

**Type** : 4EG280S2C-FA-BA-000

**Date** : 01.01.2023

|                              |                 |                            |                 |
|------------------------------|-----------------|----------------------------|-----------------|
| Power [kW]                   | : 75.0          | Efficiency Class           | : IE4           |
| Input Voltage [V]            | : 400           | Duty Cycle                 | : S1            |
| Connection Type [Δ / Y]      | : Δ             | Service Factor             | : 1.25          |
| Frequency [Hz]               | : 50            | Frame Size                 | : 280S          |
| Pole Number                  | : 2             | Weight [kg]                | : 620           |
| Nominal Speed [rpm]          | : 2982          | Insulation Class           | : F [155°C]     |
| Nominal Current [A]          | : 124           | Temperature Rise           | : B [80°K]      |
| Nominal Moment [Nm]          | : 240           | Protection Class           | : IP55          |
| Nominal Efficiency [η]       | : 95.6          | Vibration Severity Grade   | : A             |
| Power Factor [cosφ]          | : 0.91          | Method of Cooling          | : IC411 (TEFC)  |
| Locked Rotor Current [Ia/In] | : 7.7           | Direction of Rotation      | : Bidirectional |
| Locked Rotor Torque [Ma/Mn]  | : 2.7           | Balance                    | : Half Key      |
| Breakdown Torque [Mk/Mn]     | : 3.2           | Motor Thermal Protection   | : PTC           |
| Motor Color                  | : RAL 7031      | Altitude Above Sea Level   | : 1000m         |
| Ambient Temperature          | : -15°C / +40°C | Sound Pressure Level [dBA] | : 76            |

### ELECTRICAL DATA

| Δ / Y | U [V] | f [Hz] | P [kW] | n [rpm] | I [A] | η [%100] | η [%75] | η [%50] | Cosφ | Cl  |
|-------|-------|--------|--------|---------|-------|----------|---------|---------|------|-----|
| Δ     | 400   | 50     | 75.0   | 2982    | 124   | 95.6     | 95.6    | 95.2    | 0.91 | IE4 |
| Y     | 690   | 50     | 75.0   | 2982    | 71.8  | 95.6     | 95.6    | 95.2    | 0.91 | IE4 |
| Δ     | 460   | 60     | 75.0   | 3572    | 109   | 95.0     | 94.6    | 93.3    | 0.91 | IE4 |
| Δ     | 460   | 60     | 87.0   | 3570    | 124   | 95.4     | 95.4    | 95.0    | 0.92 | IE4 |

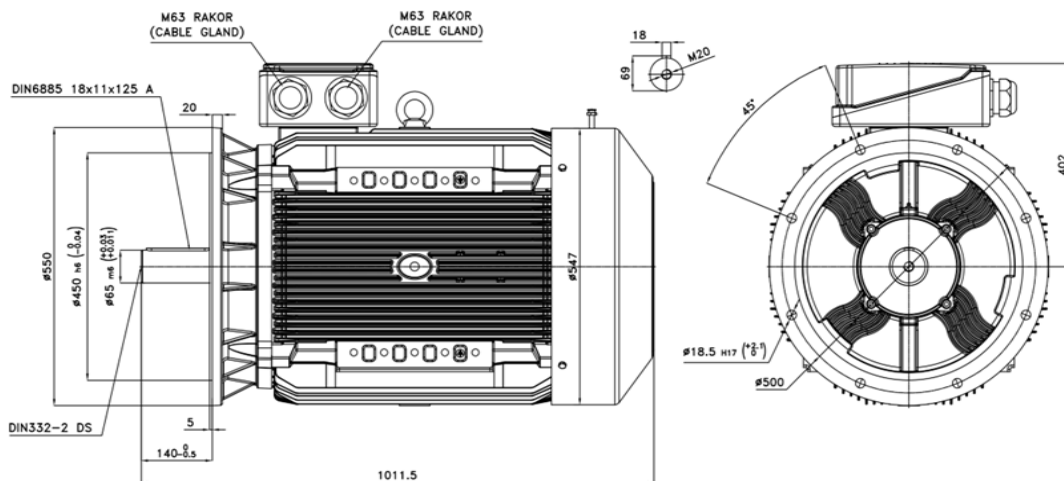
### MECHANICAL DATA

|                                       |  |
|---------------------------------------|--|
| Moment of Inertia [kgm <sup>2</sup> ] | : 0.98000                                  |
| Bearing [DS / NS]                     | : 6315 / 6315                              |
| Frame Material                        | : Cast Iron                                |
| Flange Type / Material                | : B5 / Cast Iron                           |
| Cooling Fan Material                  | : Plastic                                  |
| End Shield Material                   | : Cast Iron                                |
| Lubrication of Bearings [DS / NS]     | : 3200h-30gr / 3200h-30gr MOBIL Polyrex EM |

