

# PRODUCT INFORMATION PACKET

Model No: SCA1101A3113GAAD01

Catalog No: SCA1101A3113GAAD01

110kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B3, 50Hz, 94.3%, 315S Frame, TEFC  
Cast Iron IE2 Efficiency Motors





### Nameplate Specifications

|                            |                |                        |                                    |
|----------------------------|----------------|------------------------|------------------------------------|
| Output HP                  | <b>150 Hp</b>  | Output KW              | <b>110.0 kW</b>                    |
| Frequency                  | <b>50 Hz</b>   | Voltage                | <b>415 V</b>                       |
| Current                    | <b>179.2 A</b> | Speed                  | <b>2981 rpm</b>                    |
| Service Factor             | <b>1</b>       | Phase                  | <b>3</b>                           |
| Efficiency                 | <b>94.3 %</b>  | Power Factor           | <b>0.91</b>                        |
| Duty                       | <b>S1</b>      | Insulation Class       | <b>F</b>                           |
| Frame                      | <b>315S</b>    | Enclosure              | <b>Totally Enclosed Fan Cooled</b> |
| Ambient Temperature        | <b>50 °C</b>   | Drive End Bearing Size | <b>6316</b>                        |
| Opp Drive End Bearing Size | <b>6316</b>    | UL                     | <b>No</b>                          |
| CSA                        | <b>No</b>      | CE                     | <b>Yes</b>                         |
| IP Code                    | <b>55</b>      |                        |                                    |

### Technical Specifications

|                       |                      |                       |                       |
|-----------------------|----------------------|-----------------------|-----------------------|
| Electrical Type       | <b>Squirrel Cage</b> | Starting Method       | <b>Direct On Line</b> |
| Poles                 | <b>2</b>             | Rotation              | <b>Bi-Directional</b> |
| Mounting              | <b>B3</b>            | Motor Orientation     | <b>Horizontal</b>     |
| Drive End Bearing     | <b>C3</b>            | Opp Drive End Bearing | <b>C3</b>             |
| Frame Material        | <b>Cast Iron</b>     | Shaft Type            | <b>Keyed</b>          |
| Overall Length        | <b>1176 mm</b>       | Frame Length          | <b>729 mm</b>         |
| Shaft Diameter        | <b>65 mm</b>         | Shaft Extension       | <b>140 mm</b>         |
| Assembly/Box Mounting | <b>SIDE</b>          |                       |                       |
| Outline Drawing       | <b>0231501360</b>    | Connection Drawing    | <b>8442000085</b>     |

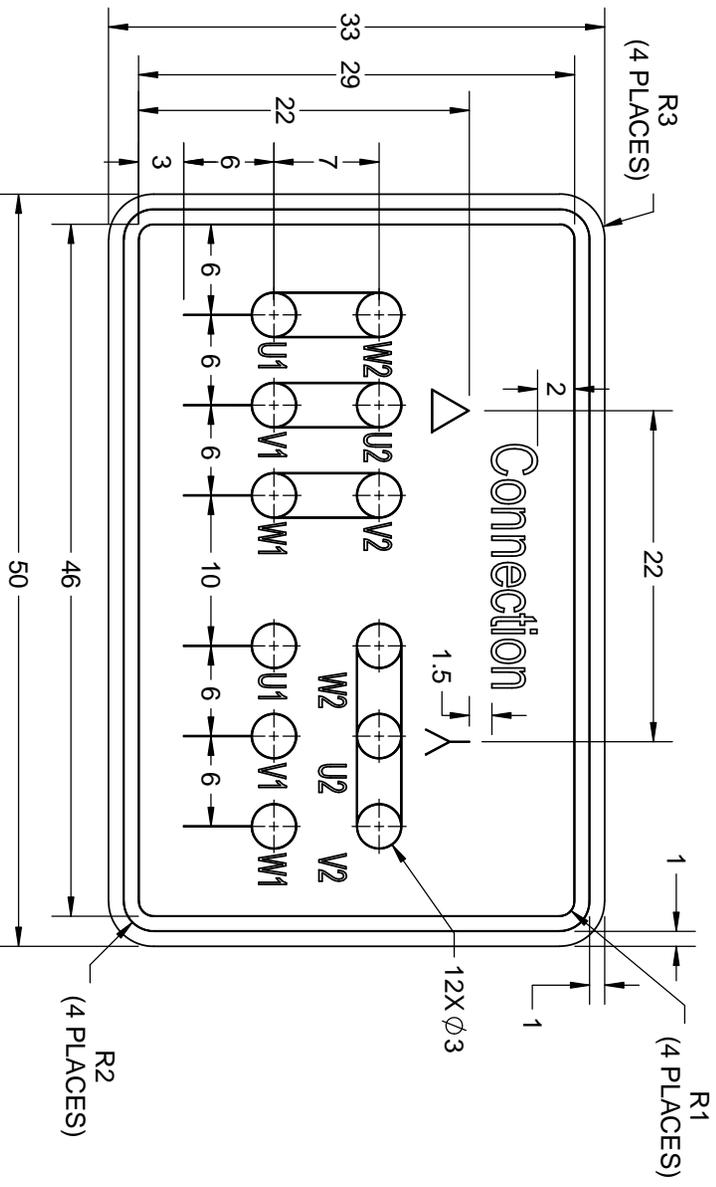
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| DRAWING REVISION                       | REVISION BY        | DATE               |
|--|--------------------|--------------------|
| A                                      | SN                 | 13/01/2017         |
| ECO-0116390                            | APPROVED BY<br>SBD | DATE<br>13/01/2017 |
| ECO DESCRIPTION<br>NEW DRAWING RELEASE |                    |                    |

| GEOMETRIC TOLERANCE |         |      |
|---------------------|---------|------|
| LINEAR DIM          | >0-6    | ±0.1 |
|                     | >6-30   | ±0.2 |
|                     | >30-120 | ±0.3 |



- NOTES:
1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
  2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
  3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.

