b>TEFC, 3-phase, squirrel cage induction motor</b> |           |                                    |              |
| 2   | Product code                                       | <b>MM09154-PP (3GBP092325-ASB+332+333)</b>          |           |                                    |              |
| 3   | Type/Frame                                         | <b>M3BP 90 SLD 4</b>                                |           |                                    |              |
| 4   | Mounting                                           | <b>IM1001, B3(foot)</b>                             |           |                                    |              |
| 5   | Rated output P <sub>N</sub>                        | 1.5                                                 | kW        |                                    |              |
| 6   | Service factor                                     | 1                                                   |           |                                    |              |
| 7   | Type of duty                                       | <b>S1(IEC) 100%</b>                                 |           |                                    |              |
| 8   | Rated voltage U <sub>N</sub>                       | 230                                                 | VD        | ± 5 % (IEC 60034-1)                |              |
| 9   | Rated frequency f <sub>N</sub>                     | 50                                                  | Hz        | ± 2 % (IEC 60034-1)                |              |
| 10  | Rated speed n <sub>N</sub>                         | 1430                                                | r/min     |                                    |              |
| 11  | Rated current I <sub>N</sub>                       | 5.3                                                 | A         |                                    |              |
| 12  | No-load current                                    | 2.7                                                 | A         |                                    |              |
| 13  | Starting current I <sub>s</sub> /I <sub>N</sub>    | 6.3                                                 |           | Fullfilled IEC 60034-12 design N,H |              |
| 14  | Nominal torque T <sub>N</sub>                      | 10                                                  | Nm        |                                    |              |
| 15  | Locked rotor torque T <sub>S</sub> /T <sub>N</sub> | 2.7                                                 |           |                                    |              |
| 16  | Maximum torque T <sub>max</sub> /T <sub>N</sub>    | 3.4                                                 |           |                                    |              |
| 17  | Minimum torque T <sub>min</sub> /T <sub>N</sub>    | 2.5                                                 |           |                                    |              |
| 18  | Speed at minimum torque                            | 255                                                 | r/min     |                                    |              |
| 19  | Load characteristics (IEC 60034-2-1:2007)          | Load %                                              | Current A | Efficiency %                       | Power factor |
| 20  | PLL determined from residual loss                  | 100                                                 | 5.3       | 84.3 / IE2                         | 0.83         |
| 21  |                                                    | 75                                                  | 4.3       | 85.6                               | 0.76         |
| 22  |                                                    | 50                                                  | 3.5       | 84.7                               | 0.63         |
| 23  |                                                    | Start                                               | 33        |                                    | 0.61         |
| 24  | Maximum starting time from hot                     | 20                                                  | s         |                                    |              |
| 25  | Maximum starting time from cold                    | 36                                                  | s         |                                    |              |
| 26  | Insulation class / Temperature class               | <b>F / B</b>                                        |           |                                    |              |
| 27  | Ambient temperature                                | 40                                                  | °C        |                                    |              |
| 28  | Altitude                                           | 1000                                                | m.a.s.l.  |                                    |              |
| 29  | Enclosure                                          | <b>IP55</b>                                         |           |                                    |              |
