

PRODUCT INFORMATION PACKET



Model No: 6RN225M02E42U461041

Catalog No: 6RN225M02E42U46@1041

45.00 kW General Purpose Low Voltage IEC Motor IE4, 3 phase, 3000 rpm, D400/Y690V 50Hz,
225M Frame B3, IC411

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Nameplate Specifications

| | | | |
|------------------------|----------------------|----------------------------|------------------------------------|
| Output HP | 60.00 Hp | Output KW | 45.0 kW |
| Frequency | 50 Hz | Voltage | D400/Y690 V |
| Current | 80.90 A | Speed | 2970 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 95 % | Power Factor | 0.84 |
| Duty | S1 | Insulation Class | F |
| Frame | 225M | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6313/C3 | Opp Drive End Bearing Size | 6313/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 | B3 | Motor Orientation | Any |
| Frame Material | Cast iron | Shaft Type | Keyed |
| Outline Drawing | 6RN225M02E42_1041 | | |

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Datasheet



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Model No. 2-Pole cage motor 6RN 225M 45kW D400V 50Hz IM1041

| U (V) | Δ / Y Conn | f [Hz] | P | | 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 _R /T _N [pu] |
|----------|---------------|-----------|------|-------|----------|------------|-----------|-------------|------------------|-------|-------|--------------|-------|-------|--|--|--|
| | | | [kW] | [hp] | | | | | FL | 3/4FL | 1/2FL | FL | 3/4FL | 1/2FL | | | |
| 400 | D | 50 | 45 | 60,32 | 80 | 2970 | 144 | IE4 | 95,1 | 95,1 | 94,4 | 0,84 | 0,80 | 0,70 | 9,10 | 3,06 | 4,10 |
| 690 | Y | | 46,1 | | | | | | | | | | | | | | |
| 460 | D | 60 | 51 | 68,36 | 78 | 3570 | 136 | IE4 | 95,4 | 95,3 | 94,5 | 0,86 | 0,82 | 0,73 | 9,14 | 3,05 | 3,97 |

| | |
|-------------------------------|-------------------------------------|
| Motor type | 6RN225M02E42 |
| Enclosure | Totally Enclosed Fan Cooling |
| Frame Material | Cast iron |
| Frame size | 225M |
| Duty | S1 |
| Voltage | 400 V |
| Frequency | 50 Hz |
| Power output | 45 kW |
| Insulation class | F |
| Ambient temperature | -20 till 40 °C |
| Temperature rise | temp.rise acc. B (80K) |
| Temperature rise winding | 58 K |
| Temperature rise surface | 26 K |
| Altitude above sea level | 1000 mtr |
| Hazardous area classification | Safe area |

| | |
|------------------------------------|-------------------------------|
| Degree of protection | IP55 |
| Mounting type | IM1041 |
| Cooling method | IC411 |
| Motor weight - approx. | 330 kg |
| Gross weight - approx. | 340 kg |
| Motor inertia | 0,2600 kgm² |
| Vibration level | according IEC60034-14 |
| Noise level (pressure) acc 60034-9 | 75 dB(A) |

| | |
|--------------------------|---------------------|
| Rotor type | Cage motor |
| Bearing type | 6313/C3 |
| Lubrication method | 22gr/4000hrs |
| Type of grease | Unirex N3 |
| Phase resistance at 20°C | 0,0778 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 | 306% | 920% | 282% | 410% | 30,6 A |
| @ D 460V 60Hz | 305% | 915% | 274% | 397% | 27,5 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.

