

PRODUCT INFORMATION PACKET

rotor nl®

Model No: 6RN280M06E32U46B1041-Uni
Catalog No: 6RN280M06E32U46B@1041-Uni
55.00 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 1000 rpm, D400/Y690V 50Hz,
280M Frame B3, IC411



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Nameplate Specifications

| | | | |
|------------------------|---------------|----------------------------|-----------------------------|
| Output HP | 75.00 Hp | Output KW | 55.0 kW |
| Frequency | 50 Hz | Voltage | D400/Y690 V |
| Current | 99.80 A | Speed | 988 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 94.1 % | Power Factor | 0.85 |
| Duty | S1 | Insulation Class | F |
| Frame | 280M | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6317/C3 | Opp Drive End Bearing Size | 6317/C3 |
| 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 | 6 | Rotation | Clockwise Shaft End |
| Mounting | B3 | Motor Orientation | Any |
| Frame Material | Cast iron | Shaft Type | Keyed |
| Shaft Diameter | 75 mm | Shaft Extension | 140 mm |
| Outline Drawing | 6RN280M06E32_1041 | | |

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Datasheet



Mors 1-5, 7151 MX Eibergen NL
 www.rotor.nl tel.: +31 545 464640
 sales@rotor.nl tel.: +31 545 464646

Model No. 6-Pole cage motor 6RN 280M 55kW 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 | 55 | 72,5 | 99,8 | 988 | 531 | IE3 | 93,9 | 94,4 | 94,2 | 0,85 | 0,81 | 0,72 | 7,55 | 2,94 | 2,86 |
| 690 | Y | | | | 57,7 | | | | | | | | | | | | |
| 460 | D | 60 | 55 | 72,5 | 87,4 | 1190 | 441 | IE3 | 94,5 | 94,6 | 94,0 | 0,84 | 0,79 | 0,70 | 8,53 | 3,33 | 3,19 |

| | |
|-------------------------------|-------------------------------------|
| Motor type | 6RN280M06E32 |
| Enclosure | Totally Enclosed Fan Cooling |
| Frame Material | Cast iron |
| Frame size | 280M |
| Duty | S1 |
| Voltage | 400 V |
| Frequency | 50 Hz |
| Power output | 55 kW |
| Insulation class | F |
| Ambient temperature | -20 till 40 °C |
| Temperature rise | temp.rise acc. B (80K) |
| Temperature rise winding | 50 K |
| Temperature rise surface | 31 K |
| Altitude above sea level | 1000 mtr |
| Hazardous area classification | Safe area |

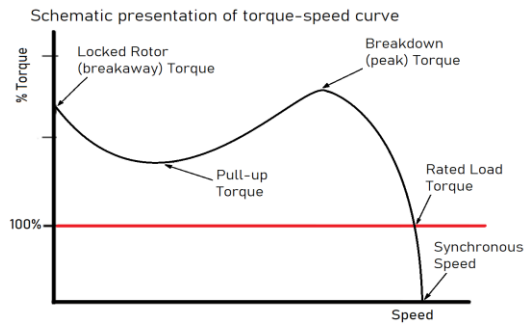
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|------------------------------------|-------------------------------|
| Degree of protection | IP55 |
| Mounting type | IM1041 |
| Cooling method | IC411 |
| Motor weight - approx. | 560 kg |
| Gross weight - approx. | 580 kg |
| Motor inertia | 1,6000 kgm² |
| Vibration level | according IEC60034-14 |
| Noise level (pressure) acc 60034-9 | 58 dB(A) |

| | |
|--------------------------|--------------------------|
| Rotor type | Cage motor |
| Bearing type | 6317/C3 - 6317/C3 |
| Lubrication method | 30gr/8000hrs |
| Type of grease | Unirex N3 |
| Phase resistance at 20°C | 0,1180 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 | 294% | 754% | 210% | 286% | 32,5 A |
| @ D 460V 60Hz | 333% | 852% | 240% | 319% | 30,7 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 |



