

# PRODUCT INFORMATION PACKET



Model No: 6RN100L02E44U46B3641-A

Catalog No: 6RN100L02E44U46B@3641-A

3.00 kW General Purpose Low Voltage IEC Motor IE4, 3 phase, 3000 rpm, D400/Y690V 50Hz,  
100L Frame B14, IC411

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## Nameplate Specifications

|                        |                             |                            |                             |
|------------------------|-----------------------------|----------------------------|-----------------------------|
| Output HP              | 4.00 Hp                     | Output KW                  | 3.0 kW                      |
| Frequency              | 50 Hz                       | Voltage                    | D400/Y690 V                 |
| Current                | 5.64 A                      | Speed                      | 2920 rpm                    |
| Service Factor         | 1                           | Phase                      | 3                           |
| Efficiency             | 89.1 %                      | Power Factor               | 0.86                        |
| Duty                   | S1                          | Insulation Class           | F                           |
| Frame                  | 100L                        | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection               | Ambient Temperature        | 40 °C                       |
| Drive End Bearing Size | 6306-2Z/C3WT (-40°C/+160°C) | Opp Drive End Bearing Size | 6306-2Z/C3WT (-40°C/+160°C) |
| 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        | B14                 | Motor Orientation | Any                 |
| Frame Material  | Cast iron           | Shaft Type        | Keyed               |
| Outline Drawing | 6RN100L02E44_3641-A |                   |                     |

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## Datasheet

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**Model No.** 2-Pole cage motor 6RN 100L 3kW D400V 50Hz IM3641-FT130

| U<br>(V) | Δ / Y<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[RPM] | T<br>[Nm] | IE<br>Class | % EFF at __ load |       |       | PF at __load |       |       | I <sub>A</sub> /I <sub>N</sub><br>[pu] | T <sub>A</sub> /T <sub>N</sub><br>[pu] | T <sub>K</sub> /T <sub>N</sub><br>[pu] |
|----------|---------------|-----------|-----------|-----------|----------|------------|-----------|-------------|------------------|-------|-------|--------------|-------|-------|----------------------------------------|----------------------------------------|----------------------------------------|
|          |               |           |           |           |          |            |           |             | FL               | 3/4FL | 1/2FL | FL           | 3/4FL | 1/2FL |                                        |                                        |                                        |
| 400      | D             | 50        | 3         | 4         | 5,7      | 2920       | 9,81      | IE4         | 89,6             | 90,3  | 90,0  | 0,86         | 0,81  | 0,71  | 10,00                                  | 3,72                                   | 5,03                                   |
| 690      | Y             |           |           |           | 3,29     |            |           |             |                  |       |       |              |       |       |                                        |                                        |                                        |
| 460      | D             | 60        | 3,45      | 4,625     | 4,95     | 3530       | 9,36      | IE4         | 90,6             | 90,7  | 89,4  | 0,85         | 0,80  | 0,69  | 10,50                                  | 4,02                                   | 5,19                                   |

|                               |                              |
|-------------------------------|------------------------------|
| Motor type                    | 6RN100L02E44                 |
| Enclosure                     | Totally Enclosed Fan Cooling |
| Frame Material                | Cast iron                    |
| Frame size                    | 100L                         |
| Duty                          | S1                           |
| Voltage                       | 400 V                        |
| Frequency                     | 50 Hz                        |
| Power output                  | 3 kW                         |
| Insulation class              | F                            |
| Ambient temperature           | -20 till 40 °C               |
| Temperature rise              | temp.rise acc. B (80K)       |
| Temperature rise winding      | 38 K                         |
| Temperature rise surface      |                              |
| Altitude above sea level      | 1000 mtr                     |
| Hazardous area classification | Safe area                    |

|              |              |
|--------------|--------------|
| Rotor type   | Cage motor   |
| Bearing type | 6306-2Z/C3WT |

|                |           |
|----------------|-----------|
| Type of grease | Unirex N3 |
|----------------|-----------|

|                          |            |
|--------------------------|------------|
| Phase resistance at 20°C | 3,7110 Ohm |
| Country of origin        | CZ         |

| Voltage/Freq  | Locked rotor<br>Torque [%<br>nom] | Starting<br>current [% nom] | Pull-up<br>Torque [% nom] | Breakdown<br>Torque [% nom] | No-load<br>Current [A] |
|---------------|-----------------------------------|-----------------------------|---------------------------|-----------------------------|------------------------|
| @ D 400V 50Hz | 372%                              | 991%                        | 340%                      | 503%                        | 1,42 A                 |
| @ D 460V 60Hz | 402%                              | 1185%                       | 325%                      | 519%                        | 1,27 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.

