

PRODUCT INFORMATION PACKET

Model No: 286THFPA8038

Catalog No: Y512

Blue Max® Inverter Duty Encoder Motor, 30 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 286TC Frame,
TEBC-AXIAL



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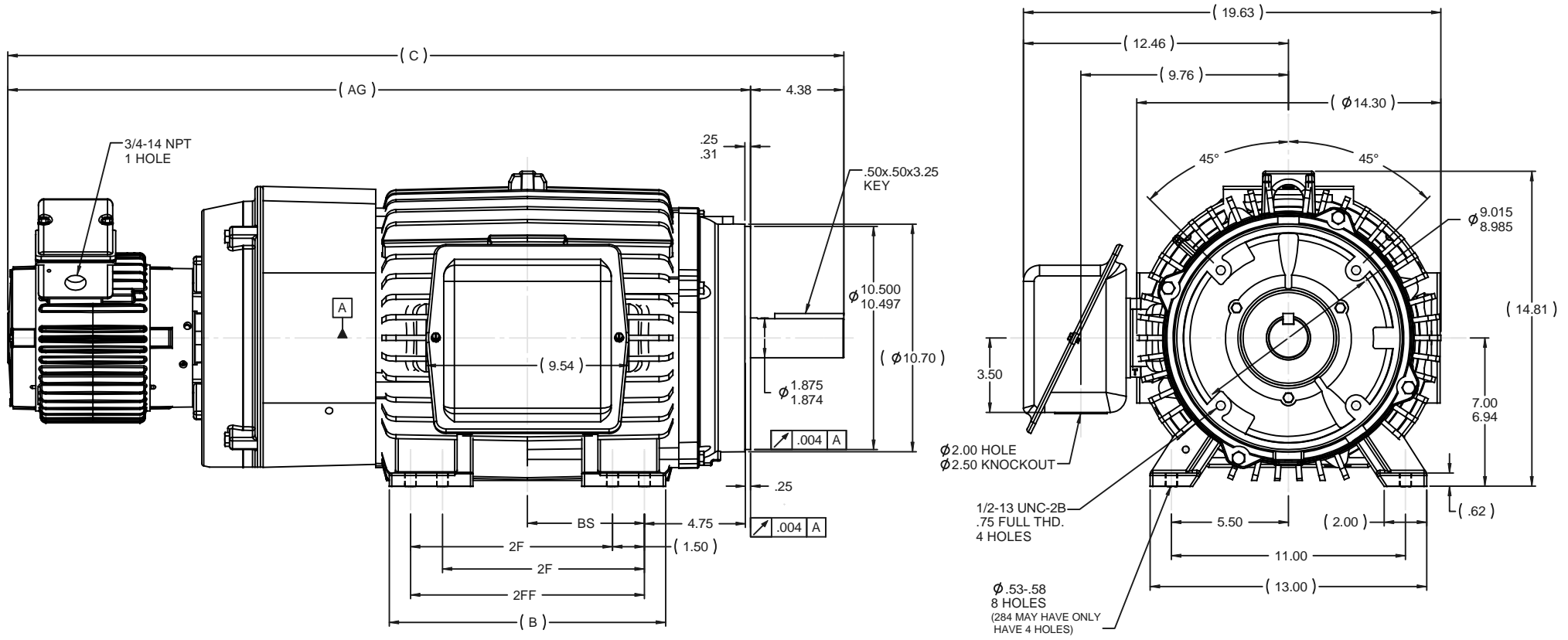


Nameplate Specifications

| | | | |
|------------------------|--------------------|----------------------------|---|
| Output HP | 30 Hp | Output KW | 22.4 kW |
| Frequency | 60 Hz | Voltage | 230/460 V |
| Current | 74.0/37.0 A | Speed | 1765 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 91 % | Power Factor | 83 |
| Duty | Continuous | Insulation Class | H |
| Design Code | INV | KVA Code | F |
| Frame | 286TC | Enclosure | Totally Enclosed Blower cooled - Axial |
| Thermal Protection | Thermostat | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6311 | Opp Drive End Bearing Size | 6210 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 43 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-----------------------|------------------------------------|-----------------------|----------------------|
| Electrical Type | Squirrel Cage Inverter Duty | Starting Method | Inverter Only |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .3 Ohms | Mounting | Rigid Base |
| Motor Orientation | Horizontal | Drive End Bearing | Ball |
| Opp Drive End Bearing | Ball | Frame Material | Cast Iron |
| Shaft Type | T | Overall Length | 39.31 in |
| Frame Length | 14.25 in | Shaft Diameter | 1.875 in |
| Shaft Extension | 4.37 in | Assembly/Box Mounting | F1/F2 CAPABLE |
| Inverter Load | CONSTANT 2000:1 | | |
| Outline Drawing | B-SS311263-1425 | Connection Drawing | A-EE7308T |



