# PRODUCT INFORMATION PACKET

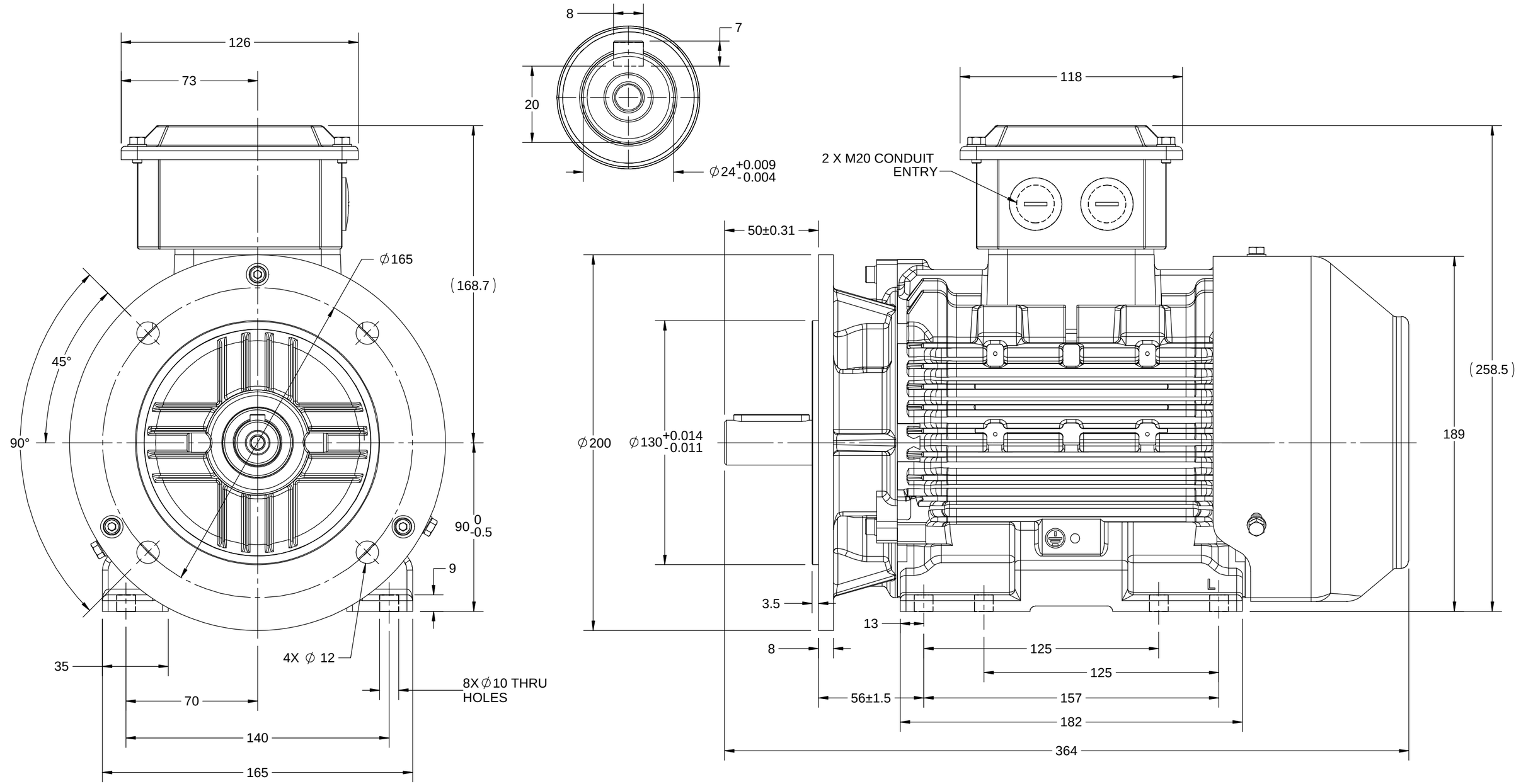
Model No: SCA1P13A3131GAAD01
Catalog No: SCA1P13A3131GAAD01
TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 90L Frame, TEFC

