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# Customer information packet

## EM3709T-G

7.5HP, 3520RPM, 3PH, 60HZ, 213T, 3728M, TEFC, F

Class - None

Division - Not Applicable

## Specifications

|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Enclosure                      | TEFC                                                          |
| Frame                          | 213T                                                          |
| Frame Material                 | Steel                                                         |
| Frequency                      | 60.00 Hz                                                      |
| Haz Area Class and Group       | None                                                          |
| Haz Area Division              | Not Applicable                                                |
| Motor Letter Type              | Three Phase                                                   |
| Output @ Frequency             | 7.500 HP @ 60 HZ                                              |
| Phase                          | 3                                                             |
| Synchronous Speed @ Frequency  | 3600 RPM @ 60 HZ                                              |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                            |
| Agency Approvals               | CSA<br>CSA EEV<br>NEMA PREMIUM<br>UR                          |
| Ambient Temperature            | 40 °C                                                         |
| Auxiliary Box                  | NO AUXILLARY BOX                                              |
| Auxiliary Box Lead Termination | None                                                          |
| Base Indicator                 | Rigid                                                         |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                       |
| Blower                         | None                                                          |
| Current @ Voltage              | 9.000 A @ 460.0 V<br>19.000 A @ 208.0 V<br>18.000 A @ 230.0 V |
| Design Code                    | A                                                             |
| Drip Cover                     | No Drip Cover                                                 |
| Duty Rating                    | CONT                                                          |
| Efficiency @ 100% Load         | 89.5 %                                                        |
| Electrically Isolated Bearing  | Not Electrically Isolated                                     |
| Feedback Device                | NO FEEDBACK                                                   |
| Front Shaft Indicator          | None                                                          |

## Part detail

|              |            |
|--------------|------------|
| Revision     | E          |
| Type         | AC         |
| Mech. spec.  | 37J838     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 37WGL869   |
| Layout       | 37LYJ838   |
| Eff. date    | 09-23-2024 |
| CD Diagram   | CD0005     |
| Poles        | 02         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 01-28-2021 |

|                               |                       |
|-------------------------------|-----------------------|
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 9.0 a                 |
| Insulation Class              | H                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | J                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 3728M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 2                     |
| Overall Length                | 17.89 IN              |
| Power Factor                  | 84                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 1.375 IN              |
| Shaft Ground Indicator        | Shaft Grounding       |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 3520 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Bearing      | None                  |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |
| Winding Thermal 1             | None                  |
| Winding Thermal 2             | None                  |

## Nameplate

## NP3441LUA

|                           |                            |      |     |      |   |       |   |  |  |  |
|---------------------------|----------------------------|------|-----|------|---|-------|---|--|--|--|
| CAT.NO.                   | EM3709T-G                  |      |     |      |   |       |   |  |  |  |
| SPEC                      | 37J838L869G1               |      |     |      |   |       |   |  |  |  |
| HP                        | 7.5                        |      |     |      |   |       |   |  |  |  |
| VOLTS                     | 230/460                    |      |     |      |   |       |   |  |  |  |
| AMPS                      | 18/9                       |      |     |      |   |       |   |  |  |  |
| RPM                       | 3520                       |      |     |      |   |       |   |  |  |  |
| FRAME                     | 213T                       |      | HZ  | 60   |   | PH    | 3 |  |  |  |
| SF                        | 1.15                       | CODE | J   | DES  | A | CLASS | H |  |  |  |
| NEMA NOM. EFF             | 89.5                       | PF   | 84  |      |   |       |   |  |  |  |
| RATING                    | 40C AMB-CONT               |      |     |      |   |       |   |  |  |  |
| CC                        | 010A                       |      |     |      |   |       |   |  |  |  |
| ENCL                      | TEFC                       | SER  |     |      |   |       |   |  |  |  |
| DE                        | 6307                       |      | ODE | 6206 |   |       |   |  |  |  |
| VPWM INVERTER READY       |                            |      |     |      |   |       |   |  |  |  |
| CT6-60H(10:1)VT3-60H(20:1 |                            |      |     |      |   |       |   |  |  |  |
|                           | 50HZ 7.5HP 190/380V 22/11A |      |     |      |   |       |   |  |  |  |
|                           | SF1.0                      |      |     |      |   |       |   |  |  |  |

## AC Induction Motor Performance Data

Record # 86824

Preliminary Data Sheet

| Winding: 37WGL869-R006 |    |              | Type: 3728M  |                                          | Enclosure: TEFC       |                |        |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |                       | 11.2 LB-FT     |        |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |    | 18/9         |              | Breakdown Torque                         |                       | 40.3 LB-FT     |        |
| R.P.M.                 |    | 3520         |              | Pull-up Torque                           |                       | 19.7 LB-FT     |        |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 21.8 LB-FT     |        |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                | 68.4 A |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 3.52 A         |        |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor | 84                                       | Line-line Res. @ 25°C |                | 1.19 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 50°C           |        |
| S.F. Amps              |    | 20/10        |              | Temp. Rise @ S.F. Load                   |                       | 63°C           |        |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 38.1           |        |
|                        |    |              |              | Rotor inertia                            |                       | 0.255 lb-ft²   |        |

## Load Characteristics 460 V, 60 Hz, 7.5 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 49   | 71   | 81   | 86   | 88   | 89   | 87   |
| Efficiency      | 83.9 | 89.7 | 91   | 90.9 | 90.2 | 89.2 | 90.3 |
| Speed           | 3580 | 3560 | 3540 | 3518 | 3494 | 3468 | 3500 |
| Line amperes    | 4.1  | 5.4  | 7.06 | 8.96 | 11   | 13.2 | 10.2 |

ABB Motors and Mechanical Inc.

WINDING # 37WGL869

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3520 RPM 460 V 3728M

TORQUES (LB-FT): PO=40.3 PU=19.7 LR=21.8 LRA=68.4





