

# ABB BALDOR RELIANCE III

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## Customer information packet

### BSM80N-275AF

BSM80N-275AF T'STAT, KOYO ENCODER

**Specifications**

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Enclosure</b>                     | TENV                |
| <b>Nameplate Speed</b>               | 4000                |
| <b>Agency Approvals</b>              | CE                  |
|                                      | CSA                 |
|                                      | TUV                 |
|                                      | UR                  |
|                                      | WEEE                |
| <b>Base Indicator</b>                | Bracket Mounted     |
| <b>Dimensional Drawing Numbers</b>   | S2LYP141            |
| <b>Frame</b>                         | D100D               |
| <b>Frame Material</b>                | Exposed Laminations |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 18 AWG          |
| <b>Motor Standards</b>               | IEC                 |
| <b>Mounting Arrangement</b>          | F1                  |
| <b>Nameplate Output</b>              | 1.23KW              |
| <b>Shaft Rotation</b>                | Reversible          |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | AL         |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | S2P141     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | S2WGW042   |
| <b>Layout</b>       | S2LYP141   |
| <b>Eff. date</b>    | 07-16-2025 |
| <b>CD Diagram</b>   | CD0006A02  |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 3#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-01-0001 |

**Nameplate**

| NP2864L                |              |    |    |    |      |            |    |     |  |
|------------------------|--------------|----|----|----|------|------------|----|-----|--|
| CAT.NO.                |              |    |    |    |      |            |    |     |  |
| BLANK                  |              |    |    |    |      |            |    |     |  |
| SPEC.                  | S2P141W042G1 |    |    |    |      |            |    |     |  |
| MFG.NO.                |              |    |    |    |      |            |    |     |  |
| TORQ CONT STALL        | 3.06 NM      |    |    |    |      |            |    |     |  |
| CUR CONT STALL/A RMS   | 3.82         |    |    |    |      |            |    |     |  |
| POWER                  | 1.23KW       |    |    |    |      |            |    |     |  |
| RATED SPEED/RPM(1/MIN) | 4000         |    |    |    |      |            |    |     |  |
| RATED BUS VOLTS        | 320          |    |    |    |      |            |    |     |  |
| PEAK CUR/A RMS         | 15.3         |    |    |    |      |            |    |     |  |
| MAX SPEED/RPM(1/MIN)   | 7000         |    |    |    | AMB. |            | 25 |     |  |
| CLASS                  | F            | IP | 54 | IC | 410  | MOTOR MASS |    | 5.4 |  |



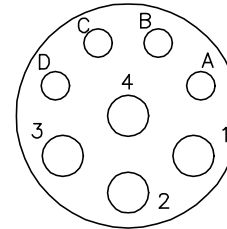
CD1297A04

**MOTOR CONNECTIONS**

| PIN | FUNCTION        | INTERNAL<br>WIRE COLOR  |
|-----|-----------------|-------------------------|
| A   | *THERMAL SWITCH | YELLOW                  |
| B   | *THERMAL SWITCH | YELLOW                  |
| C   | *BRAKE          | BLACK                   |
| D   | *BRAKE          | BLACK                   |
| 1   | U               | BLACK                   |
| 2   | GROUND          | GREEN OR **GREEN/YELLOW |
| 3   | W               | BLUE                    |
| 4   | V               | RED                     |

