

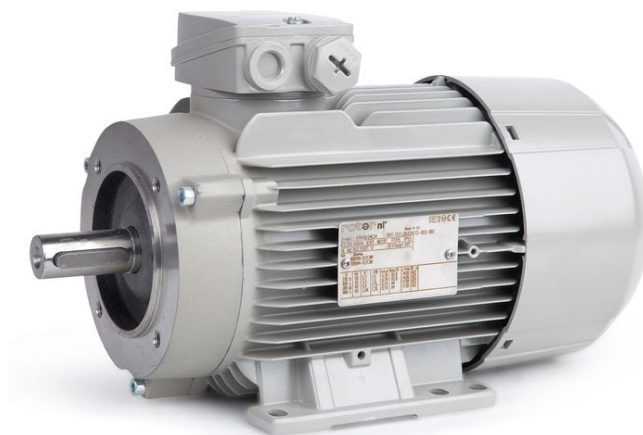
# PRODUCT INFORMATION PACKET

rotor nl®

Model No: 6RN90S02E30U24B2181-A

Catalog No: 6RN90S02E30U24B@2181-A

1.50 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 3000 rpm, D230/Y400V 50Hz,  
90S Frame B34, IC411



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### Nameplate Specifications

Output HP	2.00 Hp	Output KW	1.5 kW
Frequency	50 Hz	Voltage	D230/Y400 V
Current	5.20 A	Speed	2910 rpm
Service Factor	1	Phase	3
Efficiency	84.5 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	90S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6205-2Z/C3WT (-40°C/+160°C)	Opp Drive End Bearing Size	6004-2Z/C3WT (-40°C/+160°C)
UL	No	CSA	Optional
CE	Yes	IP Code	IP55
Number of Speeds	1	Efficiency Class	IE3

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Clockwise Shaft End
Mounting	B34	Motor Orientation	Any
Frame Material	Cast iron	Shaft Type	Keyed
Shaft Diameter	24 mm	Shaft Extension	50 mm
Outline Drawing	6RN90S02E30_2141-A		

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Datasheet



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**Model No.** 2-Pole cage motor 6RN 90S 1,5kW D230V 50Hz IM2181-FT115

U (V)	Δ / Y Conn	f [Hz]	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load			PF at __load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>R</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
230	D	50	1,5	2	5,2	2910	4,9	IE3	85,2			0,86			8,10	2,70	4,20
400	Y				3												
265	D	60	1,75	2 1/3	5,15	3510	4,76	IE3	86,0			0,87			8,75	2,64	4,20
460	Y				2,95												

Motor type	<b>6RN90S02E30</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Aluminum</b>
Frame size	<b>90S</b>
Duty	<b>S1</b>
Voltage	<b>230 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>1,5 kW</b>
Insulation class	<b>F</b>
Ambient temperature	<b>-20 till 40 °C</b>
Temperature rise	<b>temp.rise acc. B (80K)</b>
Temperature rise winding	<b>38 K</b>
Temperature rise surface	<b>10 K</b>
Altitude above sea level	<b>1000 mtr</b>
Hazardous area classification	<b>Safe area</b>

Rotor type	<b>Cage motor</b>
Bearing type	<b>6004-2Z/C3WT</b>

Type of grease	<b>Unirex N3</b>
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Phase resistance at 20°C	<b>4,0313 Ohm</b>
Country of origin	<b>CZ</b>

Voltage/Freq	Locked rotor Torque [nom]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 230V 50Hz	270%	809%	220%	420%	2,44 A
@ D 265V 60Hz	264%	871%	211%	420%	2,19 A

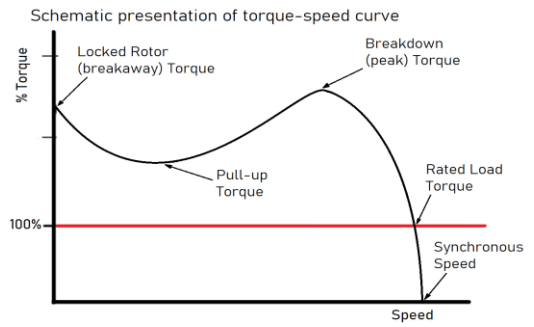
**NOTE**

All performance values at rated voltage and frequency.  
 All performance parameters are subjected to standard tolerance as per IEC 60034-1  
 Voltage, Frequency are as per IEC60034-1  
 Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency	Europe	Global IEC
Standards	EN-IEC: 60034-30	IEC: 60034-30