## Nameplate Specifications

| | | | |
|---|---|---|---|
| Output HP | 1.50 Hp | Output KW | 1.1 kW |
| Frequency | 50 Hz | Voltage | 415 V |
| Current | 2.9 A | Speed | 925 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 78.1 % | Power Factor | 0.69 |
| Duty | S1 | Insulation Class | F |
| Frame | 90L | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 50 °C |
| Drive End Bearing Size | 6205 | Opp Drive End Bearing Size | 6205 |
| UL | No | CSA | No |
| CE | Yes | IP Code | 55 |
| Number of Speeds | 1 | Efficiency Class | IE2 |

## Technical Specifications

| | | | |
|---|---|---|---|
| Electrical Type | Squirrel Cage | Starting Method | Direct On Line |
| Poles | 6 | Rotation | Bi-Directional |
| Mounting | B35 | Motor Orientation | Horizontal |
| Drive End Bearing | 2z-C3 | Opp Drive End Bearing | 2z-C3 |
| Frame Material | Cast Iron | Shaft Type | Keyed |
| Overall Length | 364 mm | Frame Length | 185 mm |
| Shaft Diameter | 24 mm | Shaft Extension | 50 mm |
| Assembly/Box Mounting | TOP | | |
| Outline Drawing | 0209000926 | Connection Drawing | 8442000085 |



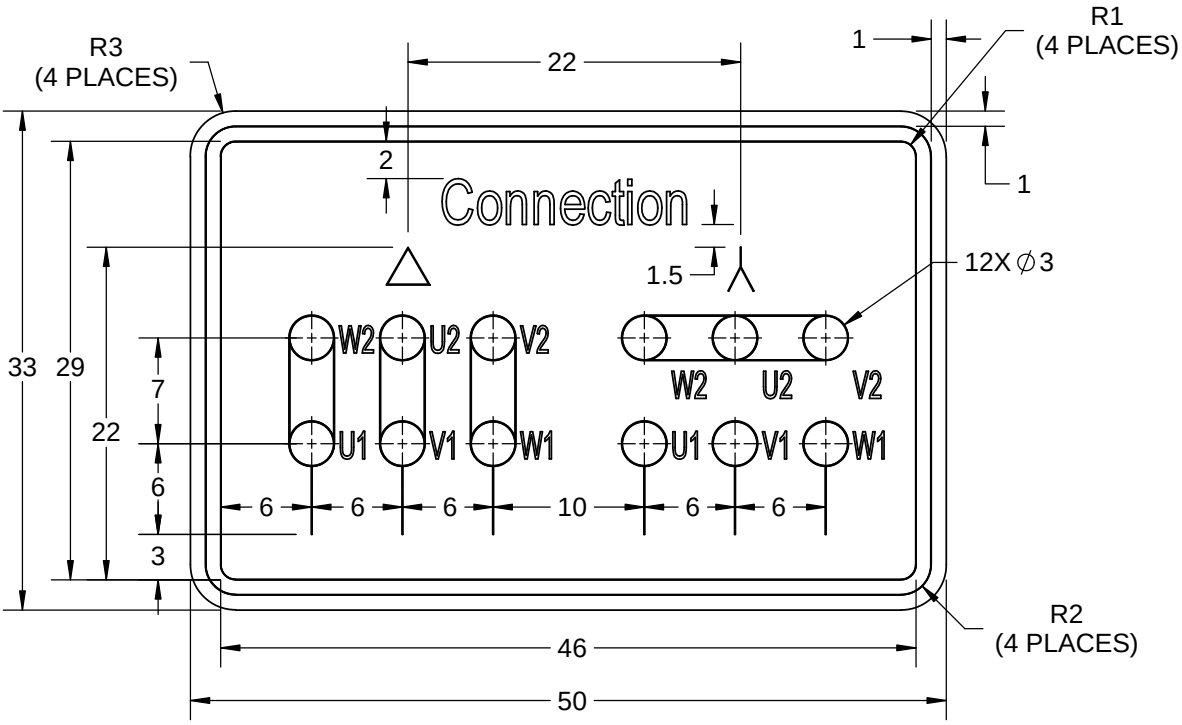

| | | | |
|---|---|---|---|
| DRAWING REVISION: A | REVISION BY: A. KEETHA | DATE: 05/10/2018 | |
| ECO: ECO-0153779 | APPROVED BY: JAY | DATE: 05/10/2018 | |
| ECO DESCRIPTION: NEW DRAWING RELEASE | | | |



| | | | |
|---|---|---|---|
| DRAWN BY: A.KEETHA | marathon™ Motors | | |
| DATE: 05/10/2018 | | | |
| APPROVED BY: JAY | DESCRIPTION: OUTLINE<br>90L FRAME- B35 MTG. TYPE: SCA | | |
| DATE: 05/10/2018 | | | |
| REFERENCE | MATERIAL | PROCESS/FINISH | |
| THIRD ANGLE PROJECTION | SIZE: B | DRAWING NUMBER: 0209000926 | SHEET: 1 OF 1 |