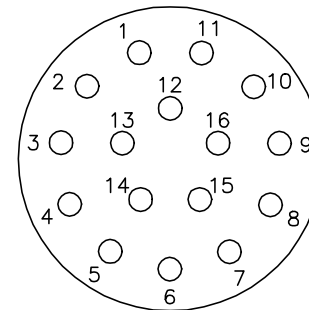
\*WHEN REQUIRED

\*\*CE MOTORS REQUIRE GREEN/YELLOW GROUND



8 PIN MOTOR CONNECTOR  
THREADED CRIMP PIN STYLE

| PIN | FUNCTION          | WIRE COLOR  |
|-----|-------------------|-------------|
| 1   | DC+5V             | RED/BLUE    |
| 2   | GROUND            | BLUE/RED    |
| 3   | CHANNEL A         | BLUE        |
| 4   | CHANNEL $\bar{A}$ | ORANGE      |
| 5   | CHANNEL B         | GREEN       |
| 6   | CHANNEL $\bar{B}$ | BROWN       |
| 7   | CHANNEL Z         | BLACK       |
| 8   | CHANNEL $\bar{Z}$ | YELLOW      |
| 9   | OPEN              | ---         |
| 10  | CHANNEL U         | WHITE/BROWN |
| 11  | CHANNEL $\bar{U}$ | BROWN/WHITE |
| 12  | CHANNEL V         | WHITE/GRAY  |
| 13  | CHANNEL $\bar{V}$ | GRAY/WHITE  |
| 14  | CHANNEL W         | RED/ORANGE  |
| 15  | CHANNEL $\bar{W}$ | ORANGE/RED  |
| 16  | OPEN              | ---         |



16 PIN CONNECTOR  
THREADED CRIMP PIN STYLE

16- #20 CONTACT SIZE  
(CRIMP SIDE)

REV. DESC: ADD CE NOTE AND GREEN/YELLOW GROUND

REV. LTR: A

VERSION: 01

TDR: 000001192301

FILE: \AAA\00115\154

REVISED: 02:31:08 06/13/2022

BY: ENDAND0

MTL: -



**BALDOR - RELIANCE®**

KOYO ENCODER (CHANNELS TO MATCH TMGW/SUMTAK OUTPUT)

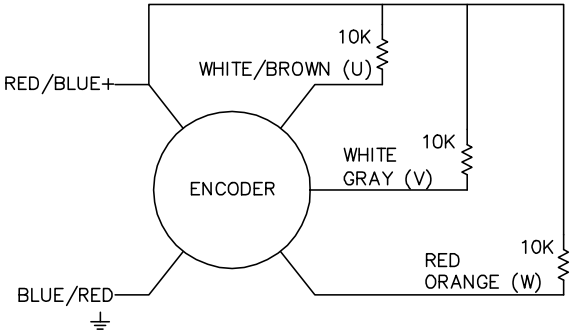
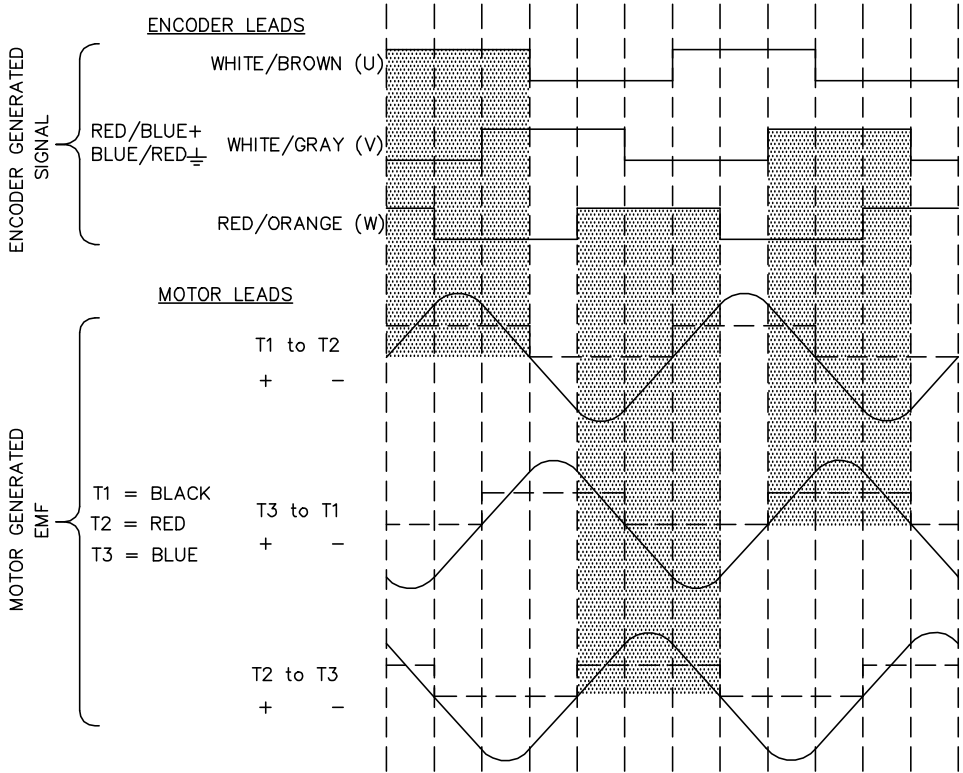
SH 1 of 1