### TERMINAL BOX

|                          |             |
|--------------------------|-------------|
| Terminal Box Material    | : Cast Iron |
| Terminal Box Position    | : Top       |
| Terminal Box Cable Entry | : 2xM63x1.5 |
| Terminal Box Blind Cap   | : --        |
| Contact Screw Thread     | : M10       |

### MECHANICAL DIMENSIONS



Manufactured and tested in accordance with IEC 60034

\*Technical data are subject to change! There may be discrepancies between calculated and rating plate values.

\*ELK Motor has right to change all the data without prior notice.

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## TECHNICAL DATASHEET ACCORDING TO COMMISSION REGULATION (EU) 2019/1781 THREE PHASE INDUCTION MOTOR - SQUIRREL CAGE

Type : 4EG280S2C-FA-BA-000

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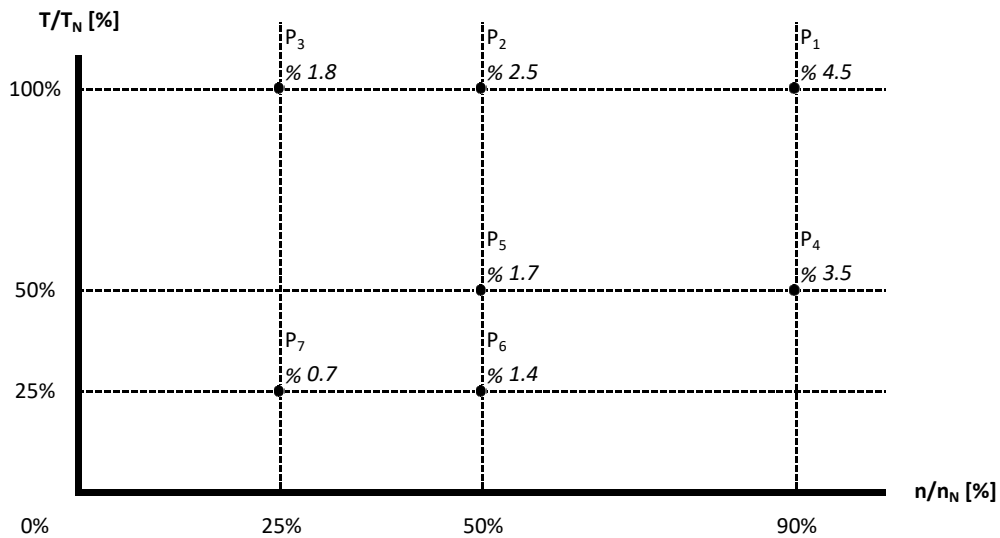
### NAMEPLATE DATA

|                                 |            |                                |        |
|---------------------------------|------------|--------------------------------|--------|
| Power [kW]                      | : 75.0     | Nominal Speed [rpm]            | : 2982 |
| Nominal Voltage [V]             | : 400      | Nominal Current [A]            | : 124  |
| Connection Type [ $\Delta$ / Y] | : $\Delta$ | Nominal Moment [Nm]            | : 240  |
| Nominal Frequency [Hz]          | : 50       | Nominal Efficiency [ $\eta$ %] | : 95.6 |

### THE POWER LOSSES AT SEVEN OPERATING POINTS ACCORDING TO COMMISSION REGULATION (EU) 2019/1781

| Operating Point Number | Speed $n/n_N$ [%] | Torque $T/T_N$ [%] | Relative Power Losses $P_L/P_N$ [%] | Efficiency $\eta$ [%] |
|------------------------|-------------------|--------------------|-------------------------------------|-----------------------|
| P <sub>1</sub>         | 90                | 100                | 4.5                                 | 95.3                  |
| P <sub>2</sub>         | 50                | 100                | 2.5                                 | 95.2                  |
| P <sub>3</sub>         | 25                | 100                | 1.8                                 | 93.5                  |
| P <sub>4</sub>         | 90                | 50                 | 3.5                                 | 92.9                  |
| P <sub>5</sub>         | 50                | 50                 | 1.7                                 | 93.6                  |
| P <sub>6</sub>         | 50                | 25                 | 1.4                                 | 89.7                  |
| P <sub>7</sub>         | 25                | 25                 | 0.7                                 | 90.1                  |