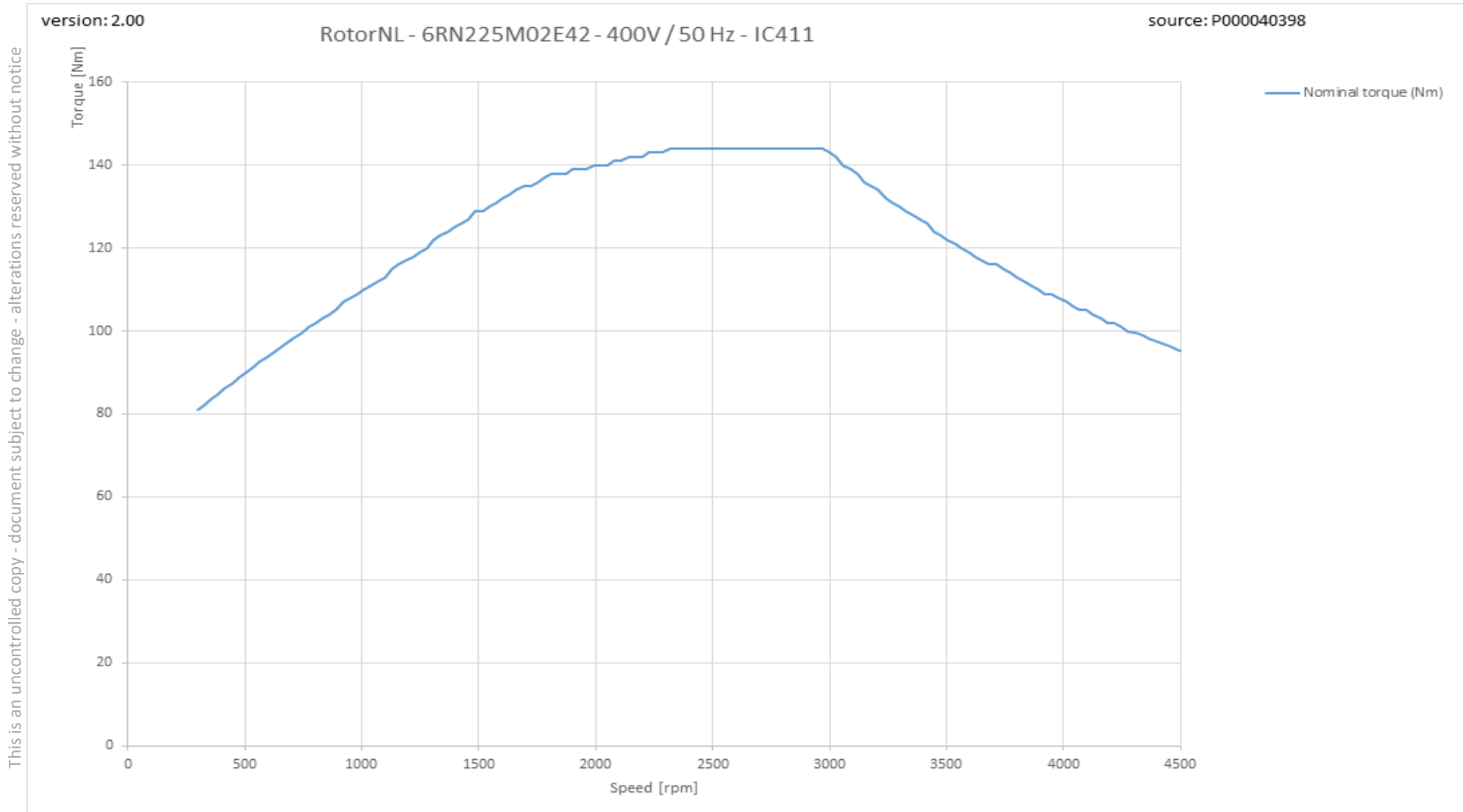
| | | |
|------------|------------------|---------------|
| Efficiency | Europe | Global IEC |
| Standards | EN-IEC: 60034-30 | IEC: 60034-30 |



