

# PRODUCT INFORMATION PACKET



Model No: 6RN180M04E42U463021

Catalog No: 6RN180M04E42U46@3021

18.50 kW General Purpose Low Voltage IEC Motor IE4, 3 phase, 1500 rpm, D400/Y690V 50Hz,  
180M Frame B5, IC411

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**Nameplate Specifications**

Output HP	<b>25.00 Hp</b>	Output KW	<b>18.5 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>D400/Y690 V</b>
Current	<b>35.09 A</b>	Speed	<b>1470 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>94.2 %</b>	Power Factor	<b>0.81</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>180M</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6310-2Z/C3WT (-40°C/+160°C)</b>	Opp Drive End Bearing Size	<b>6310-2Z/C3WT (-40°C/+160°C)</b>
UL	<b>No</b>	CSA	<b>Optional</b>
CE	<b>Yes</b>	IP Code	<b>IP55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE4</b>

**Technical Specifications**

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>4</b>	Rotation	<b>Clockwise Shaft End</b>
Mounting	<b>B5</b>	Motor Orientation	<b>Any</b>
Frame Material	<b>Cast iron</b>	Shaft Type	<b>Keyed</b>
Outline Drawing	<b>6RN180M04E42_3041</b>		

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Datasheet



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**Model No.** 4-Pole cage motor 6RN 180M 18,5kW D400V 50Hz IM3021-FF300

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	18,5	24,8	35	1470	119	IE4	93,7	94,2	94,0	0,81	0,76	0,66	8,22	2,68	3,57
690	Y				19,9												
460	D	60	21,3	28,55	34,5	1770	114	IE4	93,7	94,1	93,6	0,82	0,77	0,68	8,36	2,50	3,48

Motor type	<b>6RN180M04E42</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Cast iron</b>
Frame size	<b>180M</b>
Duty	<b>S1</b>
Voltage	<b>400 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>18,5 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>42 K</b>
Temperature rise surface	<b>17 K</b>
Altitude above sea level	<b>1000 mtr</b>
Hazardous area classification	<b>Safe area</b>

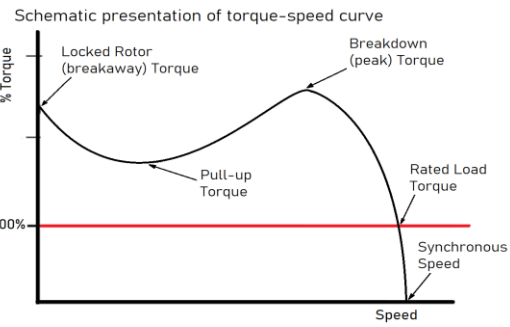
Degree of protection	<b>IP55</b>
Mounting type	<b>IM3021-FF300</b>
Cooling method	<b>IC411</b>
Motor weight - approx.	<b>193 kg</b>
Gross weight - approx.	<b>199 kg</b>
Motor inertia	<b>0,1700 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Noise level (pressure) acc 60034-9	<b>75 dB(A)</b>

Rotor type	<b>Cage motor</b>
Bearing type	<b>6310-2Z/C3WT</b>
Type of grease	<b>Unirex N3</b>
Phase resistance at 20°C	<b>0,2971 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 400V 50Hz	268%	822%		357%	14,4 A
@ D 460V 60Hz	250%	834%		348%	13,6 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



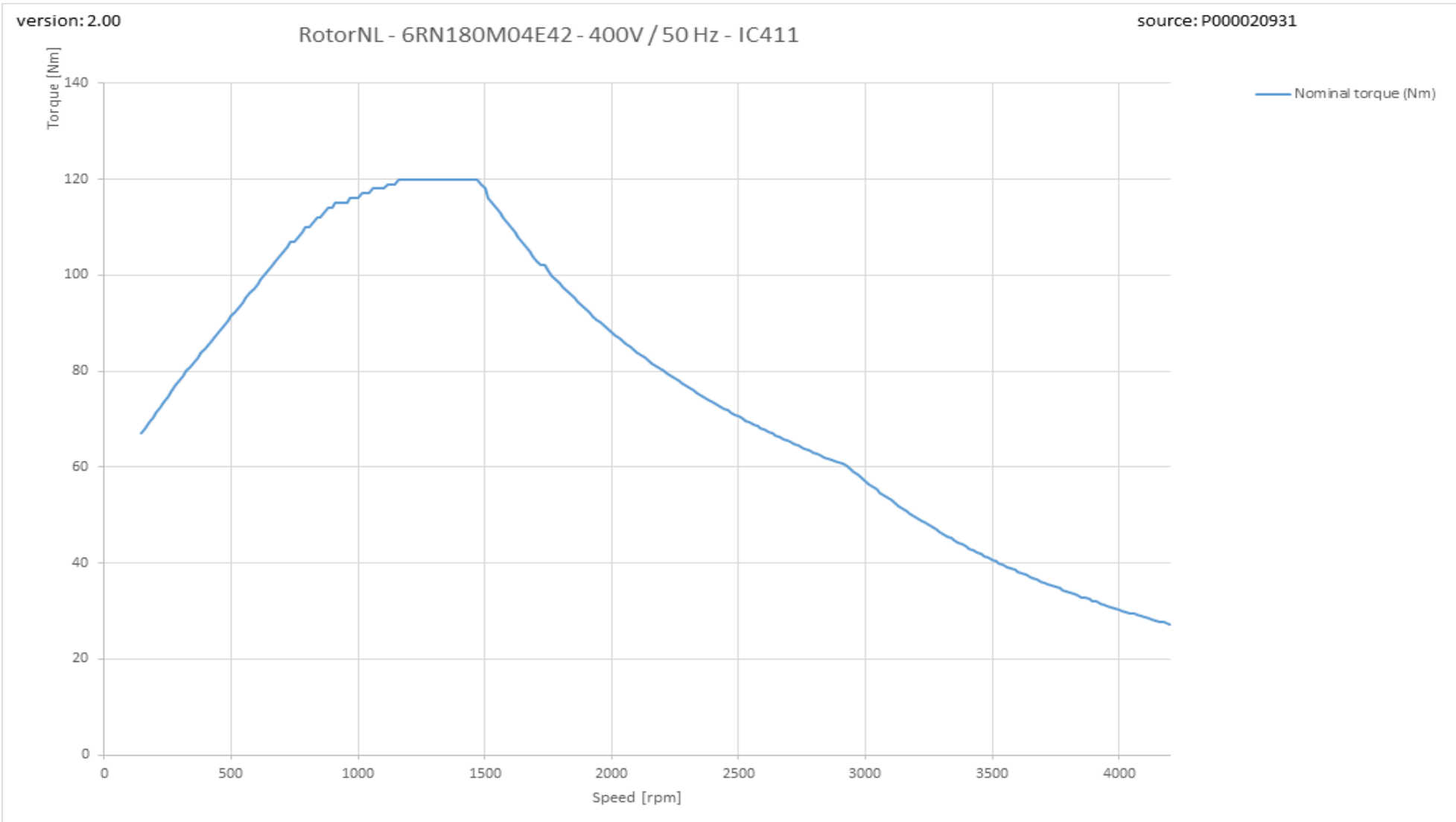
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6RN180M04E42 4-pole 18,50kW D/Y 400/690V 50Hz S1 IC411 IE4