V2.06

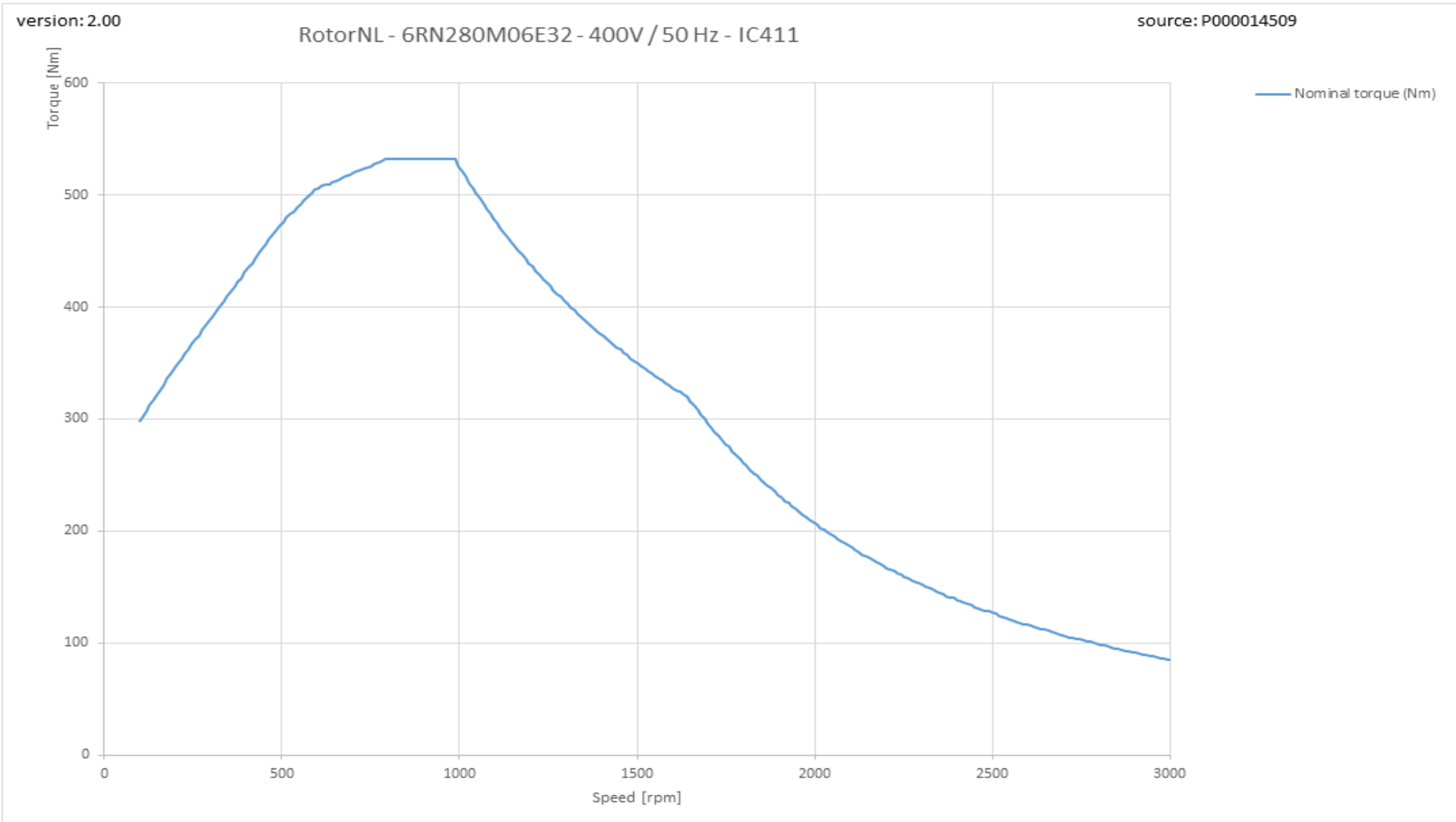
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6RN280M06E32 6-pole 55,00kW D/Y 400/690V 50Hz S1 IC411 IE3