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

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

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**Model No.** SCA1P13A3131GAAD01

| U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [RPM] | T [Nm] | IE Class | % EFF at __ load 5/4FL | FL | 3/4FL | 1/2FL | PF at __ load FL | 3/4FL | 1/2FL | $I_A/I_N$ [pu] | $T_A/T_N$ [pu] | $T_K/T_N$ [pu] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 415 | Y | 50 | 1.1 | 1.5 | 2.8 | 925 | 11.74 | IE2 | - | 78.1 | 78.1 | 74.1 | 0.69 | 0.58 | 0.42 | 4.0 | 2.8 | 2.7 |

| | | |
|---|---|---|
| Motor type | SCA | |
| Enclosure | TEFC | |
| Frame Material | Cast Iron | |
| Frame size | 90L | |
| Duty | S1 | |
| Voltage variation * | ± 10% | |
| Frequency variation * | ± 5% | |
| Combined variation * | 10% | |
| Design | N | |
| Service factor | 1.0 | |
| Insulation class | F | |
| Ambient temperature | -20 to +50 | °C |
| Temperature rise (by resistance) | 70 [ Class B ] | K |
| Altitude above sea level | 1000 | meter |
| Hazardous area classification | NA | |
| Zone classification | NA | |
| Gas group | NA | |
| Temperature class | NA | |
| Rotor type | Aluminum Die cast | |
| Bearing type | Anti-friction ball | |
| DE / NDE bearing | 6205-2Z / 6205-2Z | |
| Lubrication method | Greased for life | |
| Type of grease | NA | |

| | | |
|---|---|---|
| Degree of protection | IP 55 | |
| Mounting type | IM B35 | |
| Cooling method | IC 411 | |
| Motor weight - approx. | 30 | kg |
| Gross weight - approx. | 31 | kg |
| Motor inertia | 0.0048 | $kgm^2$ |
| Load inertia | Customer to Provide | |
| Vibration level | 1.6 | mm/s |
| Noise level ( 1meter distance from motor) | 55 | dB(A) |
| No. of starts hot/cold/Equally spread | 2/3/4 | |
| Starting method | DOL | |
| Type of coupling | Direct | |
| LR withstand time (hot/cold) | 20/40 | s |
| Direction of rotation | Bi-directional | |
| Standard rotation | Clockwise form DE | |
| Paint shade | RAL 5014 | |
| Accessories | | |
| Accessory - 1 | - | |
| Accessory - 2 | - | |
| Accessory - 3 | - | |
| Terminal box position | TOP | |
| Maximum cable size/conduit size | 1R x 3C x 10mm²/2 x M20 x 1.5 | |
| Auxiliary terminal box | NA | |

$I_A/I_N$ - Locked Rotor Current / Rated Current

$T_A/T_N$ - Locked Rotor Torque / Rated Torque

$T_K/T_N$ - Breakdown Torque / Rated Torque

**NOTE**

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

| Efficiency | Europe | China | India | Aus/Nz | Brazil | Global IEC |
|---|---|---|---|---|---|---|
| Standards | - | - | IS 12615 : 2018 | - | - | - |

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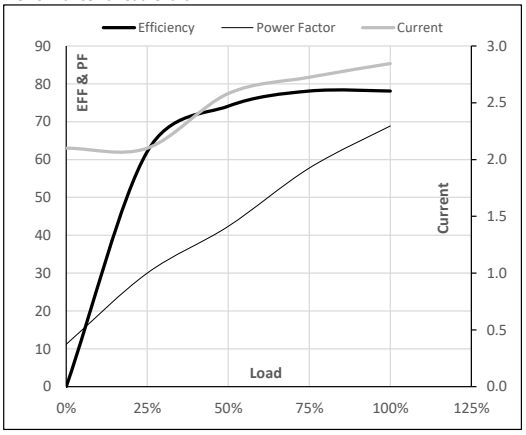
**Model No.** SCA1P13A3131GAAD01

| 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$^2$] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEFC | 415 | Y | 50 | 1.1 | 1.5 | 2.8 | 925 | 1.20 | 11.74 | IE2 | 50 | S1 | 1000 | 0.0048 | 30 |

