

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECP84402T-5

100HP, 3565RPM, 3PH, 60HZ, 405TS, A40066M, TEF

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                               |                                          |
|-------------------------------|------------------------------------------|
| Enclosure                     | TEFC                                     |
| Frame                         | 405TS                                    |
| Frame Material                | Iron                                     |
| Frequency                     | 60.00 Hz                                 |
| Haz Area Class and Group      | CLI GP A,B,C,D                           |
| Haz Area Division             | Division II                              |
| Motor Letter Type             | Three Phase                              |
| Output @ Frequency            | 100.000 HP @ 60 HZ                       |
| Phase                         | 3                                        |
| Synchronous Speed @ Frequency | 3600 RPM @ 60 HZ                         |
| Voltage @ Frequency           | 575.0 V @ 60 HZ                          |
| Agency Approvals              | C UR US<br>CCSA US<br>CCSAUSEEV<br>CURUS |
| Ambient Temperature           | 40 °C                                    |
| Auxiliary Box                 | NO AUXILLARY BOX                         |
| Base Indicator                | Rigid                                    |
| Bearing Grease Type           | Polyrex EM (-20F +300F)                  |
| Constant Torque Speed Range   | 10-60                                    |
| Current @ Voltage             | 88.000 A @ 575.0 V                       |
| Design Code                   | B                                        |
| Drip Cover                    | No Drip Cover                            |
| Duty Rating                   | CONT                                     |
| Efficiency @ 100% Load        | 94.1 %                                   |
| Feedback Device               | NO FEEDBACK                              |
| Haz Area Temp Code            | T3                                       |
| Heater Indicator              | No Heater                                |
| High Voltage Full Load Amps   | 88.0 a                                   |
| Insulation Class              | F                                        |
| Inverter Code                 | Inverter Ready                           |
| KVA Code                      | G                                        |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | -          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A40WG5508  |
| Layout       | 617429-791 |
| Eff. date    | 06-19-2025 |
| CD Diagram   | 416820-036 |
| Poles        | 02         |
| Leads        | 3#2        |
| Proprietary  | False      |
| Created date | 05-14-2025 |

| Lifting Lugs                  | Standard Lifting Lugs |
|-------------------------------|-----------------------|
| Motor Lead Quantity/Wire Size | 3 @ 2 AWG             |
| Motor Standards               | None                  |
| Motor Type                    | A40066M               |
| Mounting Arrangement          | F1                    |
| No Load Current               | 21.4 a                |
| Number of Poles               | 2                     |
| Overall Length                | 35.19 IN              |
| Power Factor                  | 90                    |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 2.125 IN              |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 3565 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Bearing      | None                  |
| Thermal Device - Winding      | None                  |

**Nameplate**

| NP4566             |             |        |                 |               |       |               |      |     |                       |        |      |      |             |   |
|--------------------|-------------|--------|-----------------|---------------|-------|---------------|------|-----|-----------------------|--------|------|------|-------------|---|
| CAT NO             | ECP84402T-5 |        |                 | SPEC NO.      |       | A40-0001-5508 |      |     |                       |        |      |      |             |   |
| HP                 | 100         | AMPS   | 88              |               | VOLTS |               | 575  |     |                       | DESIGN | B    |      |             |   |
| FRAME SIZE         | 405TS       | RPM    | 3565            |               | HZ    |               | 60   | AMB | 40                    | SF     | 1.15 |      |             |   |
| D.E. BRG.DATA      | 6313        |        | O.D.E. BRG.DATA |               |       | 6313          |      |     | PH                    | 3      | DUTY | CONT | INSUL.CLASS | P |
| D.E. BRG.          | 65BC03J30X  |        |                 | TYPE          | ENCL  | TEFC          | CODE | G   |                       |        |      |      |             |   |
| O.D.E. BRG.        | 65BC03J30X  |        |                 | POWER FACTOR  |       |               | 90   |     | NEMA-NOM-EFFICIENCY   |        |      | 94.1 |             |   |
| 3/4 LOAD EFF.      | 94.5        | IP     | 56              | MAX CORR KVAR |       |               | 12   |     | GUARANTEED EFFICIENCY |        |      | 93   |             |   |
| TEMP CODE          | T3          | TEMP = | 200             |               |       |               |      |     |                       |        |      |      |             |   |
| CHP HZ             | 60-70       | CT HZ  | 10-60           | VT HZ         |       | 0-60          |      |     |                       |        |      |      |             |   |
| INVERTER-TEMP-CODE | T3          |        |                 |               |       |               |      |     |                       |        |      |      |             |   |
| SER.NO.            |             |        |                 | MOTOR WEIGHT  |       |               |      |     |                       |        |      |      |             |   |

