

Projektnummer: ---

|  | Zeichen | Einheit | Wert |
|--|---------|---------|------|
|--|---------|---------|------|

**Nennaten Luftkühlung**

|                           |                      |                  |      |
|---------------------------|----------------------|------------------|------|
| Nennmoment                | M <sub>NennLk</sub>  | Nm               | 502  |
| Nennstrom                 | I <sub>NennLk</sub>  | A <sub>eff</sub> | 16,9 |
| Nenn Drehzahl             | n <sub>NennLk</sub>  | U/min            | 190  |
| abgegebene Wellenleistung | P <sub>NennLk</sub>  | W                | 9981 |
| Verlustleistung           | P <sub>VNennLk</sub> | W                | 837  |
| Stillstands-/ Haltemoment | M <sub>HaltLk</sub>  | Nm               | 355  |
| Stillstands-/ Haltestrom  | I <sub>HaltLk</sub>  | A <sub>eff</sub> | 12   |

**Nennaten Wasserkühlung**

|                           |                      |                  |       |
|---------------------------|----------------------|------------------|-------|
| Nennmoment                | M <sub>NennWk</sub>  | Nm               | 1236  |
| Nennstrom                 | I <sub>NennWk</sub>  | A <sub>eff</sub> | 42,3  |
| Nenn Drehzahl             | n <sub>NennWk</sub>  | U/min            | 170   |
| abgegebene Wellenleistung | P <sub>NennWk</sub>  | W                | 21997 |
| Verlustleistung           | P <sub>VNennWk</sub> | W                | 4002  |
| Stillstands-/ Haltemoment | M <sub>HaltWk</sub>  | Nm               | 874   |
| Stillstands-/ Haltestrom  | I <sub>HaltWk</sub>  | A <sub>eff</sub> | 29,9  |

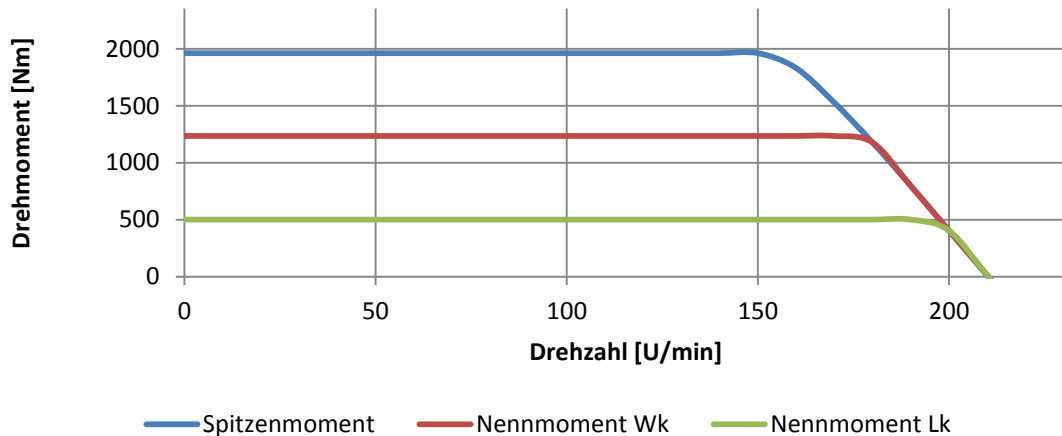
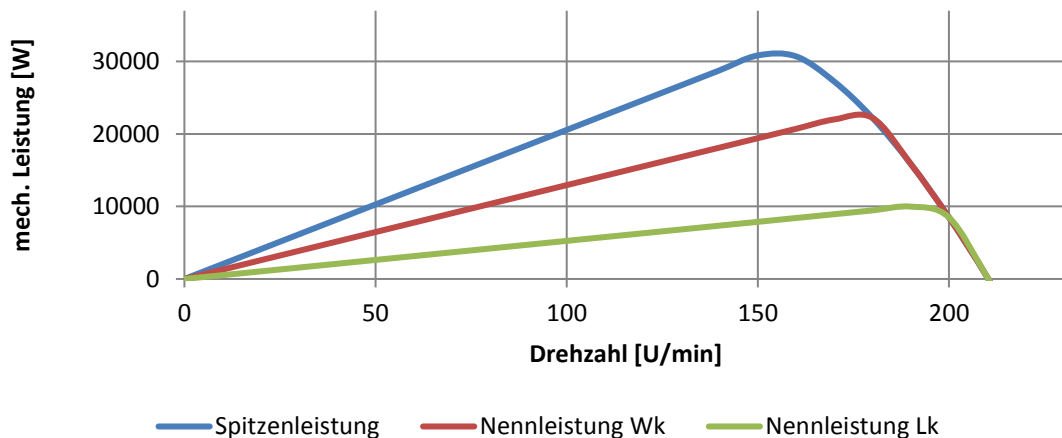
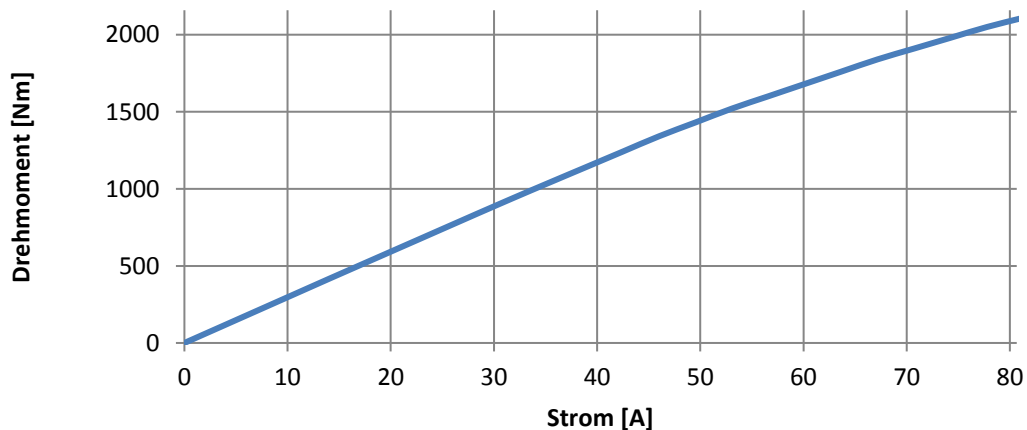
**Daten bei Spitzenlast**