| 30  | Cooling system                                     | <b>IC411 self ventilated</b>                        |           |                                    |              |
| 31  | Bearing DE/NDE                                     | <b>6205-2Z/C3 - 6204-2Z/C3</b>                      |           |                                    |              |
| 32  | Type of Grease                                     | <b>Greased for life</b>                             |           |                                    |              |
| 33  | Sound pressure level (LP dB(A) 1m)                 | 56                                                  | dB(A)     | at load                            |              |
| 34  | Moment of inertia J = ¼ GD2                        | 0.0053                                              | kg-m2     |                                    |              |
| 35  | Balancing                                          | <b>Half Key</b>                                     |           |                                    |              |
| 36  | Vibration class                                    | <b>Grade A</b>                                      |           |                                    |              |
| 37  | Position of terminal box                           | <b>Top</b>                                          |           |                                    |              |
| 38  | Terminal box entries; no, dimens.                  | <b>2xM32x1.5</b>                                    |           |                                    |              |
| 39  | Number of power terminals                          | <b>6</b>                                            |           |                                    |              |
| 40  | Direction of rotation                              | <b>CW or CCW</b>                                    |           |                                    |              |
| 41  | Weight of rotor                                    | 4                                                   | kg        |                                    |              |
| 42  | Total weight of motor                              | 27                                                  | kg        |                                    |              |
| 43  |                                                    |                                                     |           |                                    |              |

Variant Codes / Definition
332 = Baldor catalog number
333 = Not for use in the USA

Remarks:
Data based on situation 3/14/2012
All data subject to tolerances in accordance with IEC
Guaranteed values on request



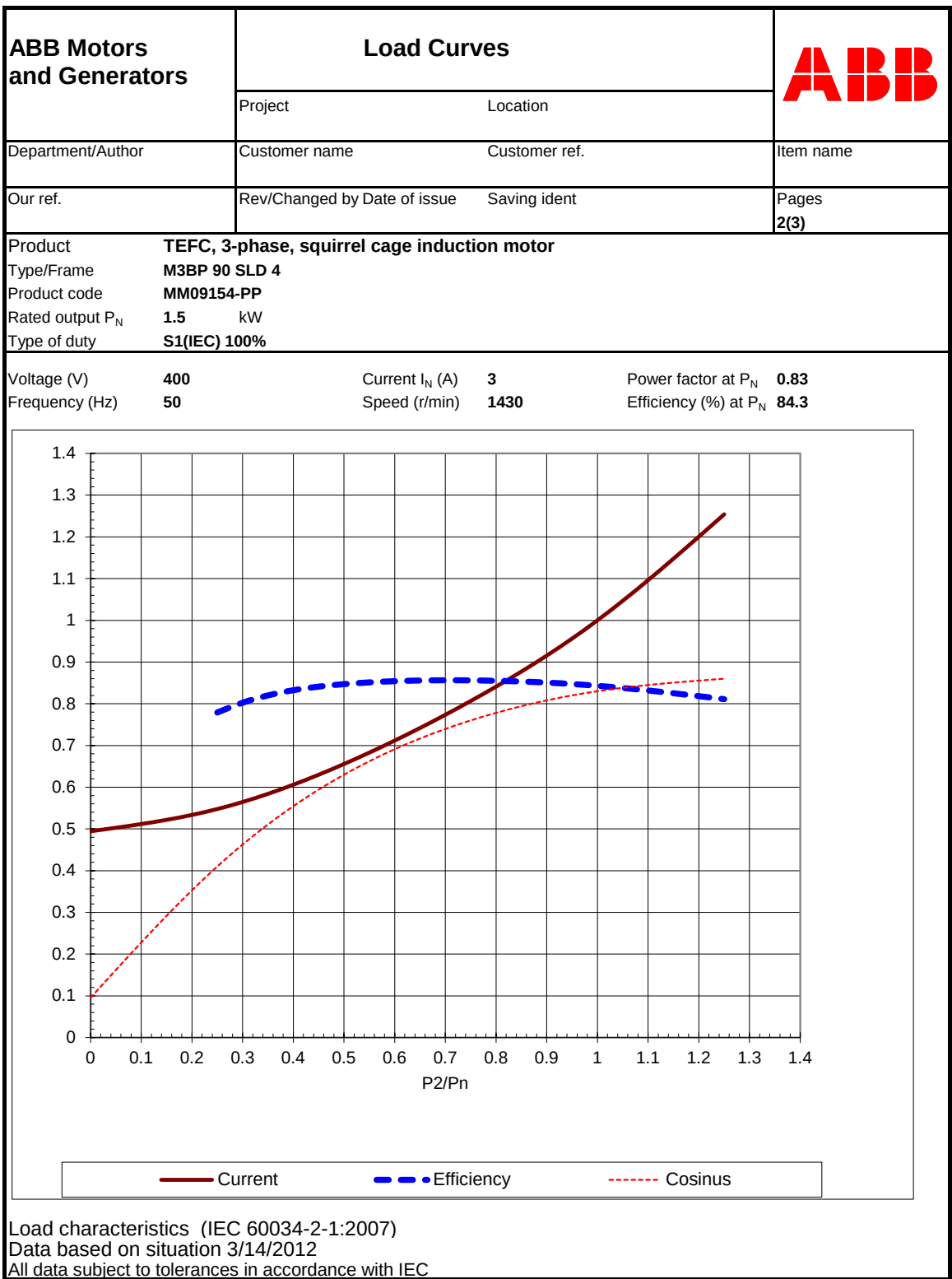


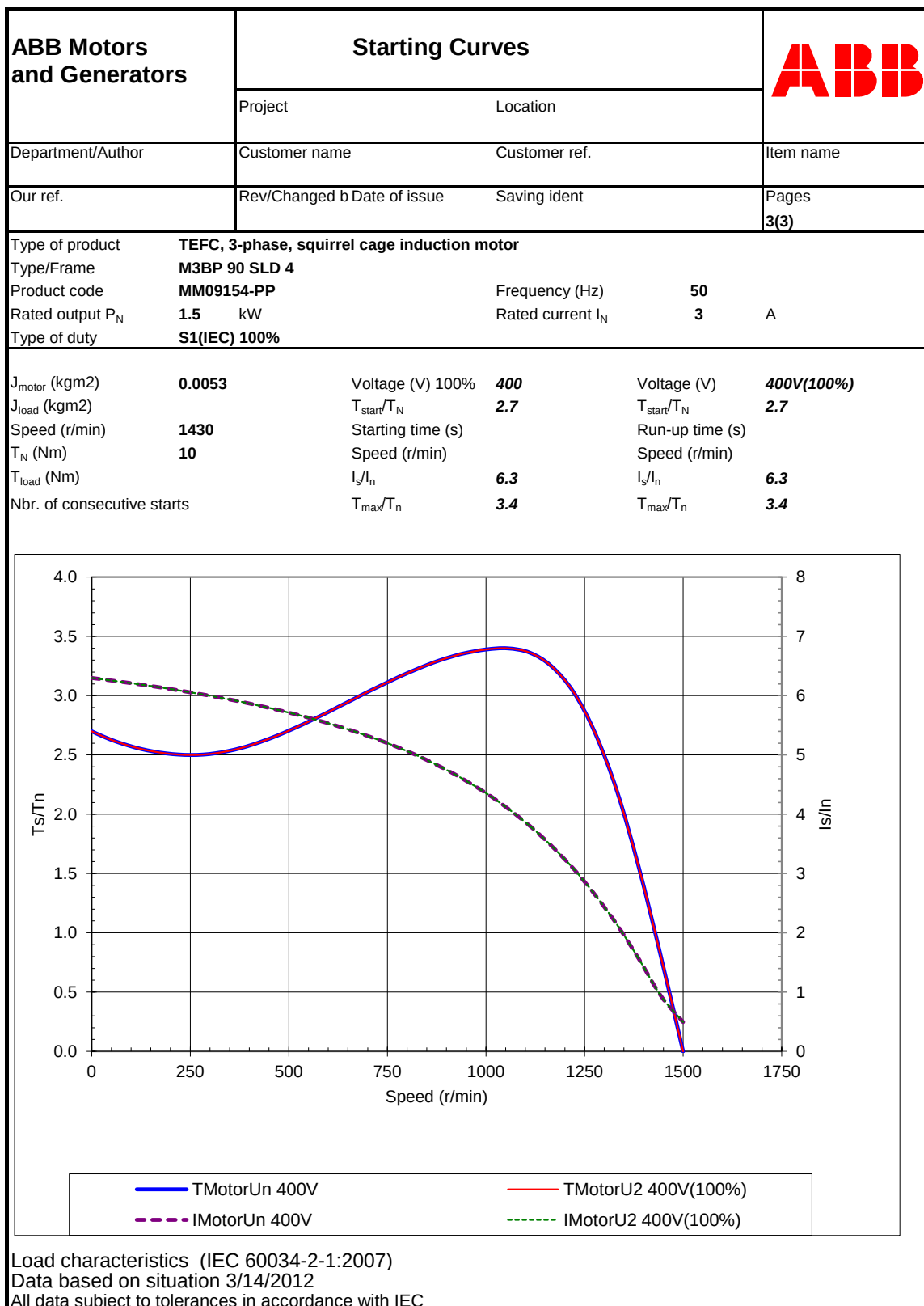
|                              |  |                            |               |               |               |                                                                                     |
|------------------------------|--|----------------------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------|
| ABB Motors<br>and Generators |  | Technical Data Sheet - DOL |               |               |               |  |
|                              |  | Project                    |               | Location      |               |                                                                                     |
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| Our ref.                     |  | Rev/Changed by             | Date of issue | Saving ident  | Pages<br>1(3) |                                                                                     |

| No. | Definition                                         | Data                                                | Unit      | Remarks                            |              |
|-----|----------------------------------------------------|-----------------------------------------------------|-----------|------------------------------------|--------------|
| 1   | Product                                            | <b>TEFC, 3-phase, squirrel cage induction motor</b> |           |                                    |              |
| 2   | Product code                                       | <b>MM09154-PP (3GBP092325-ASB+332+333)</b>          |           |                                    |              |
| 3   | Type/Frame                                         | <b>M3BP 90 SLD 4</b>                                |           |                                    |              |
| 4   | Mounting                                           | <b>IM1001, B3(foot)</b>                             |           |                                    |              |
| 5   | Rated output P <sub>N</sub>                        | 1.5                                                 | kW        |                                    |              |
| 6   | Service factor                                     | 1                                                   |           |                                    |              |
| 7   | Type of duty                                       | <b>S1(IEC) 100%</b>                                 |           |                                    |              |