NOTES:
 1- C'BOX CAN BE ROTATED IN 90° STEPS.
 2- C'BOX CAN BE MOUNTED ON OPPOSITE SIDE
 BY REMOVING BRACKETS AND TURNING FRAME 180°
 3- NAMEPLATE TO BE READ FROM C'BOX SIDE OF MOTOR.

| DASH | FRAME | C | AG | B | 2F | 2FF | BS |
|------|-------|-------|-------|-------|------|-------|------|
| 1275 | 284TC | 37.81 | 33.43 | 11.50 | 9.50 | | 4.75 |
| 1425 | 286TC | 39.31 | 34.93 | 13.00 | 9.50 | 11.00 | 5.50 |

| | | TOLERANCES UNLESS SPECIFIED | | MARATHON ELECTRIC | | DRAWN CAV 12-26-2001 | | |
|--|---|--------------------------------|-------------|-----------------------------|-------------------|----------------------|-----------------|----------|
| | | DEC | INCHES | | | CHK | ML 01-04-2002 | |
| | | X | ±.1 | | | APPR | DD 01-04-2002 | |
| 3 | REVISED MOUNTING HOLE QUANTITY CN 40694 | DRS 10-25-2008 | ML XX ±.03 | TITLE OUTLINE - TFPA SERIES | | SCALE 1:4.5 | | |
| 2 | REDRAWN IN AUTOCAD | TAT 06-24-2008 | XXX ±.005 | 280TC FR. - TEBC | | REF | | |
| 1 | NEW DRAWING MU39842 | CAV 01-02-2002 | XXXX ±.0005 | MATL | | FMF | | |
| NO | REVISION | BY & DATE | CHK | ANG | FINISH | PREV | | |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT | | | RFP | | CAD FILE SS311263 | SIZE | DRAWING NO | |
| | | | DIST | LB | | B | SS311263 | |
| | | | | | | | REV | 3 |

HIGH VOLTAGE



**THREE PHASE
DUAL VOLTAGE MOTOR**

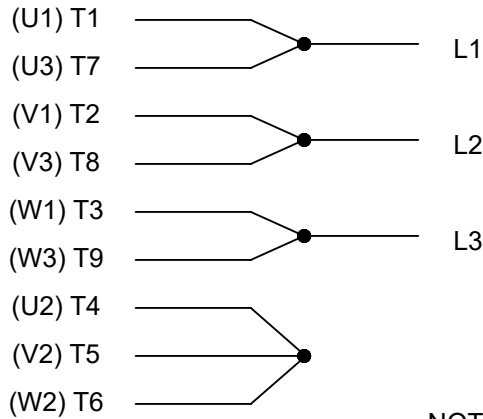
THERMO-PROTECTORS
CONNECTED IN SERIES



VIEW OF TERMINAL END

NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE



NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

| | | | | | |
|---|-------------------|--------------------|----------------------------|---------------------------|---|
| DRAWING REVISION T | REVISION BY ZR | DATE 01-14-2019 | | DRAWN BY SMC | Regal Beloit America, Inc. |
| ECO ECO-0159915 | APPROVED BY DR | DATE 01-15-2019 | | DATE 05-13-1992 | |
| ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM | | | | APPROVED BY TB | DESCRIPTION CONN DIAGRAM-INTERNAL 3 PHASE - DUAL VOLTAGE MOTOR |
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| | | | REFERENCE EE7308/EE7300 | THIRD ANGLE PROJECTION | SIZE A |

CERTIFICATION DATA SHEET

Model#: 286THFPA8038 AB
 CONN. DIAGRAM: A-EE7308T
 OUTLINE: B-SS311263-1425

WINDING#: K2564179 F 6
 ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN | | | |
|------------------------|-------------|--------------------|-----------|------------------|--------------|-------------------|--------|------------------|-----------|--------------|
| 30 | 22.4 | 1800 | 1765 | 286TC | TEBC-AXIAL | F | INV | | | |
| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION | |
| 3 | 60 | 230/460 | 74/37 | INVERTER ONLY | CONTINUOUS | H4 | 1.0 | 40 | 3300 | |
| FULL LOAD EFF: 91 | | 3/4 LOAD EFF: 91.7 | | 1/2 LOAD EFF: 91 | | GTD. EFF | | ELEC. TYPE | | NO LOAD AMPS |
| FULL LOAD PF: 83 | | 3/4 LOAD PF: 78 | | 1/2 LOAD PF: 68 | | 89.5 | | SQ CAGE INV DUTY | | 31 / 15.5 |
| F.L. TORQUE | | LOCKED ROTOR AMPS | | L.R. TORQUE | | B.D. TORQUE | | F.L. RISE°C | | |
| 89.3 LB-FT | | 450 / 225 | | 185 LB-FT 207 | | 240 LB-FT 269 | | 75 | | |
| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT | | | | |
| 75 dBA | 85 dBA | 3.2 LB-FT^2 | - LB-FT^2 | - SEC. | - | 520 LBS. | | | | |

