

PRODUCT INFORMATION PACKET



Model No: 6RN280M02E42U46B2021

Catalog No: 6RN280M02E42U46B@2021

90.00 kW General Purpose Low Voltage IEC Motor IE4, 3 phase, 3000 rpm, D400/Y690V 50Hz,
280M Frame B35, IC411

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Nameplate Specifications

Output HP	120.00 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	D400/Y690 V
Current	152.00 A	Speed	2978 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	280M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6315/C3	Opp Drive End Bearing Size	6315/C3
UL	No	CSA	Optional
CE	Yes	IP Code	IP55
Number of Speeds	1	Efficiency Class	IE4

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Clockwise Shaft End
Mounting	B35	Motor Orientation	Any
Frame Material	Cast iron	Shaft Type	Keyed
Outline Drawing	6RN280M02E42_2041		

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Datasheet

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Model No. 2-Pole cage motor 6RN 280M 90kW D400V 50Hz IM2021-FF500

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load			PF at __load			I _A /I _N [pu]	T _A /T _N [pu]	T _K /T _N [pu]
									FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	D	50	90	120	152	2978	288	IE4	95,7	95,8	95,4	0,89	0,87	0,81	8,86	2,77	3,43
690	Y				87,7												
460	D	60	101	135,4	148	3578	269	IE4	95,7	95,6	94,9	0,90	0,88	0,83	8,78	2,85	3,35

Motor type	6RN280M02E42
Enclosure	Totally Enclosed Fan Cooling
Frame Material	Cast iron
Frame size	280M
Duty	S1
Voltage	400 V
Frequency	50 Hz
Power output	90 kW

Insulation class	F
Ambient temperature	-20 till 40 °C
Temperature rise	temp.rise acc. B (80K)
Temperature rise winding	63 K
Temperature rise surface	23 K
Altitude above sea level	1000 mtr
Hazardous area classification	Safe area

Rotor type	Cage motor
Bearing type	6315/C3
Lubrication method	25gr/4000hrs
Type of grease	Unirex N3

Phase resistance at 20°C	0,0406 Ohm
Country of origin	CZ

Voltage/Freq	Locked rotor Torque [% nom]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 400V 50Hz	277%	881%	232%	343%	40,8 A
@ D 460V 60Hz	285%	871%	229%	335%	37,7 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	IP55
Mounting type	IM2021-FF500
Cooling method	IC411
Motor weight - approx.	610 kg
Gross weight - approx.	630 kg
Motor inertia	1,0000 kgm ²
Vibration level	according IEC60034-14
Noise level (pressure) acc 60034-9	73 dB(A)

Direction of rotation	cw / ccw
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Schematic presentation of torque-speed curve



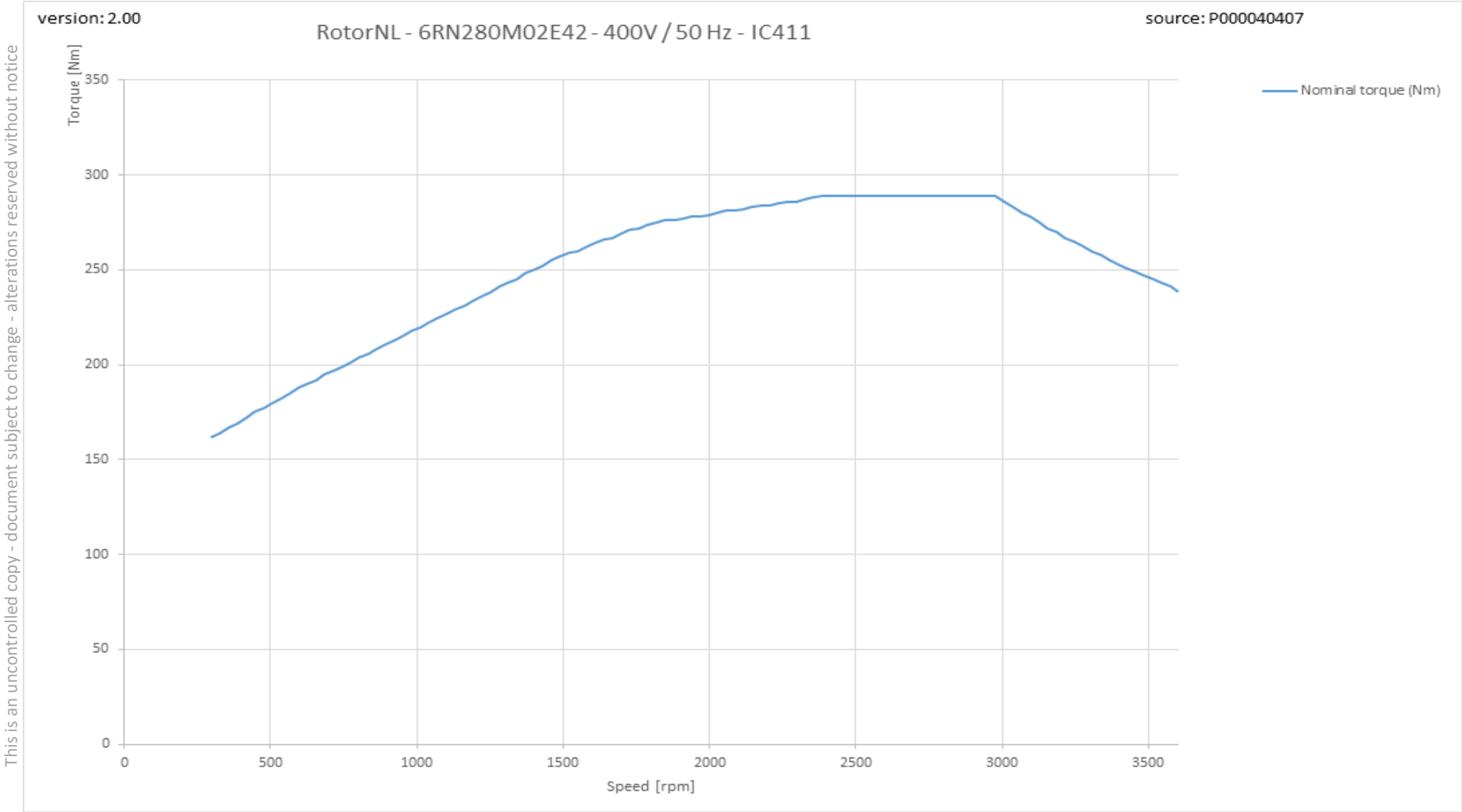
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6RN280M02E42 2-pole 90,00kW D/Y 400/690V 50Hz S1 IC411 IE4