|                            |                    |                  |       |
|----------------------------|--------------------|------------------|-------|
| Spitzenmoment              | M <sub>Peak</sub>  | Nm               | 1962  |
| Spitzenstrom               | I <sub>Peak</sub>  | A <sub>eff</sub> | 73    |
| Drehzahl bei Spitzenmoment | n <sub>Peak</sub>  | U/min            | 150   |
| abgegebene Wellenleistung  | P <sub>Peak</sub>  | W                | 30823 |
| Verlustleistung            | P <sub>VPeak</sub> | W                | 11597 |

**Daten**

|                                         |                   |                           |        |
|-----------------------------------------|-------------------|---------------------------|--------|
| Drehmomentkonstante                     | k <sub>t</sub>    | Nm/A <sub>eff</sub>       | 29,646 |
| Spannungskonstante (Phase - Phase)      | k <sub>e</sub>    | V <sub>eff</sub> /(rad/s) | 17,981 |
|                                         |                   | V <sub>eff</sub> /(U/min) | 1,883  |
| Motorkonstante                          | k <sub>m</sub>    | Nm/VW                     | 17,339 |
| Leerlaufdrehzahl                        | n <sub>Leer</sub> | U/min                     | 210    |
| max. Frequenz                           | f <sub>max</sub>  | Hz                        | 98     |
| Zwischenkreisspannung                   | U <sub>Zk</sub>   | V <sub>DC</sub>           | 560    |
| Ø Widerstand pro Phase (nur Wicklung)   | R <sub>Ph20</sub> | Ω                         | 0,709  |
| Ø Induktivität pro Phase (nur Wicklung) | L <sub>Ph</sub>   | mH                        | 8,058  |
| elektr. Zeitkonstante τ=L/R             | τ                 | ms                        | 11,37  |
| Polpaarzahl                             | n                 |                           | 28     |
| Drehmasse Rotor (Einbausatz)            | J                 | kgm <sup>2</sup>          | 0,3436 |
| Motorgewicht ohne Gehäuse               | m                 | kg                        | 43,1   |
| Statoraußendurchmesser ohne Gehäuse     | d <sub>A</sub>    | mm                        | 400    |
| Luftspaltdurchmesser                    | d <sub>LS</sub>   | mm                        | 340    |
| Eisenlänge                              | l                 | mm                        | 125    |
| Schaltung                               |                   |                           | Stern  |