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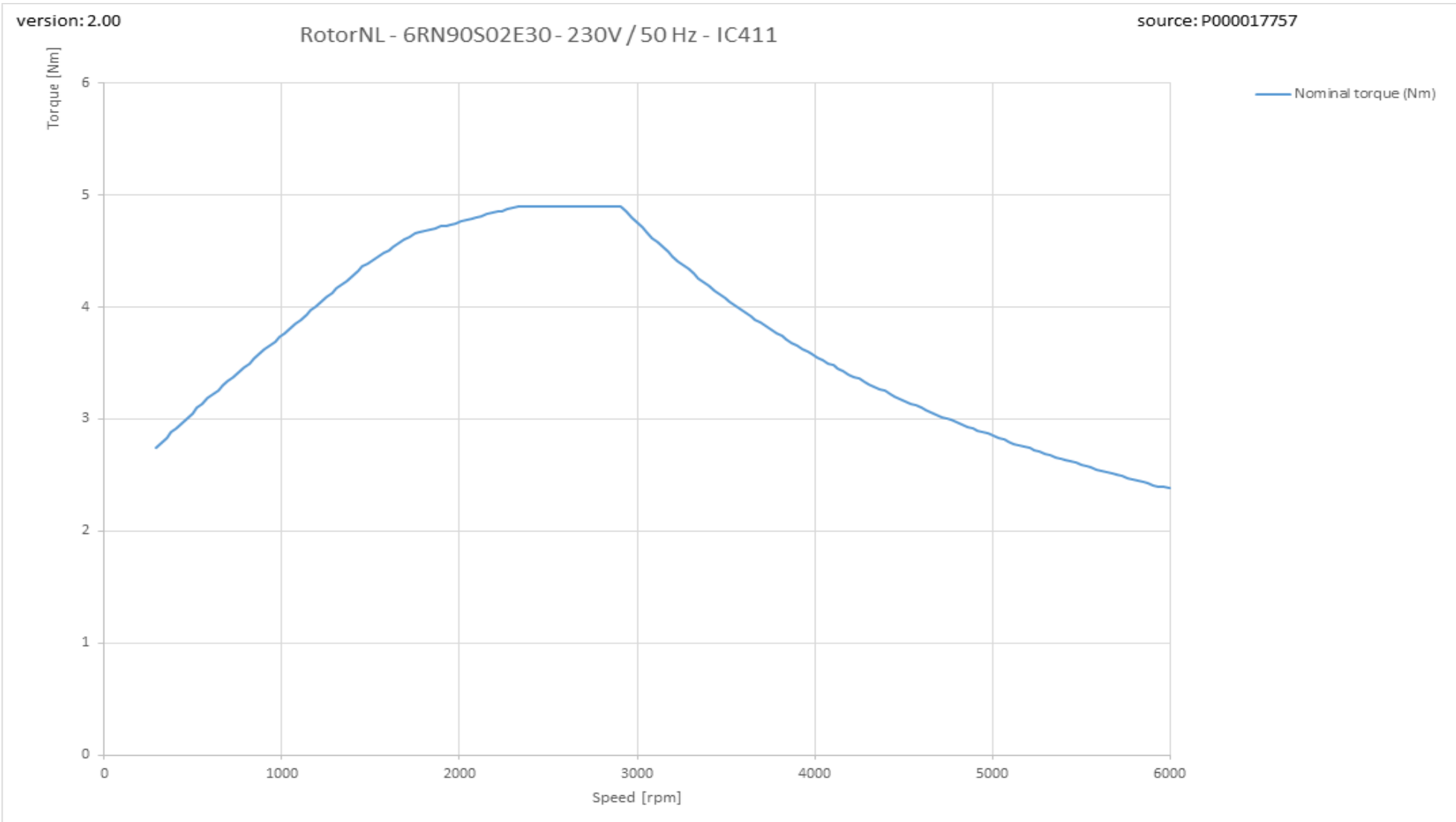
Degree of protection	<b>IP55</b>
Mounting type	<b>IM2181-FT115</b>
Cooling method	<b>IC411</b>
Motor weight - approx.	<b>18 kg</b>
Gross weight - approx.	<b>19 kg</b>
Motor inertia	<b>0,0021 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Direction of rotation	<b>cw / ccw</b>