| 000613007EX     |             |                          |               |      |
|-----------------|-------------|--------------------------|---------------|------|
| CAT NO          | ECP84402T-5 | SPEC NO.                 | A40-0001-5508 |      |
| NO. ROTOR BARS  | 38          | GREASE TYPE              | POLYREX EM    |      |
| NO. SLOTS       | 48          | NL AMPS AT RATED VOLTAGE |               | 21.4 |
| 5 YEAR WARRANTY |             | WINDING RES @25 C        | .0799         | OHMS |
| MFG. DATE       |             | SER.NO                   |               |      |
|                 |             |                          |               |      |
|                 |             |                          |               |      |

|                                                                                                                                    |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------|--|--|------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--|-----------------------|--|--|--------------------------------------------|--|--------------------------------------------------------------|--------------------------------------------|--|--|-----------|--|--|
| ABB BALDOR<br>RELIANCE III                                                                                                         |  |  |             |  |  |                                                                                                                              | CUSTOMER INFORMATION PACKET |  |                       |  |  |                                            |  | ECP84402T-5 - 100HP, 3565RPM, 3PH, 60HZ, 405TS, A40066M, TEF |                                            |  |  |           |  |  |
| S/O                                                                                                                                |  |  | FRAME       |  |  | HP                                                                                                                           |                             |  | TYPE                  |  |  | PHASE/<br>HERTZ                            |  |                                                              | RPM                                        |  |  | VOLTS     |  |  |
|                                                                                                                                    |  |  | 405TSC      |  |  | 100                                                                                                                          |                             |  | P                     |  |  | 3/60                                       |  |                                                              | 3565                                       |  |  | 575       |  |  |
| AMPS                                                                                                                               |  |  | DUTY        |  |  | AMB °C/<br>INSUL                                                                                                             |                             |  | S.F.                  |  |  | NEMA<br>DESIGN                             |  |                                                              | CODE<br>LETTER                             |  |  | ENCLOSURE |  |  |
| 88                                                                                                                                 |  |  | CONT        |  |  | 40/F                                                                                                                         |                             |  | 1.15                  |  |  | B                                          |  |                                                              | G                                          |  |  | TEFC      |  |  |
| E/S                                                                                                                                |  |  | ROTOR       |  |  | TEST<br>S.O.                                                                                                                 |                             |  | TEST<br>DATE          |  |  | STATOR RES. @25 °C<br>OHMS (BETWEEN LINES) |  |                                                              |                                            |  |  |           |  |  |
| 405508                                                                                                                             |  |  | 418142005XE |  |  | ---                                                                                                                          |                             |  | ---                   |  |  | .0799                                      |  |                                                              |                                            |  |  |           |  |  |
| PERFORMANCE                                                                                                                        |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
| LOAD                                                                                                                               |  |  | HP          |  |  | AMPERES                                                                                                                      |                             |  | RPM                   |  |  | % POWER FACTOR                             |  |                                                              | % EFFICIENCY                               |  |  |           |  |  |
| NO LOAD                                                                                                                            |  |  | 0           |  |  | 21.4                                                                                                                         |                             |  | 3600                  |  |  | 8.25                                       |  |                                                              | 0                                          |  |  |           |  |  |
| 1/4                                                                                                                                |  |  | 25.0        |  |  | 30.2                                                                                                                         |                             |  | 3591                  |  |  | 68.4                                       |  |                                                              | 90.7                                       |  |  |           |  |  |