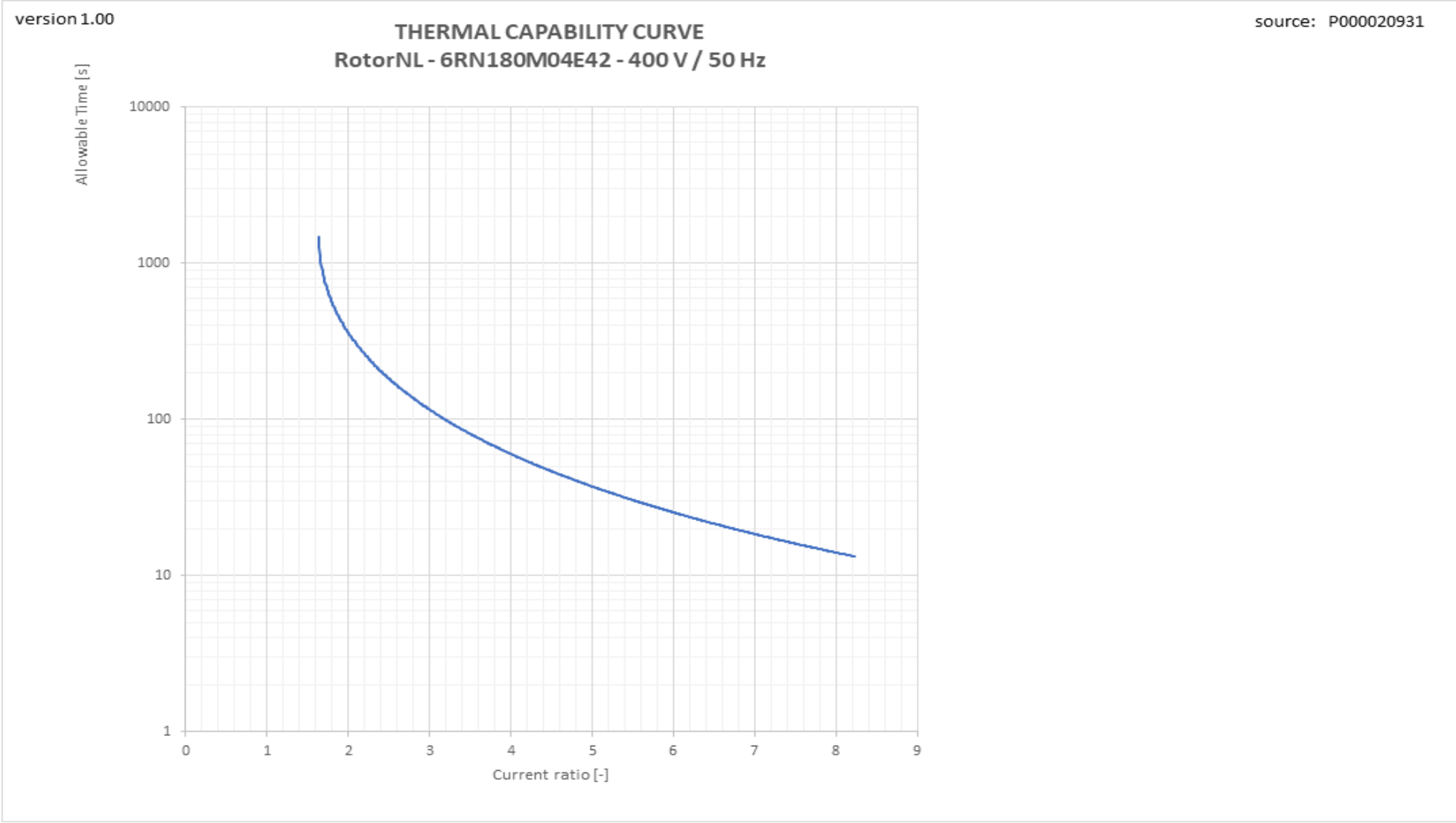
Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph

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Tn graph