6RN90S02E30 2-pole 1,50kW D/Y 230/400V 50Hz S1 IC411 IE3



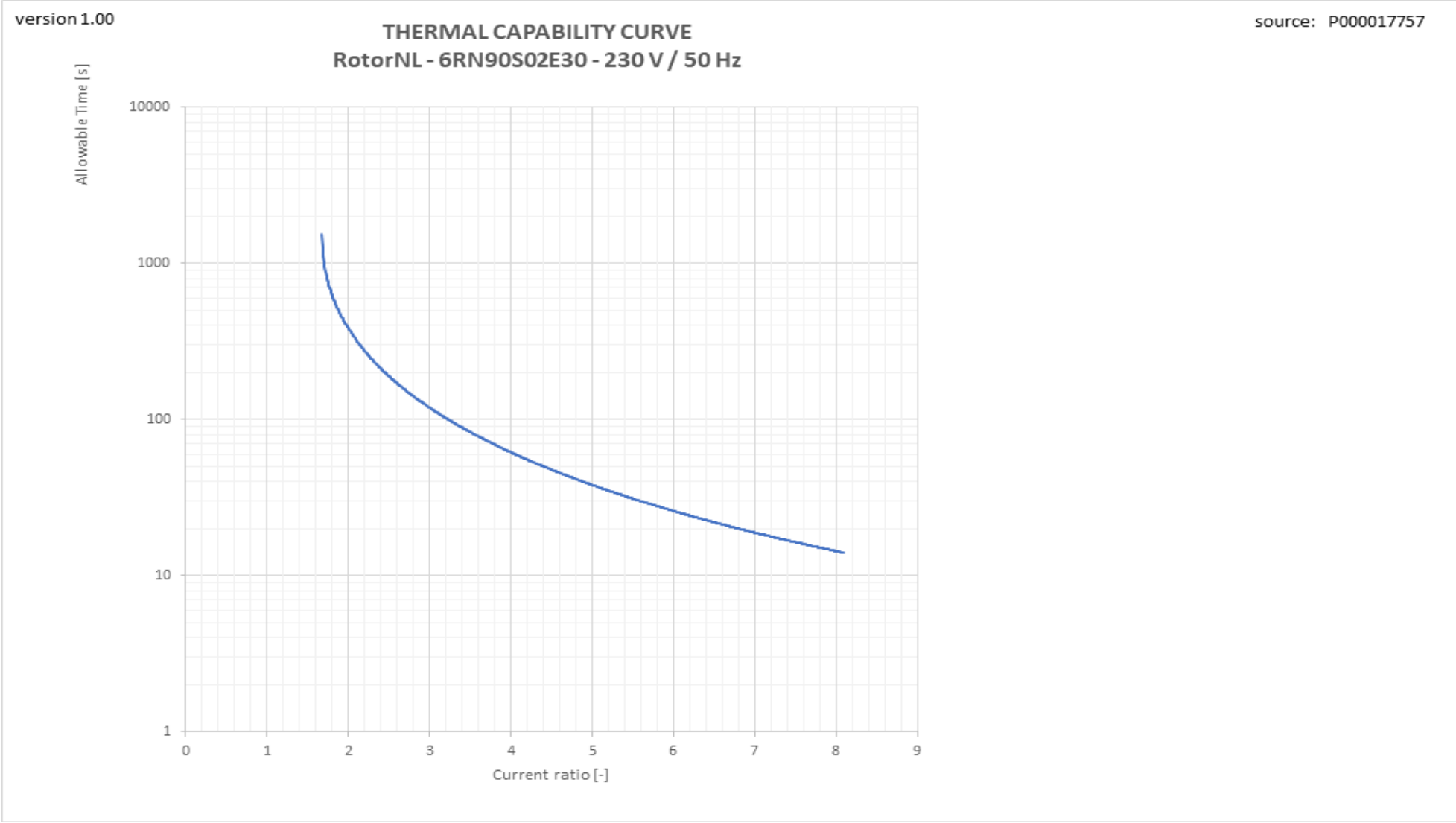
Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph

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Tn graph