| 2/4                                                                                                                                |  |  | 50.0        |  |  | 46.8                                                                                                                         |                             |  | 3583                  |  |  | 85.3                                       |  |                                                              | 93.9                                       |  |  |           |  |  |
| 3/4                                                                                                                                |  |  | 75.0        |  |  | 66.7                                                                                                                         |                             |  | 3574                  |  |  | 89.1                                       |  |                                                              | 94.5                                       |  |  |           |  |  |
| 4/4                                                                                                                                |  |  | 99.9        |  |  | 88.2                                                                                                                         |                             |  | 3565                  |  |  | 90.0                                       |  |                                                              | 94.3                                       |  |  |           |  |  |
| 5/4                                                                                                                                |  |  | 125         |  |  | 110                                                                                                                          |                             |  | 3555                  |  |  | 90.5                                       |  |                                                              | 93.8                                       |  |  |           |  |  |
|                                                                                                                                    |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
| SPEED TORQUE                                                                                                                       |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
|                                                                                                                                    |  |  |             |  |  | RPM                                                                                                                          |                             |  | TORQUE<br>% FULL LOAD |  |  | TORQUE LB.-FT.                             |  |                                                              | AMPERES                                    |  |  |           |  |  |
| LOCKED ROTOR                                                                                                                       |  |  |             |  |  | 0                                                                                                                            |                             |  | 214                   |  |  | 314                                        |  |                                                              | 584                                        |  |  |           |  |  |
| PULL UP                                                                                                                            |  |  |             |  |  | 2385                                                                                                                         |                             |  | 184                   |  |  | 271                                        |  |                                                              | 527                                        |  |  |           |  |  |
| BREAKDOWN                                                                                                                          |  |  |             |  |  | 3396                                                                                                                         |                             |  | 273                   |  |  | 403                                        |  |                                                              | 337                                        |  |  |           |  |  |
| FULL LOAD                                                                                                                          |  |  |             |  |  | 3565                                                                                                                         |                             |  | 100                   |  |  | 147                                        |  |                                                              | 88.2                                       |  |  |           |  |  |
| AMPERES SHOWN FOR 575 VOLT CONNECTION. IF OTHER CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE. |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
| TYPICAL DATA<br>NEMA NOM. EFF. 94.1 %                                                                                              |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |
|                                                 |  |  |             |  |  | DRAWN BY: <u>C.E. JAMISON</u><br>CHECKED BY: <u>C.E. JAMISON</u><br>APPROVED BY: <u>W. L. SMITH</u><br>DATE: <u>05/03/19</u> |                             |  |                       |  |  | AC MOTOR<br>PERFORMANCE<br>DATA            |  |                                                              | A40WG5508-R003<br><br>DATE ISSUED 01/21/21 |  |  |           |  |  |
|                                                                                                                                    |  |  |             |  |  |                                                                                                                              |                             |  |                       |  |  |                                            |  |                                                              |                                            |  |  |           |  |  |