| 8   | Rated voltage U <sub>N</sub>                       | 400                                                 | VY        | ± 5 % (IEC 60034-1)                |              |
| 9   | Rated frequency f <sub>N</sub>                     | 50                                                  | Hz        | ± 2 % (IEC 60034-1)                |              |
| 10  | Rated speed n <sub>N</sub>                         | 1430                                                | r/min     |                                    |              |
| 11  | Rated current I <sub>N</sub>                       | 3                                                   | A         |                                    |              |
| 12  | No-load current                                    | 1.53                                                | A         |                                    |              |
| 13  | Starting current I <sub>s</sub> /I <sub>N</sub>    | 6.3                                                 |           | Fullfilled IEC 60034-12 design N,H |              |
| 14  | Nominal torque T <sub>N</sub>                      | 10                                                  | Nm        |                                    |              |
| 15  | Locked rotor torque T <sub>S</sub> /T <sub>N</sub> | 2.7                                                 |           |                                    |              |
| 16  | Maximum torque T <sub>max</sub> /T <sub>N</sub>    | 3.4                                                 |           |                                    |              |
| 17  | Minimum torque T <sub>min</sub> /T <sub>N</sub>    | 2.5                                                 |           |                                    |              |
| 18  | Speed at minimum torque                            | 255                                                 | r/min     |                                    |              |
| 19  | Load characteristics (IEC 60034-2-1:2007)          | Load %                                              | Current A | Efficiency %                       | Power factor |
| 20  | PLL determined from residual loss                  | 100                                                 | 3         | 84.3 / IE2                         | 0.83         |
| 21  |                                                    | 75                                                  | 2.4       | 85.6                               | 0.76         |
| 22  |                                                    | 50                                                  | 2         | 84.7                               | 0.63         |
| 23  |                                                    | Start                                               | 19.4      |                                    | 0.61         |
| 24  | Maximum starting time from hot                     | 20                                                  | s         |                                    |              |
| 25  | Maximum starting time from cold                    | 36                                                  | s         |                                    |              |
| 26  | Insulation class / Temperature class               | <b>F / B</b>                                        |           |                                    |              |
| 27  | Ambient temperature                                | 40                                                  | °C        |                                    |              |
| 28  | Altitude                                           | 1000                                                | m.a.s.l.  |                                    |              |
| 29  | Enclosure                                          | <b>IP55</b>                                         |           |                                    |              |
| 30  | Cooling system                                     | <b>IC411 self ventilated</b>                        |           |                                    |              |
| 31  | Bearing DE/NDE                                     | <b>6205-2Z/C3 - 6204-2Z/C3</b>                      |           |                                    |              |
| 32  | Type of Grease                                     | <b>Greased for life</b>                             |           |                                    |              |
| 33  | Sound pressure level (LP dB(A) 1m)                 | 56                                                  | dB(A)     | at load                            |              |
| 34  | Moment of inertia J = ¼ GD2                        | 0.0053                                              | kg-m2     |                                    |              |
| 35  | Balancing                                          | <b>Half Key</b>                                     |           |                                    |              |
| 36  | Vibration class                                    | <b>Grade A</b>                                      |           |                                    |              |
