

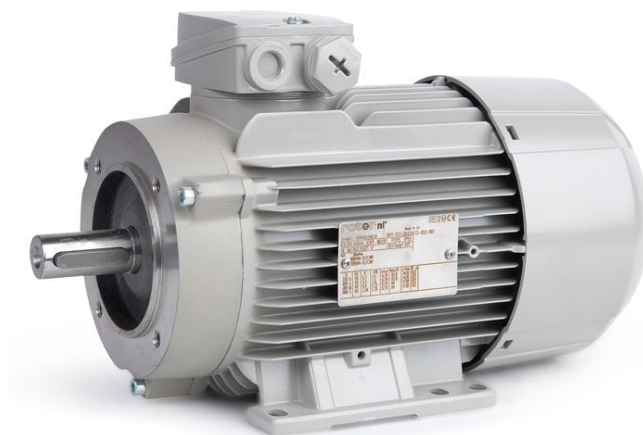
# PRODUCT INFORMATION PACKET

rotor nl®

Model No: 6RN90S04E30U46B2181-A

Catalog No: 6RN90S04E30U46B@2181-A

1.10 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 1500 rpm, D400/Y690V 50Hz,  
90S Frame B34, IC411



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### Nameplate Specifications

Output HP	1.50 Hp	Output KW	1.1 kW
Frequency	50 Hz	Voltage	D400/Y690 V
Current	2.43 A	Speed	1445 rpm
Service Factor	1	Phase	3
Efficiency	84.1 %	Power Factor	0.78
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	4	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	6RN90S04E30_1041		

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Datasheet



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**Model No.** 4-Pole cage motor 6RN 90S 1,1kW D400V 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			
400	D	50	1,1	1 1/2	2,43	1445	7,3	IE3	84,5			0,78			6,80	2,31	3,60
690	Y				1,4												
460	D	60	1,27	1,702	2,4	1740	6,98	IE2	85,8			0,79		7,44	2,96	3,75	

Motor type	<b>6RN90S04E30</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Aluminum</b>
Frame size	<b>90S</b>
Duty	<b>S1</b>
Voltage	<b>400 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>1,1 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>27 K</b>
Temperature rise surface	<b>19 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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Country of origin	<b>CZ</b>
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Voltage/Freq	Locked rotor Torque [nom] [%]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 400V 50Hz	231%	679%		360%	1,38 A
@ D 460V 60Hz	296%	737%	241%	375%	1,28 A

**NOTE**

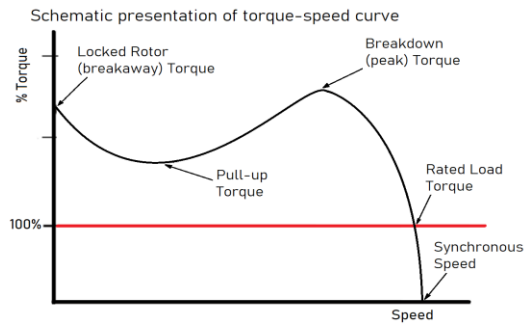
All performance values at rated voltage and frequency.  
 All performance parameters are subjected to standard tolerance as per IEC 60034-1  
 Voltage, Frequency are as per IEC60034-1  
 Technical data are subject to change. There may be discrepancies between calculated and name plate values.

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>16 kg</b>
Gross weight - approx.	<b>16 kg</b>
Motor inertia	<b>0,0028 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Noise level (pressure) acc 60034-9	<b>0 dB(A)</b>

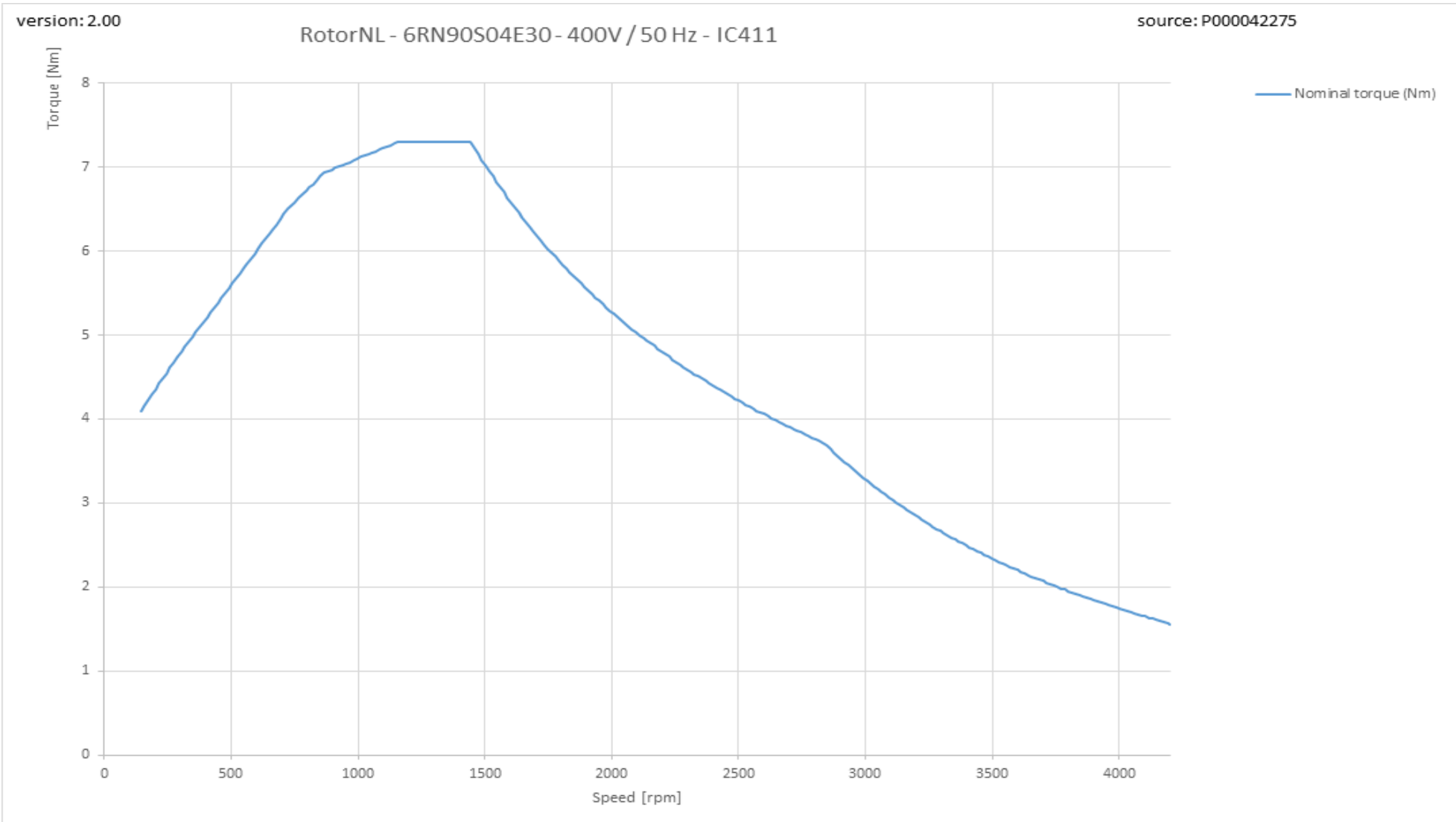
Direction of rotation	<b>cw / ccw</b>
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6RN90S04E30 4-pole 1,10kW D/Y 400/690V 50Hz S1 IC411 IE3



Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph

