

Type : 3EL090S2B-FA-A0-000**Date** : 01.01.2023

Power [kW] : 1.50
Input Voltage [V] : 400
Connection Type [Δ / Y] : Y
Frequency [Hz] : 50
Pole Number : 2
Nominal Speed [rpm] : 2900
Nominal Current [A] : 2.97
Nominal Moment [Nm] : 4.94
Nominal Efficiency [η] : 84.8
Power Factor [$\cos\phi$] : 0.86
Locked Rotor Current [I_a/I_n] : 7.6
Locked Rotor Torque [M_a/M_n] : 3.1
Breakdown Torque [M_k/M_n] : 3.9
Motor Color : RAL 7031
Ambient Temperature : -15°C / +40°C

Efficiency Class : IE3
Duty Cycle : S1
Service Factor : 1.20
Frame Size : 090S
Weight [kg] : 15.2
Insulation Class : F [155°C]
Temperature Rise : B [80°K]
Protection Class : IP55
Vibration Severity Grade : A
Method of Cooling : IC411 (TEFC)
Direction of Rotation : Bidirectional
Balance : Half Key
Motor Thermal Protection : --
Altitude Above Sea Level : 1000m
Sound Pressure Level [dB(A)] : 59

ELECTRICAL DATA

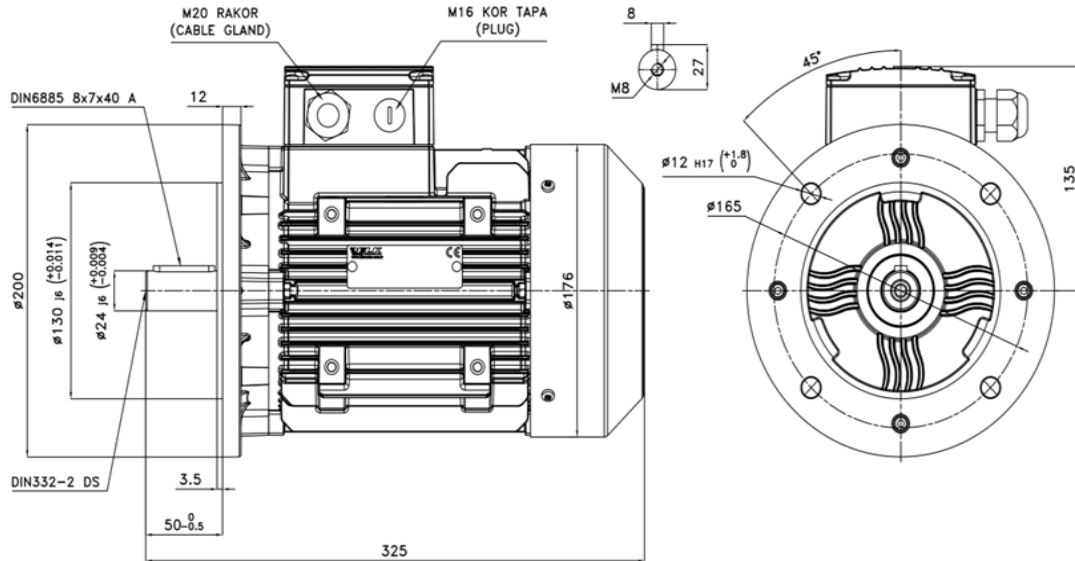
Δ / Y	U [V]	f [Hz]	P [kW]	n [rpm]	I [A]	η [%100]	η [%75]	η [%50]	Cos ϕ	Cl
Δ	230	50	1.50	2900	5.14	84.8	85.4	84.2	0.86	IE3
Y	400	50	1.50	2900	2.97	84.8	85.4	84.2	0.86	IE3
Y	460	60	1.50	3500	2.59	85.5	85.7	84.1	0.85	IE3
Y	460	60	1.74	3490	2.93	85.7	85.9	84.3	0.87	IE3

MECHANICAL DATA

Moment of Inertia [kgm^2] : 0.00178
Bearing [DS / NS] : 6205ZZ / 6205ZZ
Frame Material : Aluminum
Flange Type / Material : B5 / Aluminum
Cooling Fan Material : Plastic
End Shield Material : Aluminum

TERMINAL BOX

Terminal Box Material : Aluminum
Terminal Box Position : Top
Terminal Box Cable Entry : M20x1.5
Terminal Box Blind Cap : M16x1.5
Contact Screw Thread : M4

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.