| 37  | Position of terminal box                           | <b>Top</b>                                          |           |                                    |              |
| 38  | Terminal box entries; no, dimens.                  | <b>2xM32x1.5</b>                                    |           |                                    |              |
| 39  | Number of power terminals                          | <b>6</b>                                            |           |                                    |              |
| 40  | Direction of rotation                              | <b>CW or CCW</b>                                    |           |                                    |              |
| 41  | Weight of rotor                                    | 4                                                   | kg        |                                    |              |
| 42  | Total weight of motor                              | 27                                                  | kg        |                                    |              |
| 43  |                                                    |                                                     |           |                                    |              |

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|                              |  |                            |               |               |               |                                                                                     |
|------------------------------|--|----------------------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------|
| ABB Motors<br>and Generators |  | Technical Data Sheet - DOL |               |               |               |  |
|                              |  | Project                    |               | Location      |               |                                                                                     |
| Department/Author            |  | Customer name              |               | Customer ref. |               | Item name                                                                           |
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| No. | Definition                                         | Data                                                | Unit      | Remarks                            |              |
|-----|----------------------------------------------------|-----------------------------------------------------|-----------|------------------------------------|--------------|
| 1   | Product                                            | <b>TEFC, 3-phase, squirrel cage induction motor</b> |           |                                    |              |
| 2   | Product code                                       | <b>MM09154-PP (3GBP092325-ASB+332+333)</b>          |           |                                    |              |
| 3   | Type/Frame                                         | <b>M3BP 90 SLD 4</b>                                |           |                                    |              |
| 4   | Mounting                                           | <b>IM1001, B3(foot)</b>                             |           |                                    |              |
| 5   | Rated output P <sub>N</sub>                        | 1.5                                                 | kW        |                                    |              |
| 6   | Service factor                                     | 1                                                   |           |                                    |              |
| 7   | Type of duty                                       | <b>S1(IEC) 100%</b>                                 |           |                                    |              |
| 8   | Rated voltage U <sub>N</sub>                       | 460                                                 | VY        | ± 5 % (IEC 60034-1)                |              |
| 9   | Rated frequency f <sub>N</sub>                     | 60                                                  | Hz        | ± 2 % (IEC 60034-1)                |              |
| 10  | Rated speed n <sub>N</sub>                         | 1740                                                | r/min     |                                    |              |
| 11  | Rated current I <sub>N</sub>                       | 2.7                                                 | A         |                                    |              |
| 12  | No-load current                                    | 1.45                                                | A         |                                    |              |
| 13  | Starting current I <sub>s</sub> /I <sub>N</sub>    | 7.2                                                 |           | Fullfilled IEC 60034-12 design N,H |              |
| 14  | Nominal torque T <sub>N</sub>                      | 8.2                                                 | Nm        |                                    |              |