FRAME 405TSC

RPM 3565

S.F. 1.15

ROTOR 418142005XE

HP 100

VOLTS 575

NEMA DESIGN B

TEST S.O. TYPICAL DATA

TYPE P

AMPS 88

CODE LETTER G

TEST DATE ---

PHASE / HERTZ 3/60

DUTY CONT

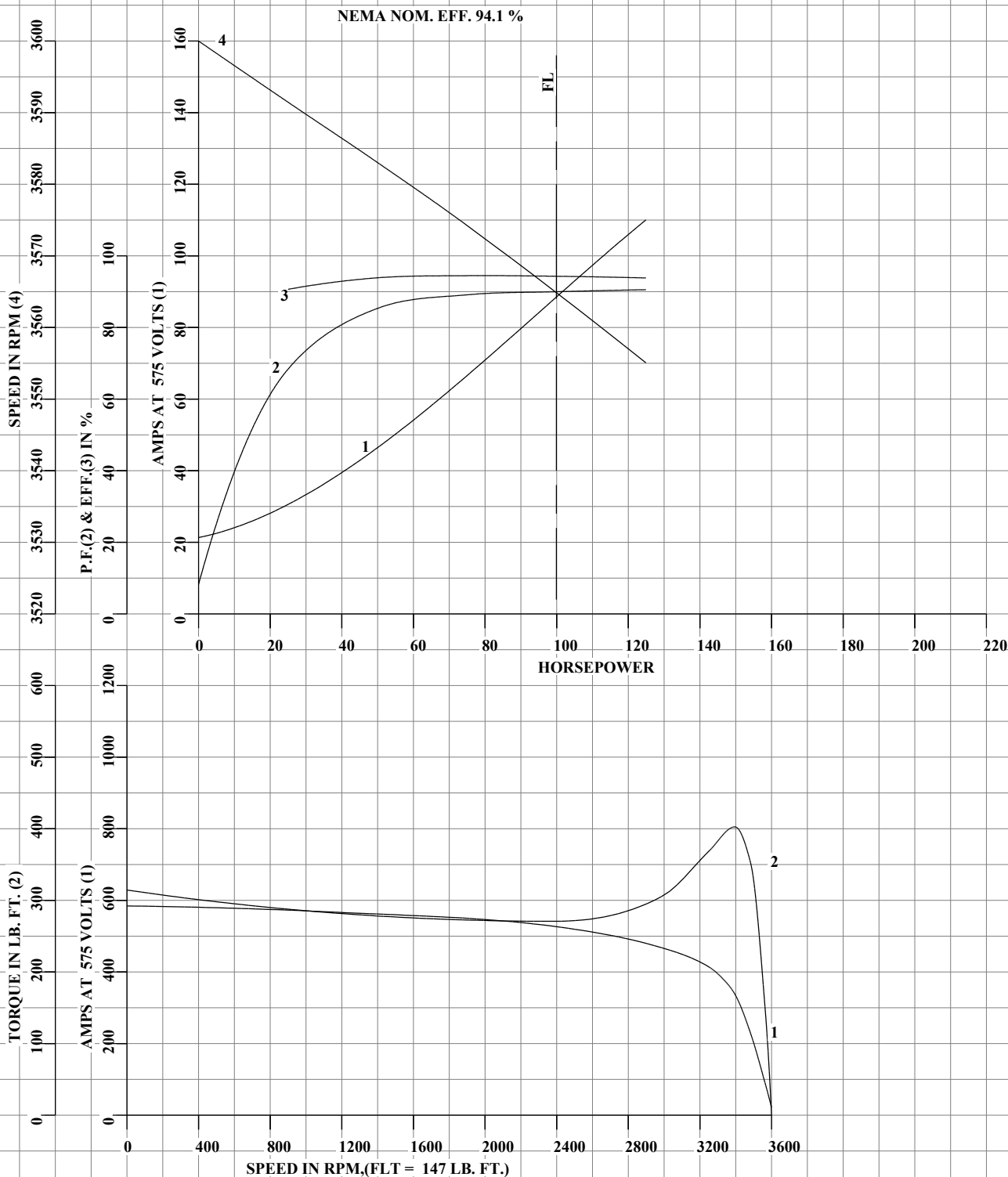
ENCLOSURE TEFC

STATOR RES. @ 25°C .0799

AMB °C / INSUL 40/F

E/S 405508

OHMS (BETWEEN LINES)



AMPERES SHOWN FOR 575 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.



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CHECKED BY: C.E. JAMISON  
APPROVED BY: W. L. SMITH  
DATE: 05/03/19