**Achten Sie darauf, dass Ihr Regler den Motornenn- und Spitzenstrom bereitstellen kann.**
**Eine Anpassung der Drehzahl kann nach Rücksprache erfolgen.**
**Auf Anfrage sind andere Zwischenkreisspannungen möglich.**


**Drehzahl-Drehmoment-Diagramm**

**Drehzahl-Leistungs-Diagramm**

**Strom-Drehmoment-Diagramm**


Project-No.:

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|  | Symbol | Unit | Value |
|--|--------|------|-------|
|--|--------|------|-------|

**Rated Data free Air Convection**

|                   |                    |                  |      |
|-------------------|--------------------|------------------|------|
| Nominal Torque    | T <sub>NomAC</sub> | Nm               | 502  |
| Nominal Current   | I <sub>NomAC</sub> | A <sub>rms</sub> | 16,9 |
| Nominal Speed     | n <sub>NomAC</sub> | rpm              | 190  |
| Nominal Power     | P <sub>NomAC</sub> | W                | 9981 |
| Power Dissipation | P <sub>DAC</sub>   | W                | 837  |
| Holding Torque    | T <sub>HAC</sub>   | Nm               | 355  |
| Holding Current   | I <sub>HAC</sub>   | A <sub>rms</sub> | 12   |

**Rated Data Water cooled**

|                   |                    |                  |       |
|-------------------|--------------------|------------------|-------|
| Nominal Torque    | T <sub>NomWC</sub> | Nm               | 1236  |
| Nominal Current   | I <sub>NomWC</sub> | A <sub>rms</sub> | 42,3  |
| Nominal Speed     | n <sub>NomWC</sub> | rpm              | 170   |
| Nominal Power     | P <sub>NomWC</sub> | W                | 21997 |
| Power Dissipation | P <sub>DWC</sub>   | W                | 4002  |
| Holding Torque    | T <sub>HWC</sub>   | Nm               | 874   |
| Holding Current   | I <sub>HWC</sub>   | A <sub>rms</sub> | 29,9  |

**Peak Data**

|                      |                    |                  |       |
|----------------------|--------------------|------------------|-------|
| Peak Torque          | T <sub>Peak</sub>  | Nm               | 1962  |
| Peak Current         | I <sub>Peak</sub>  | A <sub>rms</sub> | 73    |
| Speed at Peak Torque | n <sub>Peak</sub>  | rpm              | 150   |
| Peak Power           | P <sub>Peak</sub>  | W                | 30823 |
| Power Dissipation    | P <sub>DPeak</sub> | W                | 11597 |

**Data**

|                                       |                   |                           |        |
|---------------------------------------|-------------------|---------------------------|--------|
| Torque Constant                       | k <sub>t</sub>    | Nm/A <sub>rms</sub>       | 29,646 |
| BEMF Constant (Phase - Phase)         | k <sub>e</sub>    | V <sub>rms</sub> /(rad/s) | 17,981 |
|                                       |                   | V <sub>rms</sub> /rpm     | 1,883  |
| Motor Constant                        | k <sub>m</sub>    | Nm/√W                     | 17,339 |
| max. Speed                            | n <sub>max</sub>  | rpm                       | 210    |
| max. Frequency                        | f <sub>max</sub>  | Hz                        | 98     |
| DC Bus Voltage                        | U <sub>DC</sub>   | V <sub>DC</sub>           | 560    |
| Ø Resistance per Phase (Winding only) | R <sub>Ph20</sub> | Ω                         | 0,709  |
| Ø Inductance per Phase (Winding only) | L <sub>Ph</sub>   | mH                        | 8,058  |
| electr. Time Constant τ=L/R           | τ                 | ms                        | 11,37  |
| Number of Polepairs                   | n                 |                           | 28     |
| Rotor Inertia (assembly set)          | J                 | kgm <sup>2</sup>          | 0,3436 |
| Weight of Motor w/o Housing           | m                 | kg                        | 43,1   |
| Outer Stator Diameter w/o Housing     | d <sub>A</sub>    | mm                        | 400    |
| Airgap Diameter                       | d <sub>Ag</sub>   | mm                        | 340    |
| Length of Stator                      | l                 | mm                        | 125    |
| Winding Connection                    |                   |                           | Star   |