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

| R1 | R2 | X1 | X2 | XM |
|----------|----------|----------|---------|---------|
| 0.192984 | 0.152306 | 0.679228 | 0.98384 | 17.1226 |
| RM | ZREF | XR | TD | TD0 |
| 890.186 | 9.46 | 4.5 | 0.0175 | 0.315 |

*** SUPPLEMENTAL INFORMATION ***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|-----------------|------------------|------------|-------------|-------------|--------------------|------------|---------|---------------|
| C-FACE | ENCODER | RIGID | HORIZONTAL | FALSE | NONE | FALSE | NONE | BLUE (ENAMEL) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE | OPE | | | | | | |
| BALL | BALL | POLYREX EM | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6311 | 6210 | | | | | | |

| THERMO-PROTECTORS | | | | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS | PROTECTORS | WDG RTDs | BRG RTDs | | | |
| TSTATS (N/C) | NOT | NONE | NONE | NONE | FALSE | NONE VOLTS |

If Inverter equals NONE, contact factory for further information

| |
|---------------------------------------|
| INVERTER TORQUE: CONSTANT 2000:1 |
| INV. HP SPEED RANGE: 1.5 X BASE SPEED |
| ENCODER: PROVISIONS ONLY |
| NONE NONE |
| NONE NONE PPR |
| BRAKE: NONE NONE |
| NONE P/N NONE |

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| | | | |
|------------|--------|---------|--|
| NONE | NONE | | |
| NONE FT-LB | NONE V | NONE Hz | |

DATE: 06/27/2017 01:42:50 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 16-06-2017
Customer: _____
Attention: _____
Submitted by: FAREEDA DUDEKULA



286THFA8038

Submittal

Data @ **460 V**

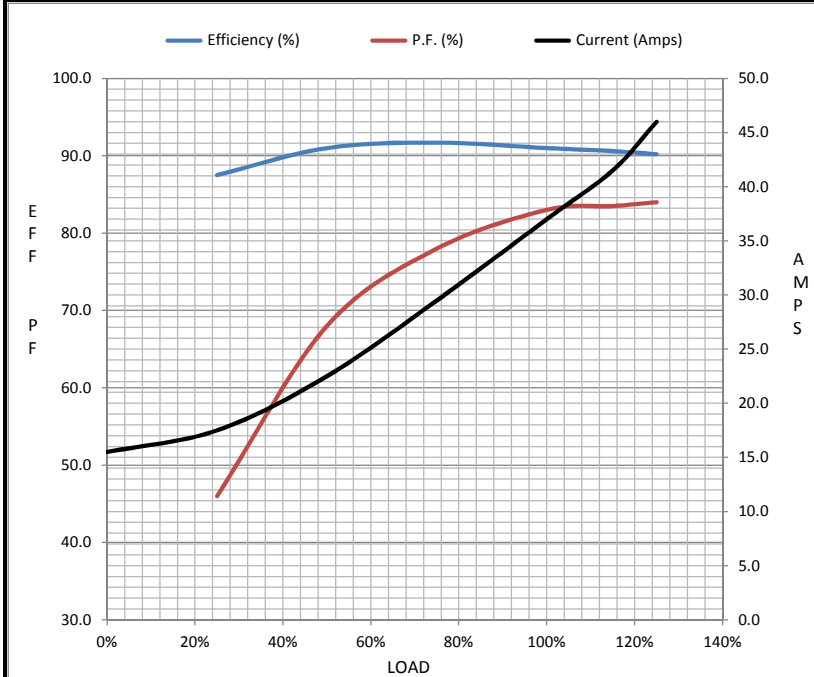
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 15.5 | 17.5 | 22.5 | 29.5 | 37.0 | 41.5 | 46.0 | 225 |
| Torque (ft-lb) | 0.00 | 22.0 | 44.0 | 66.5 | 89.3 | 101 | 112 | 185 |
| RPM | 1800 | 1792 | 1782 | 1774 | 1765 | 1,760 | 1752 | 0 |
| Efficiency (%) | | 87.5 | 91.0 | 91.7 | 91.0 | 90.6 | 90.2 | |
| P.F. (%) | 6.0 | 46.0 | 68.0 | 78.0 | 83.0 | 83.5 | 84.0 | 39.5 |