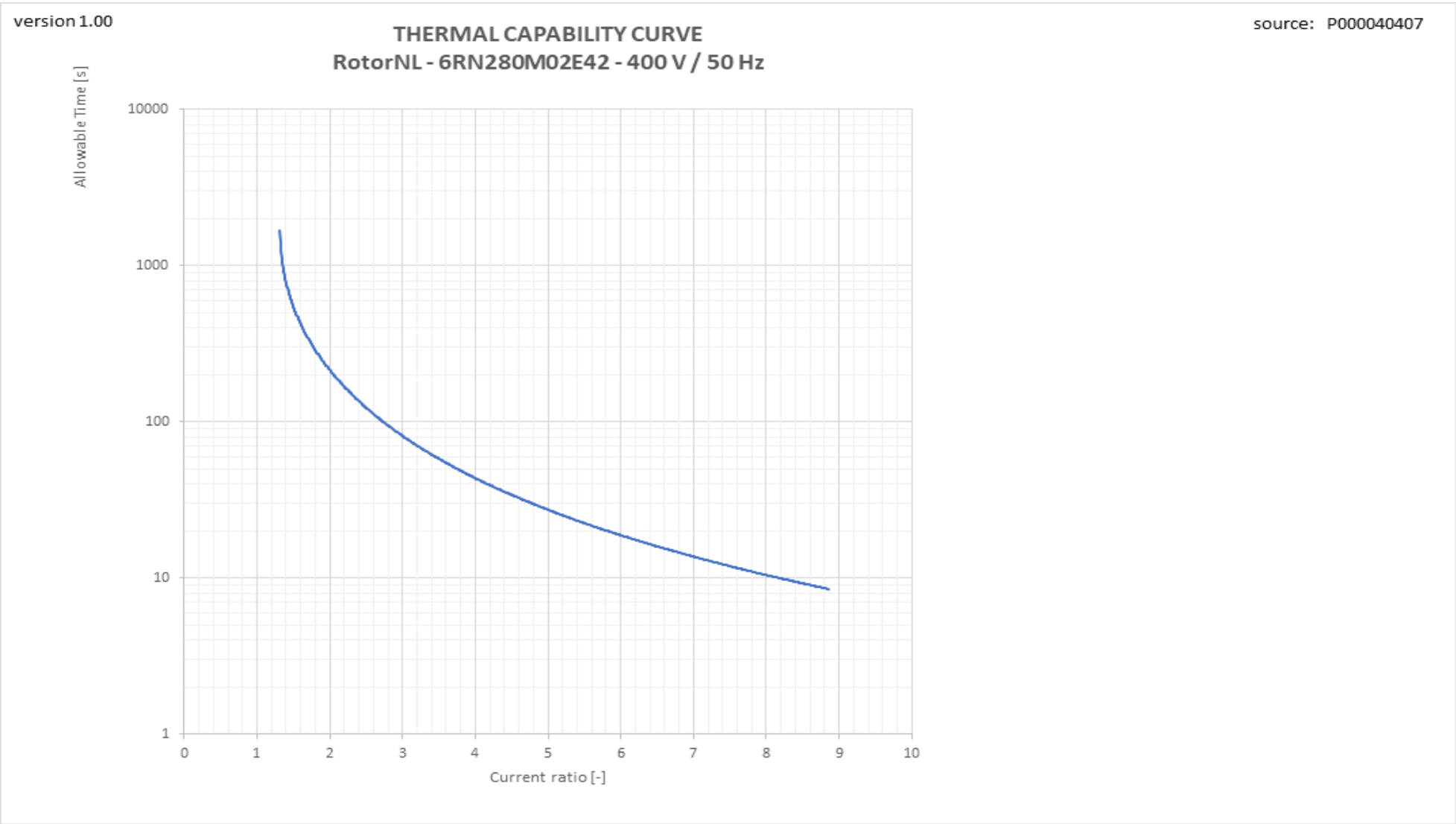
Torque versus Speed curve with variable frequency drive