### MAP OF RELATIVE POWER LOSSES $P_L/P_N$ [%]



Manufactured and tested in accordance with IEC 60034

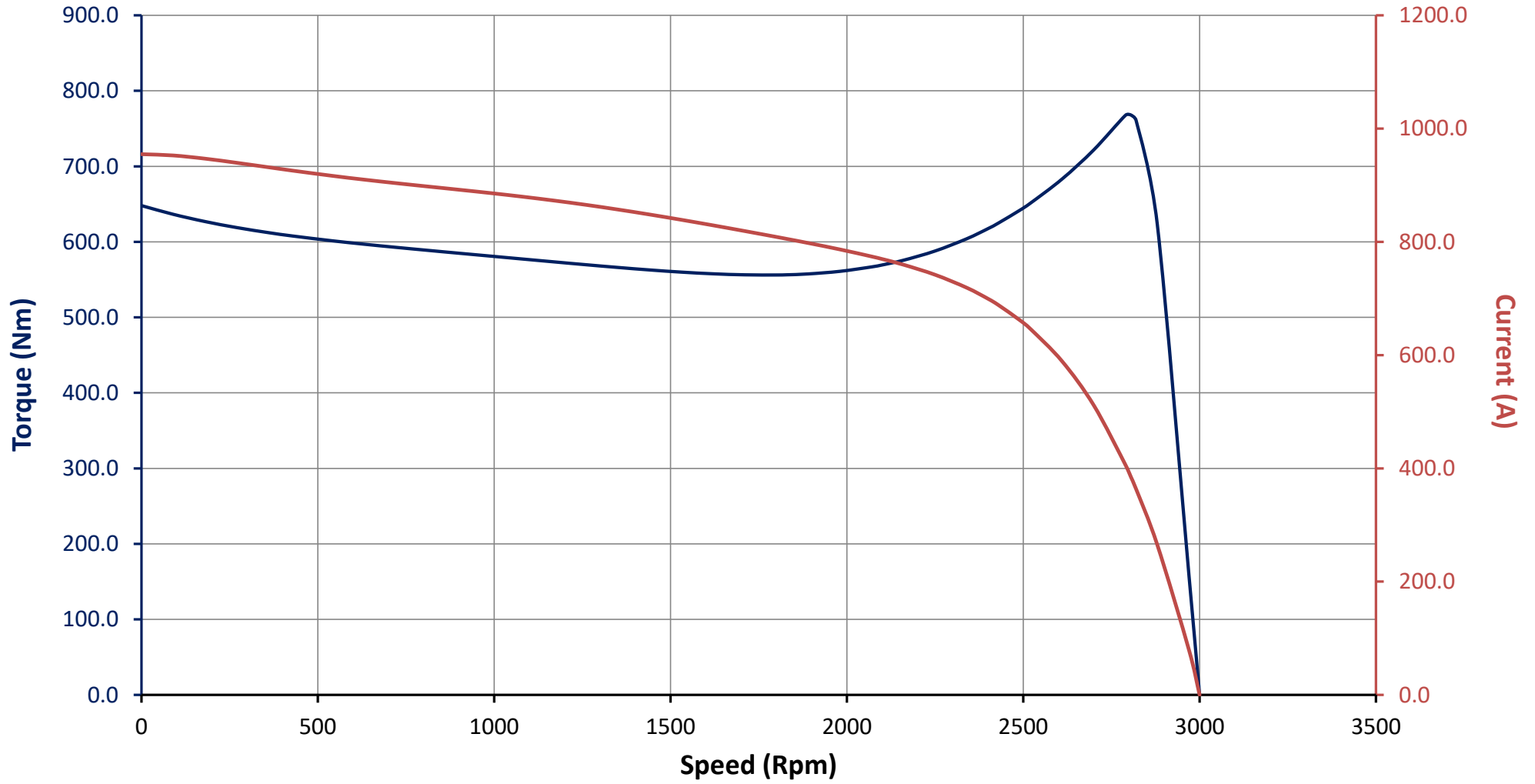
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### Torque and Current Curves Related to Speed



Motor Code : 4EG280S2C-FA-BA-000

### Performance Curves Related to Rated Output