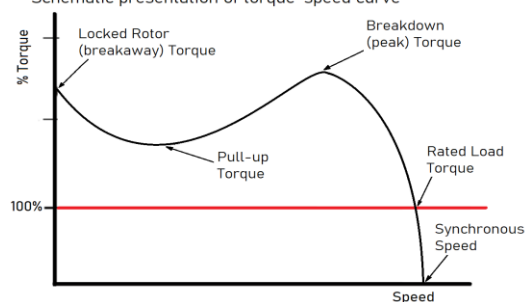
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|------------|------------------|---------------|
| Efficiency | Europe           | Global IEC    |
| Standards  | EN-IEC: 60034-30 | IEC: 60034-30 |

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|                                    |                         |
|------------------------------------|-------------------------|
| Degree of protection               | IP55                    |
| Mounting type                      | IM3641-FT130            |
| Cooling method                     | IC411                   |
| Motor weight - approx.             | 38 kg                   |
| Gross weight - approx.             | 39 kg                   |
| Motor inertia                      | 0,0054 kgm <sup>2</sup> |
| Vibration level                    | according IEC60034-14   |
| Noise level (pressure) acc 60034-9 | 62 dB(A)                |

|                       |          |
|-----------------------|----------|
| Direction of rotation | cw / ccw |
|-----------------------|----------|

Schematic presentation of torque-speed curve



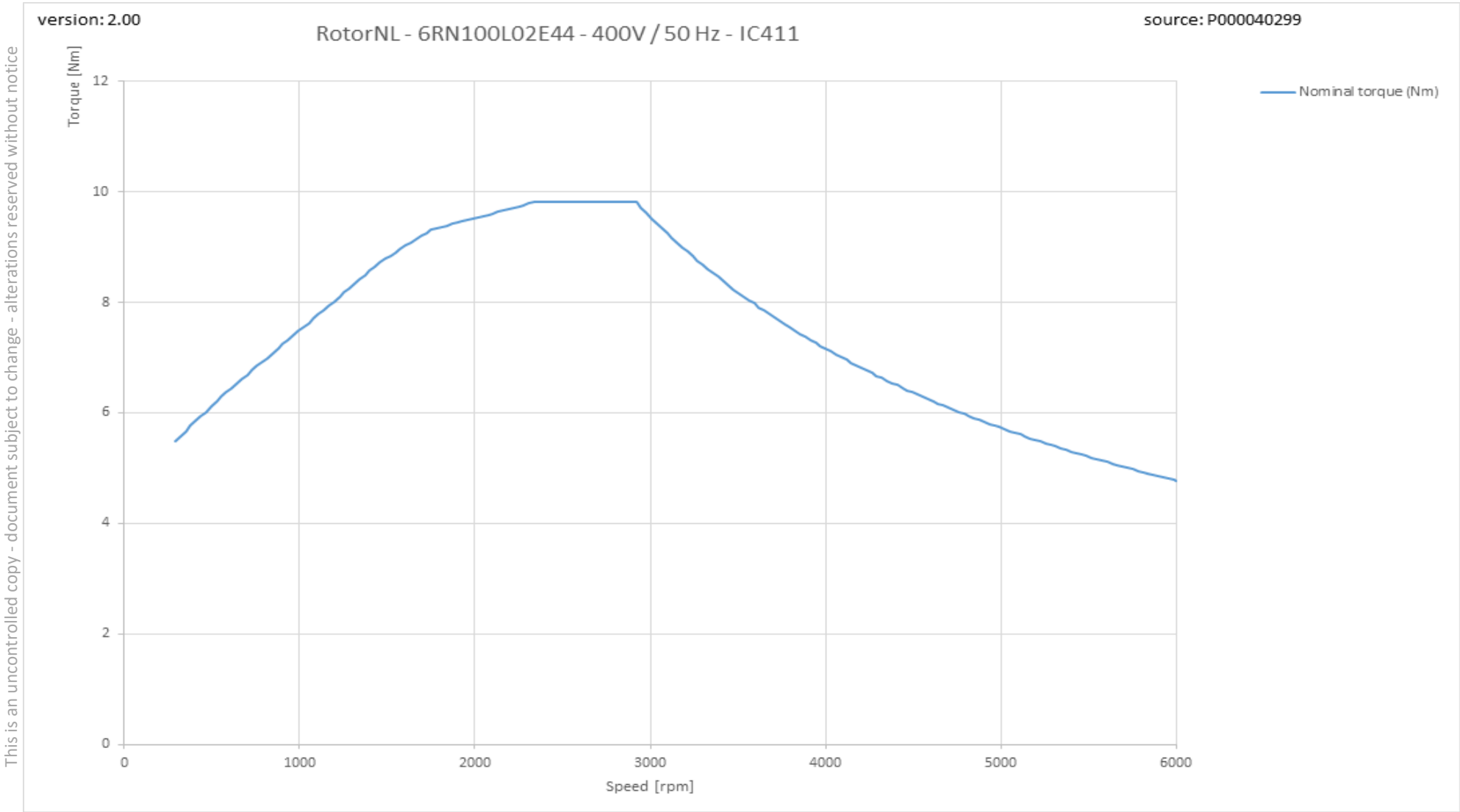
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6RN100L02E44 2-pole 3,00kW D/Y 400/690V 50Hz S1 IC411 IE4