**Motor Load Data**

| Load Point | | NL | 1/4FL | 1/2FL | 3/4FL | FL | 5/4FL |
|---|---|---|---|---|---|---|---|
| Current | A | 2.1 | 2.1 | 2.6 | 2.7 | 2.8 | |
| Torque | Nm | 0.0 | 2.7 | 5.5 | 8.5 | 11.7 | |
| Speed | r/min | 1000 | 982 | 965 | 947 | 925 | |
| Efficiency | % | 0.0 | 62.1 | 74.1 | 78.1 | 78.1 | |
| Power Factor | % | 11.2 | 30.0 | 42.4 | 57.8 | 68.9 | |

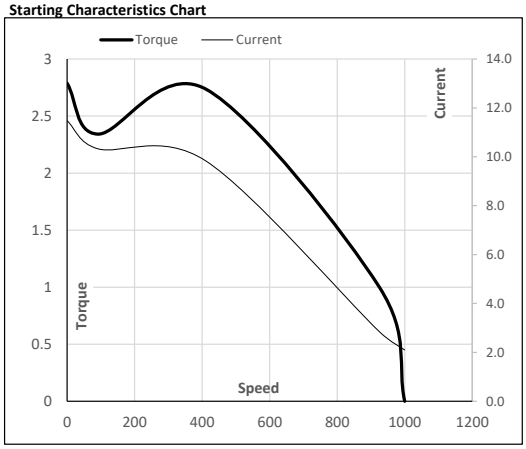
**Performance vs Load Chart**




**Motor Speed Torque Data**

| Load Point | | LR | P-Up | BD | Rated | NL |
|---|---|---|---|---|---|---|
| Speed | r/min | 0 | 91 | 411 | 925 | 1000 |
| Current | A | 11.5 | 10.3 | 9.8 | 2.8 | 2.1 |
| Torque | pu | 2.8 | 2.3 | 2.7 | 1 | 0 |

**Starting Characteristics Chart**




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

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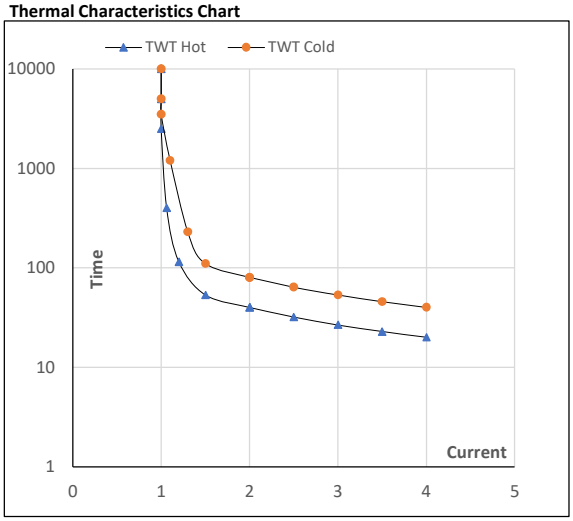
**Model No.** SCA1P13A3131GAAD01

| 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$^2$] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEFC | 415 | Y | 50 | 1.1 | 1.5 | 2.8 | 925 | 1.20 | 11.74 | IE2 | 50 | S1 | 1000 | 0.0048 | 30 |

**Motor Speed Torque Data**

| Load | | FL | $I_1$ | $I_2$ | $I_3$ | $I_4$ | $I_5$ | LR |
|---|---|---|---|---|---|---|---|---|
| TWT Hot | s | 10000 | 53 | 40 | 32 | 27 | 23 | 20 |
| TWT Cold | s | 10000 | 110 | 80 | 64 | 53 | 46 | 40 |
| Current | pu | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 |

**Thermal Characteristics Chart**




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

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# EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : SCA1P13A3131GAAD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : SCA1P13A3131GAAD01

Rework No : N/A

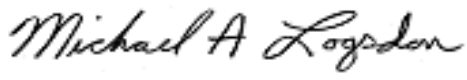
Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)
EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22