6RN225M02E42 2-pole 45,00kW D/Y 400/690V 50Hz S1 IC411 IE4

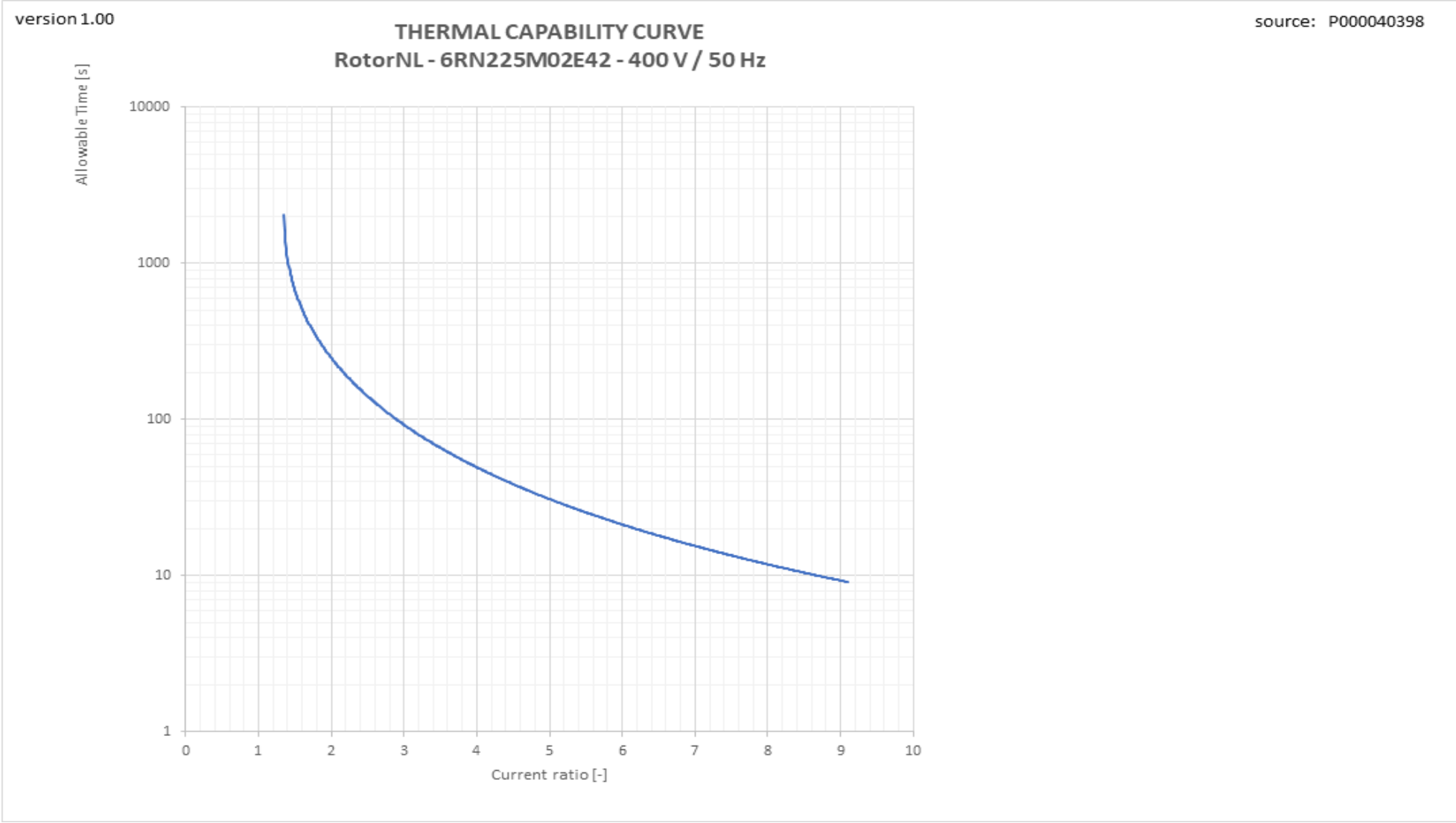


Torque versus Speed curve with variable frequency drive



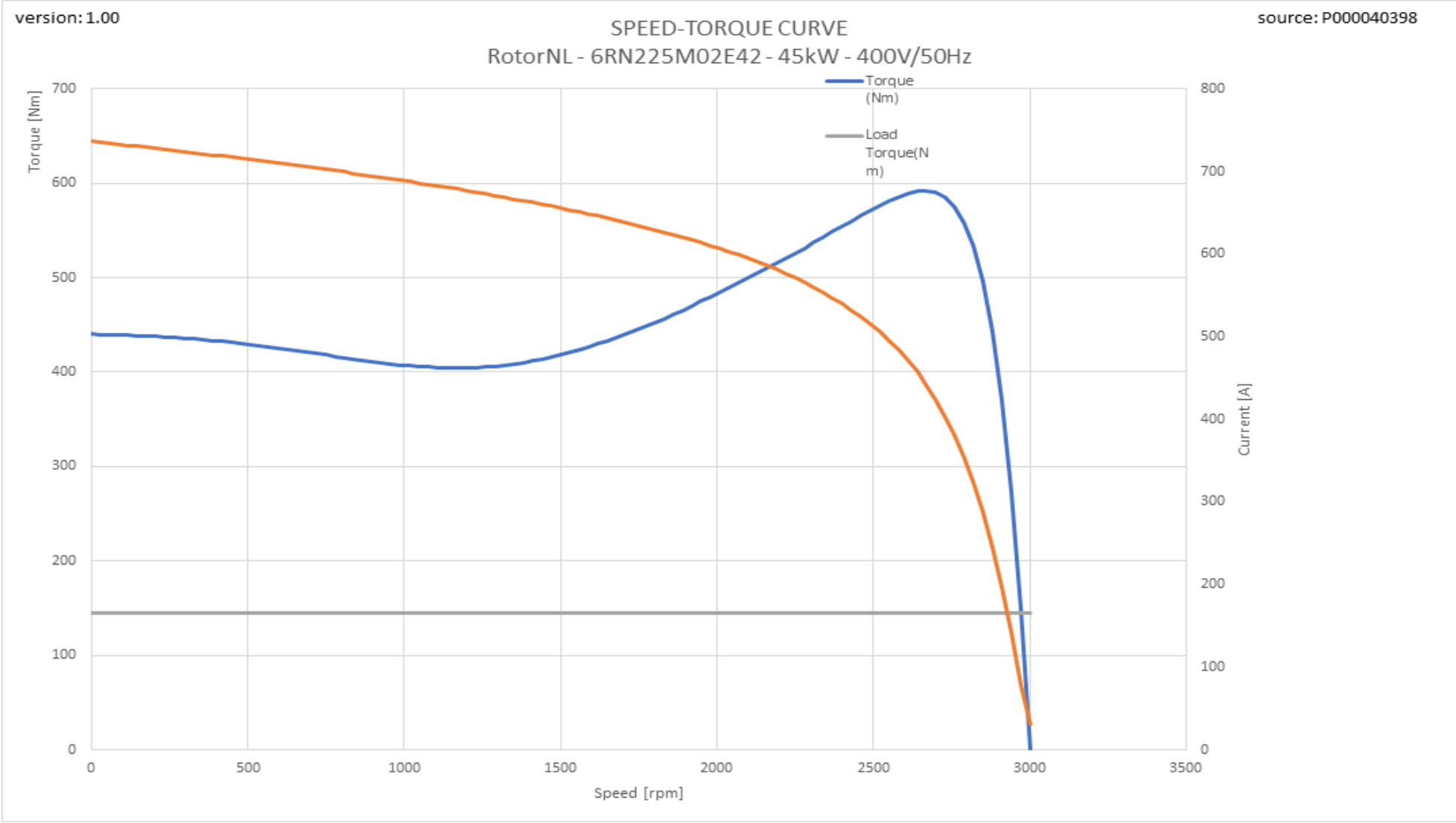
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Therm_VSD graph



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Tn graph



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