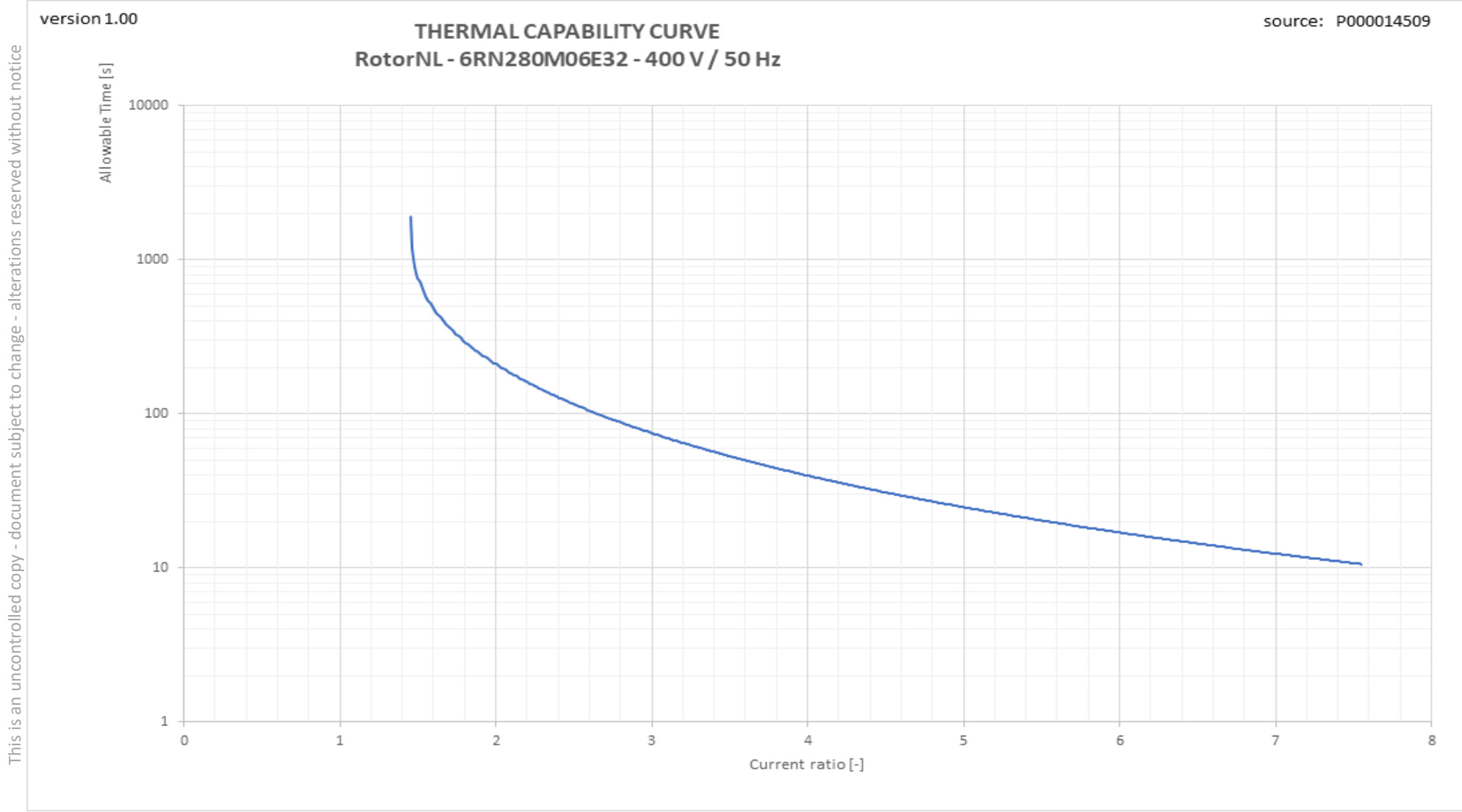


Torque versus Speed curve with variable frequency drive



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Therm_VSD graph



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Tn graph