FR.AG.010 REV.NO: 04 REV.DATE: 01.01.2023



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

Type : 3EL090S2B-FA-A0-000

Date : 01.01.2023

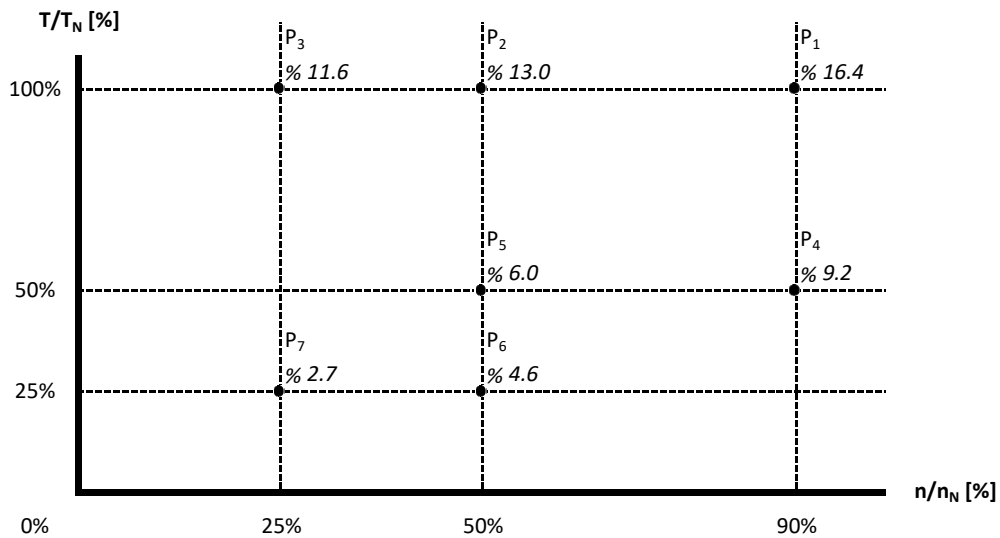
NAMEPLATE DATA

Power [kW]	: 1.50	Nominal Speed [rpm]	: 2900
Nominal Voltage [V]	: 400	Nominal Current [A]	: 2.97
Connection Type [Δ / Y]	: Y	Nominal Moment [Nm]	: 4.94
Nominal Frequency [Hz]	: 50	Nominal Efficiency [η %]	: 84.8

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 η [%]
P ₁	90	100	16.4	84.6
P ₂	50	100	13.0	79.4
P ₃	25	100	11.6	68.3
P ₄	90	50	9.2	83.0
P ₅	50	50	6.0	80.7
P ₆	50	25	4.6	73.1
P ₇	25	25	2.7	69.8

MAP OF RELATIVE POWER LOSSES P_L/P_N [%]



Manufactured and tested in accordance with IEC 60034

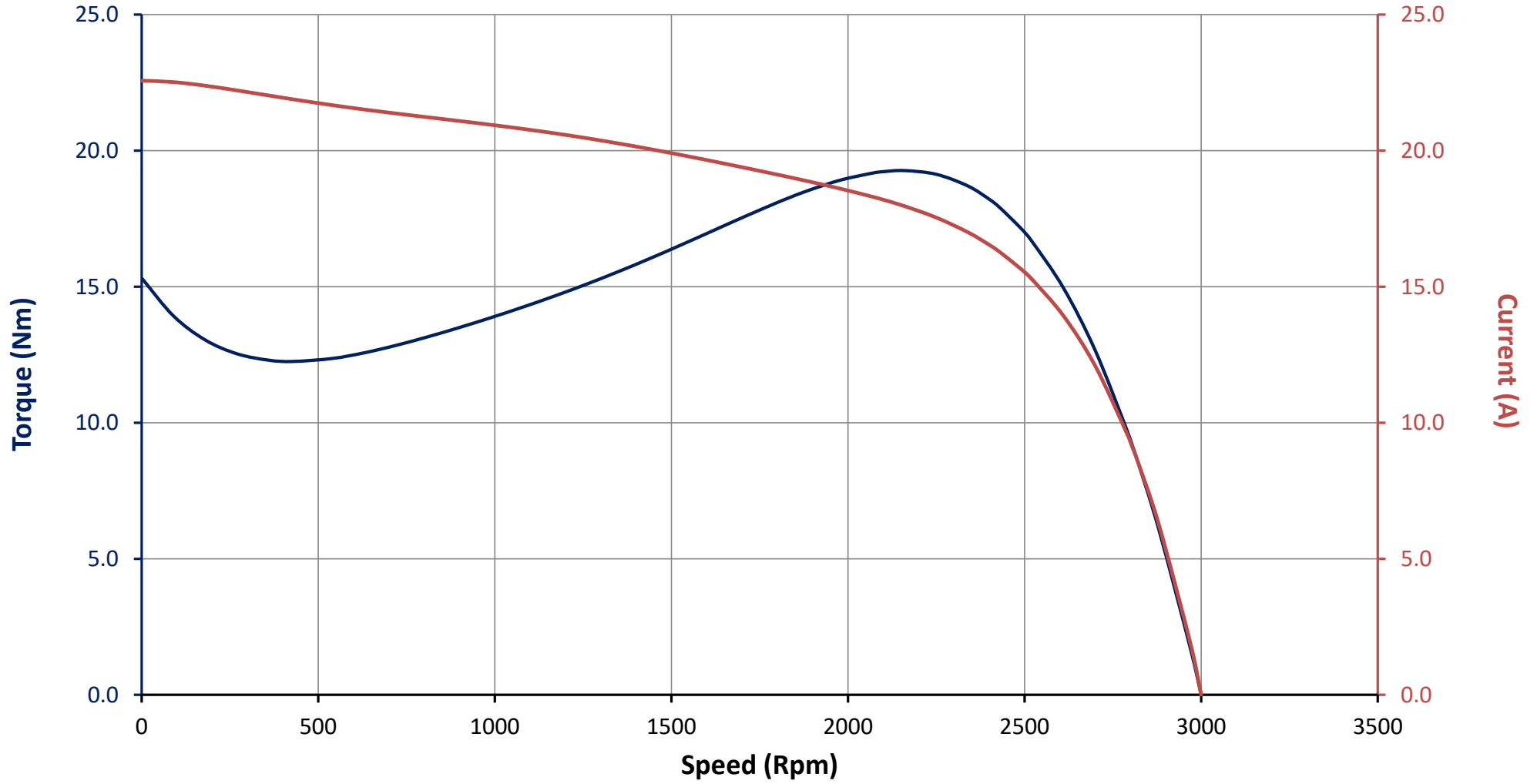
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Motor Code : 3EL090S2B-FA-A0-000

Torque and Current Curves Related to Speed



Motor Code : 3EL090S2B-FA-A0-000

Performance Curves Related to Rated Output