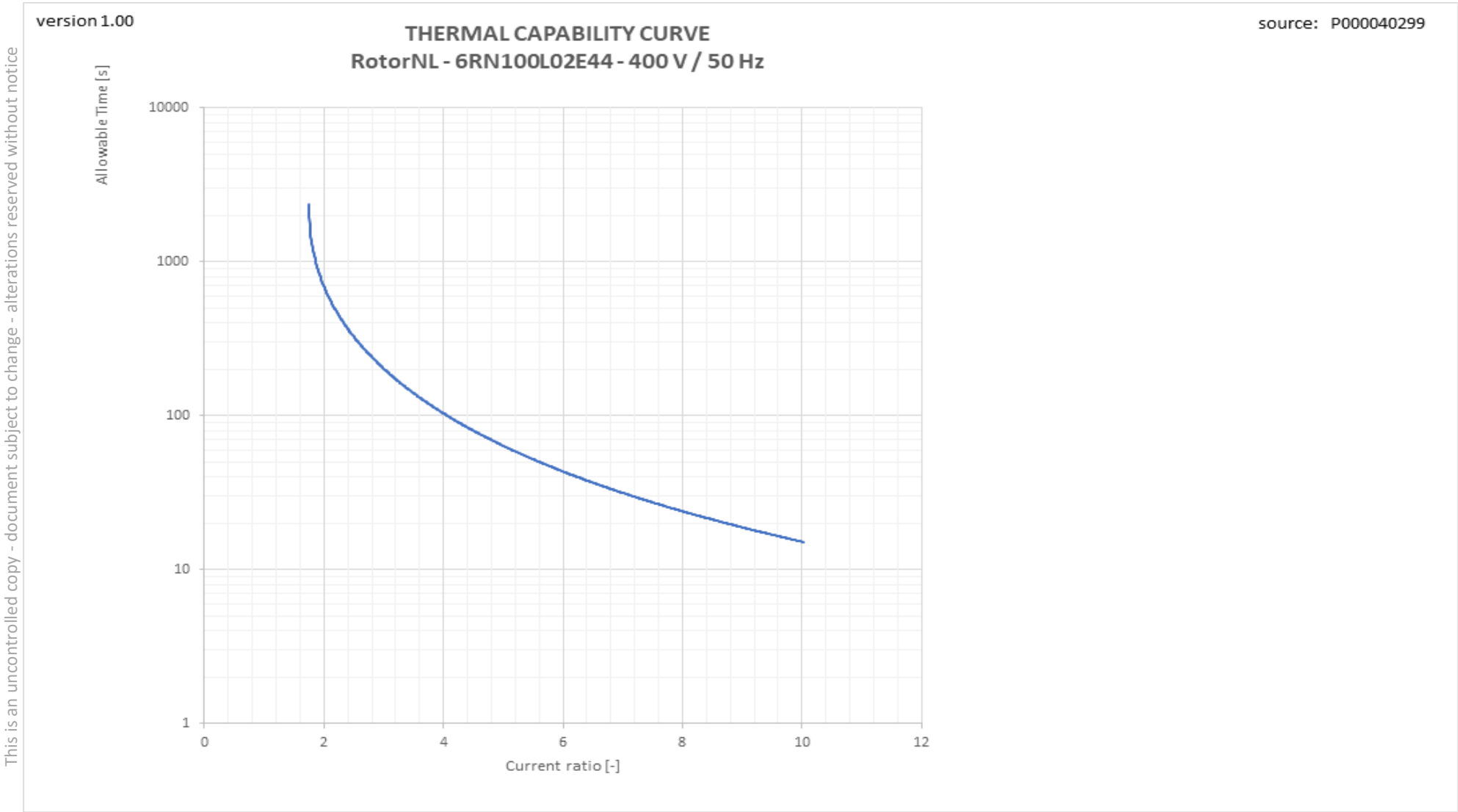


Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph



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Tn graph