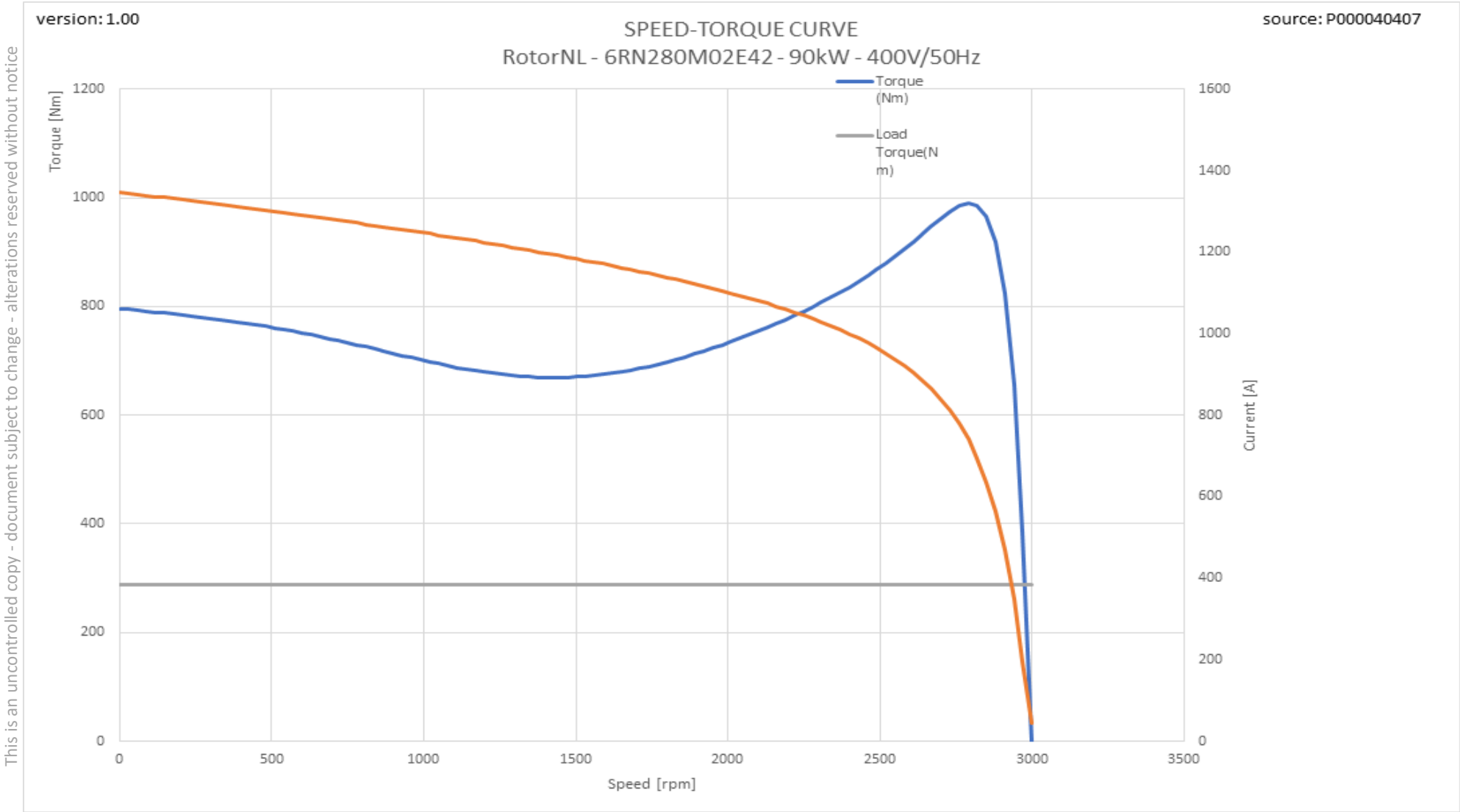
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Therm_VSD graph

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Tn graph



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