**Ensure that your servo drive can handle the Nominal- and Peakcurrent of the Motor.**

**An adjustment of the Speed can be done after consultation.**

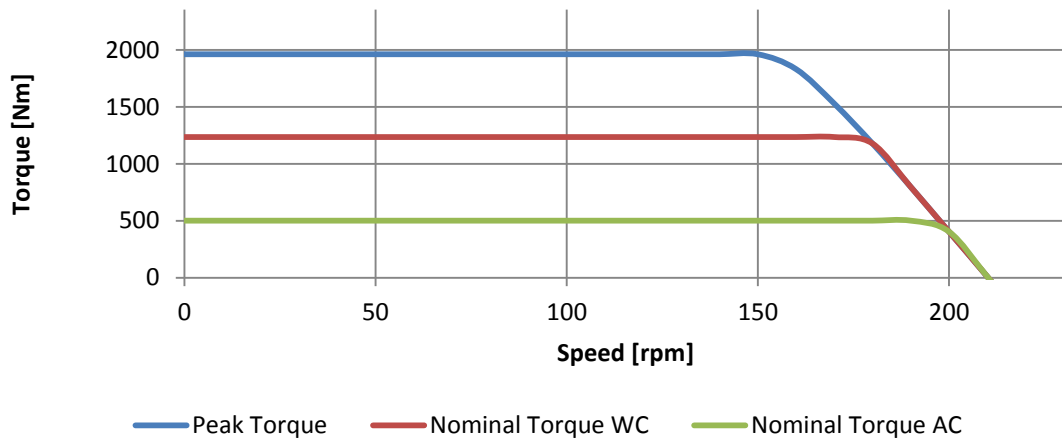
**By request, other DC Bus Voltages are possible.**

Date:

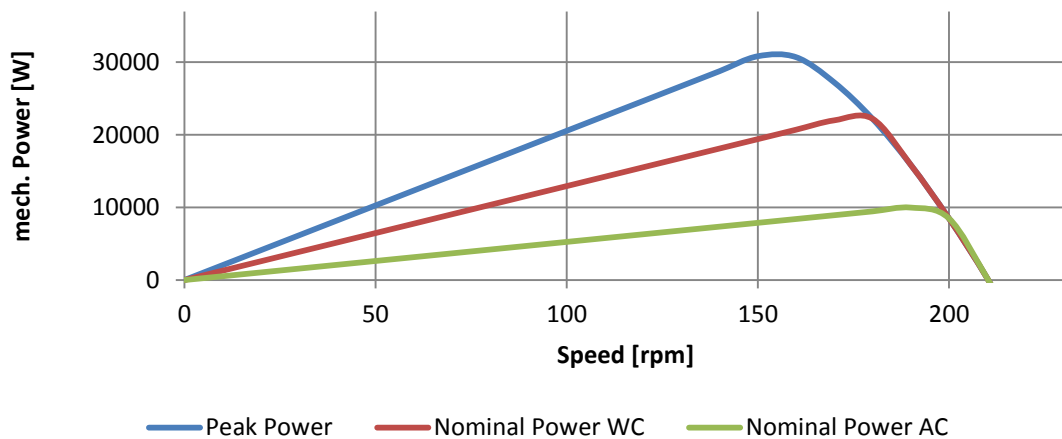
05.03.2014



**Speed-Torque-Graph**



**Speed-Power-Graph**



**Current-Torque-Graph**