| 15  | Locked rotor torque T <sub>S</sub> /T <sub>N</sub> | 2.8                                                 |           |                                    |              |
| 16  | Maximum torque T <sub>max</sub> /T <sub>N</sub>    | 4.1                                                 |           |                                    |              |
| 17  | Minimum torque T <sub>min</sub> /T <sub>N</sub>    | 2.6                                                 |           |                                    |              |
| 18  | Speed at minimum torque                            | 306                                                 | r/min     |                                    |              |
| 19  | Load characteristics (IEC 60034-2-1:2007)          | Load %                                              | Current A | Efficiency %                       | Power factor |
| 20  | PLL determined from residual loss                  | 100                                                 | 2.7       | 86.1 / IE2                         | 0.8          |
| 21  |                                                    | 75                                                  | 2.2       | 86.3                               | 0.73         |
| 22  |                                                    | 50                                                  | 1.85      | 84.4                               | 0.6          |
| 23  |                                                    | Start                                               | 19.6      |                                    | 0.6          |
| 24  | Maximum starting time from hot                     | 20                                                  | s         |                                    |              |
| 25  | Maximum starting time from cold                    | 36                                                  | s         |                                    |              |
| 26  | Insulation class / Temperature class               | <b>F / B</b>                                        |           |                                    |              |
| 27  | Ambient temperature                                | 40                                                  | °C        |                                    |              |
| 28  | Altitude                                           | 1000                                                | m.a.s.l.  |                                    |              |
| 29  | Enclosure                                          | <b>IP55</b>                                         |           |                                    |              |
| 30  | Cooling system                                     | <b>IC411 self ventilated</b>                        |           |                                    |              |
| 31  | Bearing DE/NDE                                     | <b>6205-2Z/C3 - 6204-2Z/C3</b>                      |           |                                    |              |
| 32  | Type of Grease                                     | <b>Greased for life</b>                             |           |                                    |              |
| 33  | Sound pressure level (LP dB(A) 1m)                 | 63                                                  | dB(A)     | at load                            |              |
| 34  | Moment of inertia J = ¼ GD2                        | 0.0053                                              | kg-m2     |                                    |              |
| 35  | Balancing                                          | <b>Half Key</b>                                     |           |                                    |              |
| 36  | Vibration class                                    | <b>Grade A</b>                                      |           |                                    |              |
| 37  | Position of terminal box                           | <b>Top</b>                                          |           |                                    |              |
| 38  | Terminal box entries; no, dimens.                  | <b>2xM32x1.5</b>                                    |           |                                    |              |
| 39  | Number of power terminals                          | <b>6</b>                                            |           |                                    |              |
| 40  | Direction of rotation                              | <b>CW or CCW</b>                                    |           |                                    |              |
| 41  | Weight of rotor                                    | 4                                                   | kg        |                                    |              |
| 42  | Total weight of motor                              | 27                                                  | kg        |                                    |              |
| 43  |                                                    |                                                     |           |                                    |              |

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