CD1297A04

CD1338A01

BRUSHLESS D.C. COMMUTATION

|                           |   |    |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 8 POLE MECHANICAL DEGREES | 0 | 15 | 30  | 45  | 60  | 75  | 90  | 105 | 120 | 135 | 150 | 165 | 180 |
| 4 POLE MECHANICAL DEGREES | 0 | 30 | 60  | 90  | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 | 360 |
| ELECTRICAL DEGREES        | 0 | 60 | 120 | 180 | 240 | 300 | 360 | 420 | 480 | 540 | 600 | 660 | 720 |



NOTE:  
CCW ROTATION VIEWING  
MOTOR SHAFT END

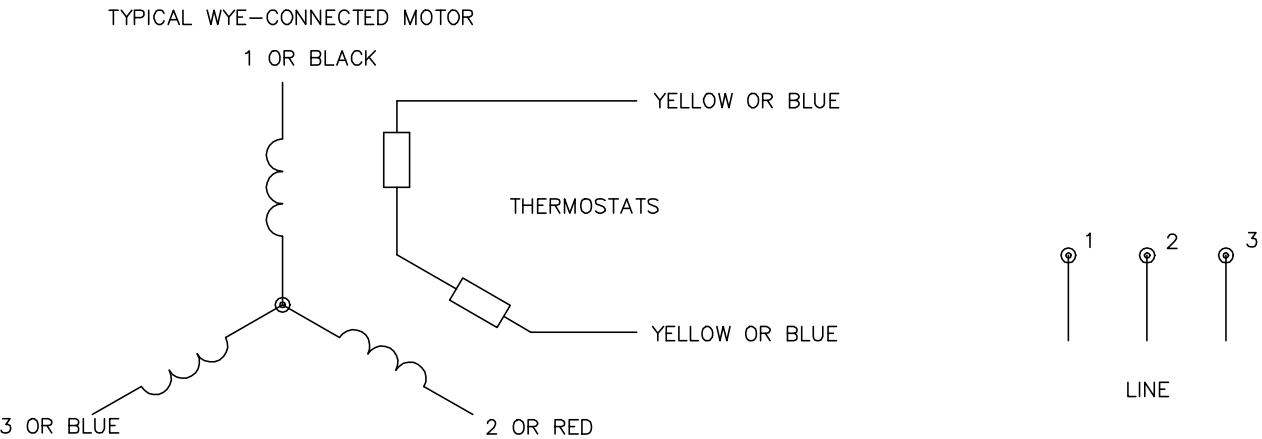
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|----------------|-------------------|----------------|------------------------------|-------------|
| REV. DESC: NEW | REV. LTR: -       | BY: FN         | REVISED: 11:22:25 03/24/2004 | TDR: 328266 |
| CD1338A01      | FILE: AAA00115153 | REF: CD1338A01 | MTL: -                       |             |

**BALDOR ELECTRIC Co.**

BLDC COMMUTATION KOYO ENC.(CHANNELS TO MATCH TMGW/SUMTAK)

CD1338A01

CD0006A02



- NOTES:
- 1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
  - 2. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.

|                                                               |                      |                              |
|---------------------------------------------------------------|----------------------|------------------------------|
| REV. DESC: REMOVED "OPTIONAL" FROM PRINT, SERVO REQ'S T'STATS |                      |                              |
| REV. LTR: D                                                   | VERSION: 03          | TDR: 000000414937            |
| CD0006A02                                                     | FILE: \AAA\00068\606 | REVISED: 10:02:28 11/21/2006 |
|                                                               | MTL: -               | BY: ENJFDO                   |

BALDOR ELECTRIC Co.

3PH, SV, 3 LEADS, WYE CONNECTED

CD0006A02