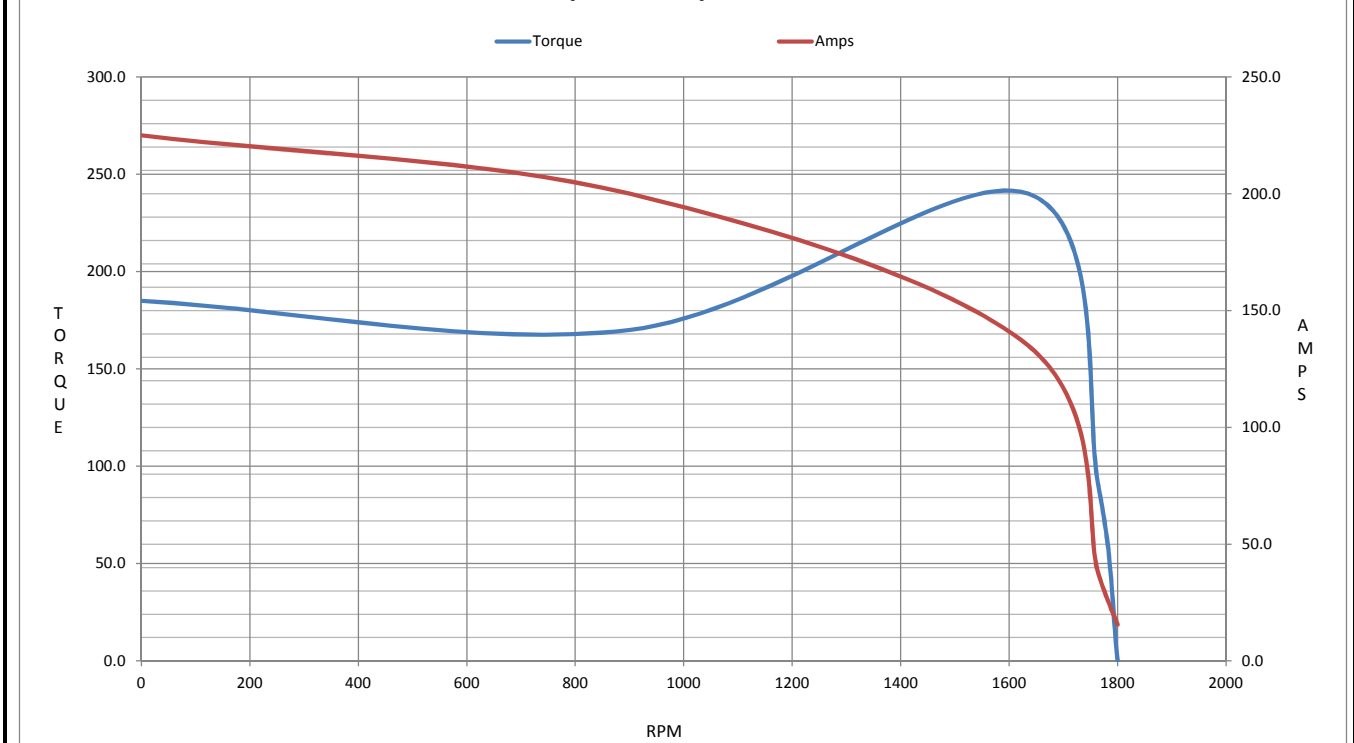
Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM) | 0 | 900 | 1635 | 1765 | 1800 |
| Current (Amps) | 225 | 200 | 135 | 37.0 | 15.5 |
| Torque (ft-lb) | 185 | 170 | 240 | 89.3 | 0.00 |

| Information Block | | | | |
|-----------------------------|------------------------|--------|--------|---------|
| HP | 30.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 286 | | | |
| Enclosure | TEBC | | | |
| Construction | TBP | | | |
| Voltage | 230/460 V | | | |
| Frequency | 60 Hz | | | |
| Design | B | | | |
| LR Code letter | F | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 75 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 3.2 Lb-Ft ² | | | |
| Ref Wdg | K2564179 F | | | |
| Sound Pressure @ 1M | 75 dBA | | | |
| VFD Rating | CONSTANT 2000:1 | | | |
| Outline Dwg | B-SS311263-1425 | | | |
| Conn. Diag | A-EE7308T | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.1930 | 0.1520 | 0.6790 | 0.9840 | 17.1230 |



Speed - Torque Curve



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 : 286THFPA8038

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

Catalog No : Y512

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