8WD.442.2017

|                           |                    |  |                              |
|---------------------------|--------------------|--|------------------------------|
| DRAWN BY<br>SN            |                    | <br>Regal Beloit America, Inc. |                              |
| DATE<br>16/12/2016        | APPROVED BY<br>SBD |  |                              |
| DATE<br>16/12/2016        | REFERENCE          | DESCRIPTION<br>CONN DIAGRAM-NAMEPLATE  |                              |
| MATERIAL                  | PROCESS/FINISH     | SIZE<br>A  | DRAWING NUMBER<br>8442000085 |
| THIRD ANGLE<br>PROJECTION |                    | SHEET<br>1 OF 1  |                              |

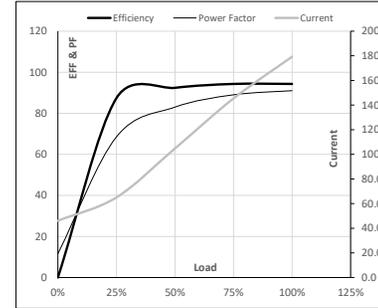
Model No. SCA1101A3113GAAD01

| Enclosure | U<br>[V] | Δ / Y<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[RPM] | T<br>[kgm] | T<br>[Nm] | IE<br>Class | Amb<br>[°C] | Duty | Elevation<br>[m] | Inertia<br>[kg·m <sup>2</sup> ] | Weight<br>[kg] |
|-----------|----------|---------------|-----------|-----------|-----------|----------|------------|------------|-----------|-------------|-------------|------|------------------|---------------------------------|----------------|
| TEFC      | 415      | Δ             | 50        | 110       | 150       | 179.2    | 2981       | 36.54      | 358.32    | IE2         | 50          | S1   | 1000             | 2.0965                          | 945            |

**Motor Load Data**

| Load Point   |       | NL   | 1/4FL | 1/2FL | 3/4FL | FL    | 5/4FL |
|--------------|-------|------|-------|-------|-------|-------|-------|
| Current      | A     | 46.1 | 65.0  | 104.8 | 145.4 | 179.2 |       |
| Torque       | Nm    | 0.0  | 89.2  | 178.6 | 268.3 | 358.3 |       |
| Speed        | r/min | 3000 | 2995  | 2991  | 2986  | 2981  |       |
| Efficiency   | %     | 0.0  | 87.4  | 92.4  | 94.3  | 94.3  |       |
| Power Factor | %     | 11.6 | 68.5  | 83.0  | 89.0  | 91.0  |       |

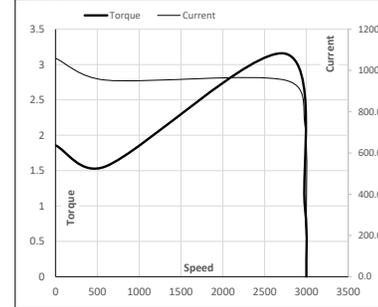
**Performance vs Load Chart**



**Motor Speed Torque Data**

| Load Point |       | LR     | P-Up  | BD    | Rated | NL   |
|------------|-------|--------|-------|-------|-------|------|
| Speed      | r/min | 0      | 600   | 2743  | 2981  | 3000 |
| Current    | A     | 1059.1 | 953.2 | 738.4 | 179.2 | 46.1 |
| Torque     | pu    | 1.9    | 1.6   | 3.2   | 1     | 0    |

**Starting Characteristics Chart**



**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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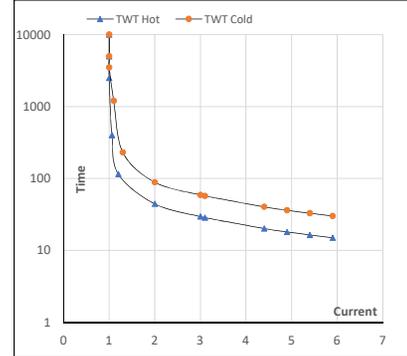
Model No. SCA1101A3113GAAD01

| Enclosure | U (V) | Δ / Y Conn | f (Hz) | P (kW) | P (hp) | I (A) | n (rpm) | T (kgm) | T (Nm) | IE Class | Amb (°C) | Duty | Elevation (m) | Inertia (kg·m <sup>2</sup> ) | Weight (kg) |
|-----------|-------|------------|--------|--------|--------|-------|---------|---------|--------|----------|----------|------|---------------|------------------------------|-------------|
| TEFC      | 415   | Δ          | 50     | 110    | 150    | 179.2 | 2981    | 36.54   | 358.32 | IE2      | 50       | S1   | 1000          | 2.0965                       | 945         |

**Motor Speed Torque Data**

| Load     | FL      | I <sub>1</sub> | I <sub>2</sub> | I <sub>3</sub> | I <sub>4</sub> | I <sub>5</sub> | LR      |
|----------|---------|----------------|----------------|----------------|----------------|----------------|---------|
| TWT Hot  | s 10000 | 44             | 30             | 25             | 18             | 16             | 15      |
| TWT Cold | s 10000 | 89             | 59             | 45             | 35             | 32             | 30      |
| Current  | pu      | 1              | 2              | 3              | 4              | 5              | 5.5 5.9 |

**Thermal Characteristics Chart**



**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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