AC MOTOR  
PERFORMANCE  
DATA

A40WG5508-R003

ISSUE DATE 01/21/21

FRAME 405TSC

RPM 3565

S.F. 1.15

ROTOR 418142005XE

HP 100

VOLTS 575

NEMA DESIGN B

TEST S.O. TYPICAL DATA

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AMPS 88

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DUTY CONT

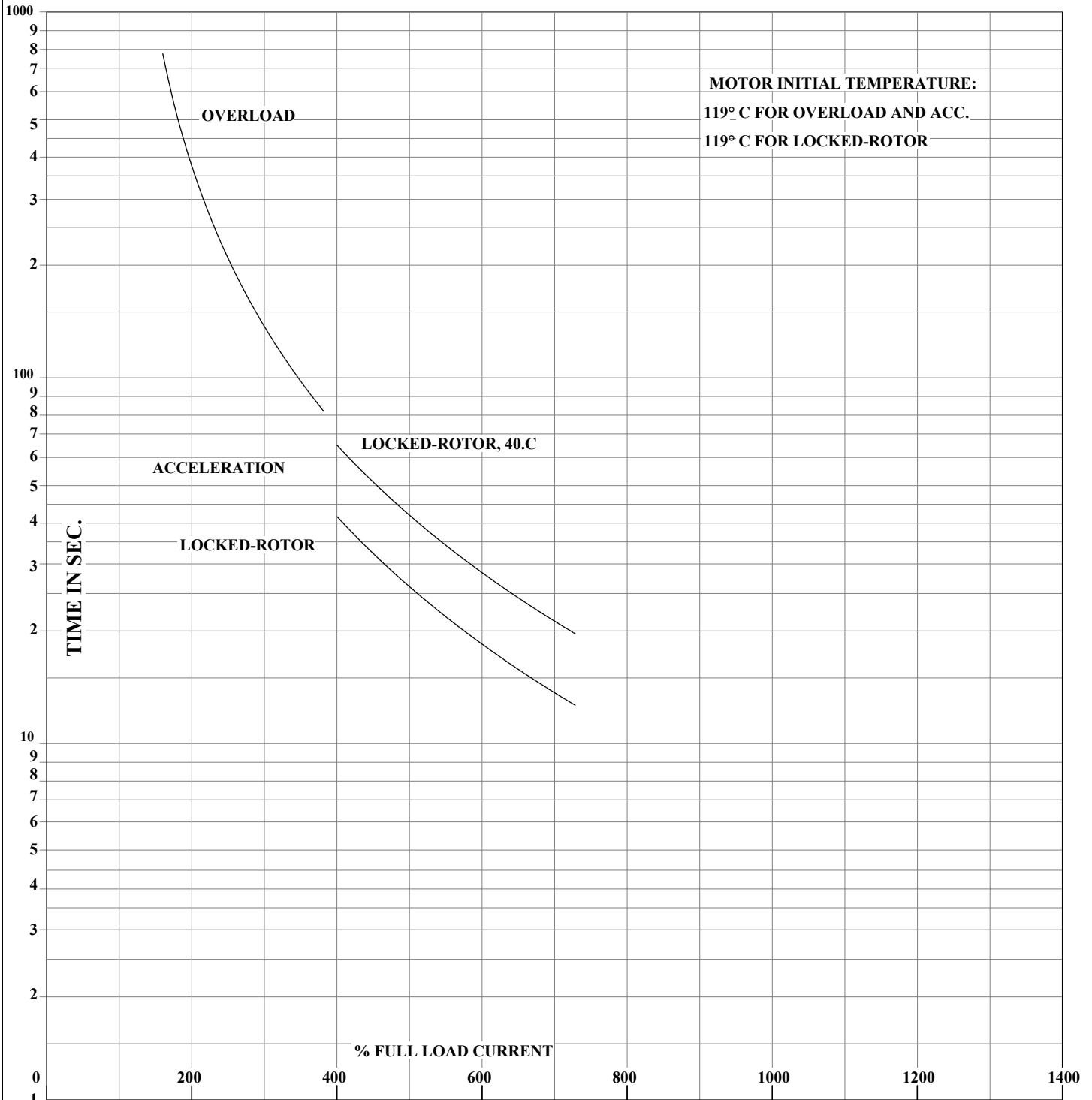
ENCLOSURE TEFC

STATOR RES. @ 25°C .0799

AMB °C / INSUL 40/F

E/S 405508

OHMS (BETWEEN LINES)



THERMAL LIMIT CURVE  
NEMA NOM. EFF. 94.1 %

AMPERES SHOWN FOR 575 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

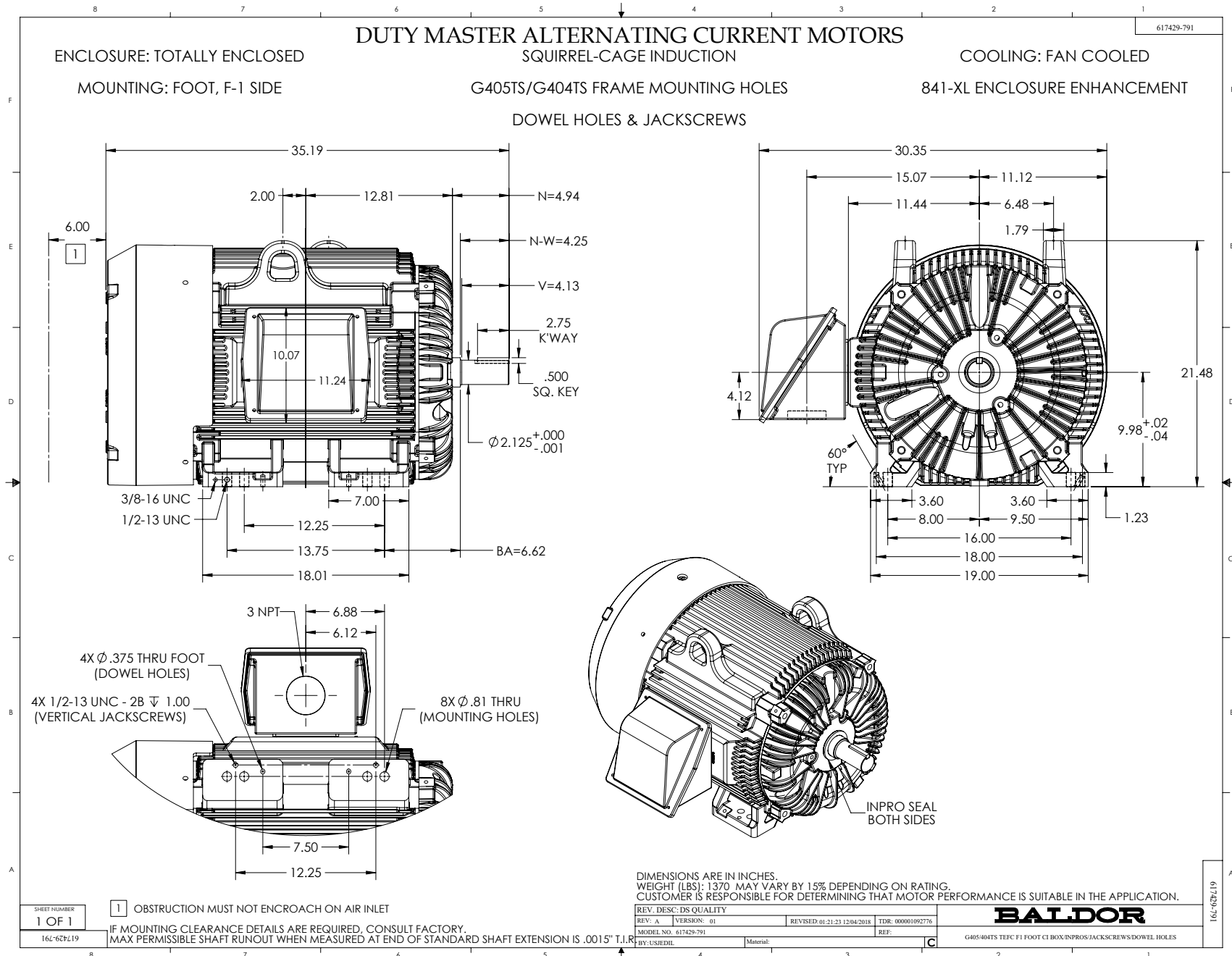


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DATE: 05/03/19

AC MOTOR  
PERFORMANCE  
DATA

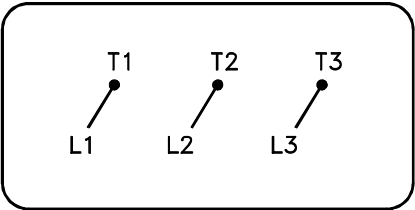
**A40WG5508-R003**

ISSUE DATE 01/21/21



416820-036

A-C MOTOR  
CONNECTION DIAGRAM  
STANDARD 3 LEAD CONNECTED



(N.P. 1575-BA)

416820-036

|                                      |             |                                |
|--------------------------------------|-------------|--------------------------------|
| REV. DESC: LOADED TO BUS, C/R 335225 |             |                                |
| REV. LTR: -                          | VERSION: 00 | TDR: 000000538207              |
| FILE: \MGA\00000\682                 |             | REVISED: 11: 54: 06 04/30/2010 |
| MTL: -                               |             | BY: RAGRA                      |

**BALDOR**

CONN DIAG - STANDARD 3 LEAD  
SH 1 of 1