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# Customer information packet

## EM2528T

20HP, 1180RPM, 3PH, 60HZ, 286T, 4056M, OPSB, F1

## Specifications

|                                |                                                                |
|--------------------------------|----------------------------------------------------------------|
| Enclosure                      | OPSB                                                           |
| Frame                          | 286T                                                           |
| Frame Material                 | Steel                                                          |
| Frequency                      | 60.00 Hz                                                       |
| Motor Letter Type              | Three Phase                                                    |
| Output @ Frequency             | 20.000 HP @ 60 HZ                                              |
| Phase                          | 3                                                              |
| Synchronous Speed @ Frequency  | 1200 RPM @ 60 HZ                                               |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                             |
| Agency Approvals               | CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR                  |
| Ambient Temperature            | 40 °C                                                          |
| Auxillary Box                  | No Auxillary Box                                               |
| Auxillary Box Lead Termination | None                                                           |
| Base Indicator                 | Rigid                                                          |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                        |
| Blower                         | None                                                           |
| Current @ Voltage              | 56.000 A @ 208.0 V<br>54.000 A @ 230.0 V<br>27.000 A @ 460.0 V |
| Design Code                    | A                                                              |
| Drip Cover                     | No Drip Cover                                                  |
| Duty Rating                    | CONT                                                           |
| Efficiency @ 100% Load         | 92.4 %                                                         |
| Electrically Isolated Bearing  | Not Electrically Isolated                                      |
| Feedback Device                | NO FEEDBACK                                                    |
| Front Face Code                | Standard                                                       |
| Front Shaft Indicator          | None                                                           |
| Heater Indicator               | No Heater                                                      |

## Part detail

|              |            |
|--------------|------------|
| Revision     | V          |
| Type         | AC         |
| Mech. spec.  | 40G48      |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 40WGX191   |
| Layout       | 40LYG048   |
| Eff. date    | 11-29-2023 |
| CD Diagram   | CD0180     |
| Poles        | 06         |
| Leads        | 9#10       |
| Proprietary  | False      |
| Created date | 10-14-2010 |

|                               |                       |
|-------------------------------|-----------------------|
| High Voltage Full Load Amps   | 27.0 a                |
| Insulation Class              | F                     |
| Inverter Code                 | Inverter Ready        |
| IP Rating                     | NONE                  |
| KVA Code                      | H                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | No Locked Bearing     |
| Motor Lead Exit               | Ko Box                |
| Motor Lead Quantity/Wire Size | 9 @ 10 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 4056M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 6                     |
| Overall Length                | 25.06 IN              |
| Power Factor                  | 74                    |
| 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                | 1.875 IN              |
| Shaft Extension Location      | Pulley End            |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 1180 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

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## Nameplate

| NP2138LUA    |                            |    |          |          |        |     |            |        |           |      |        |      |
|--------------|----------------------------|----|----------|----------|--------|-----|------------|--------|-----------|------|--------|------|
| CAT.NO.      | EM2528T                    |    |          | P/N      |        |     |            |        | ENCLOSURE |      | OPSB   |      |
| SPEC.        | 40G048X191                 |    | CC       | 010A     | FRAME  |     | 286T       |        | S/N       |      |        |      |
| HP           | 20                         |    |          | CLASS    |        | F   | HZ         |        | 60        |      |        |      |
| RPM          | 1180                       |    |          | PH       | 3      | DES |            | A      |           |      |        |      |
| VOLT         | 230/460                    |    |          | KVA-CODE |        |     | H          |        | ODE BRG   | 6309 | DE BRG | 6311 |
| AMP          | 54/27                      |    |          |          |        |     |            |        |           |      |        |      |
| RATING       | 40C AMB-CONT               |    |          |          | GREASE |     | POLYREX EM |        |           |      |        |      |
| NEMA-NOM-EFF | 92.4                       | PF | 74       | SER.F.   | 1.15   |     |            |        |           |      |        |      |
|              | 50hz 20 hp 190/380v 62/31a |    |          |          |        |     |            | sf 1.0 |           |      |        |      |
| HTR-VOLTS    |                            |    | HTR-AMPS |          |        |     |            |        |           |      |        |      |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 40-1400     | C FACE KIT  | A8         |

**AC Induction Motor Performance Data**

Record # 66052

Typical performance - not guaranteed values

| Winding: 40WGX191-R001 |    |              | Type: 4056M                              |                           | Enclosure: OPSB       |           |           |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|-----------|-----------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |           |           |
| Rated Output (HP)      |    | 20           | Full Load Torque                         |                           | 88.68 LB-FT           |           |           |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line        |           |           |
| Full Load Amps         |    | 54/27        | Breakdown Torque                         |                           | 291 LB-FT             |           |           |
| R.P.M.                 |    | 1180         | Pull-up Torque                           |                           | 110 LB-FT             |           |           |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 160 LB-FT |           |
| NEMA Design Code       |    | A            | KVA Code                                 | H                         | Starting Current      |           | 177 A     |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current           |                       | 14.1 A    |           |
| NEMA Nom. Eff.         |    | 92.4         | Power Factor                             | 74                        | Line-line Res. @ 25°C |           | 0.38967 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 29°C      |           |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                       | 35°C      |           |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 31.3      |           |

**Load Characteristics 460 V, 60 Hz, 20 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 34     | 55     | 68     | 74     | 78     | 79     | 76   |
| Efficiency      | 88.4   | 92.5   | 93.3   | 93.2   | 92.7   | 91.9   | 92.9 |
| Speed           | 1195.7 | 1191.7 | 1187.5 | 1183.3 | 1178.5 | 1172.9 | 1180 |
| Line amperes    | 15.4   | 18.3   | 22.2   | 27     | 32.4   | 38.5   | 30.2 |

ABB Motors and Mechanical Inc.

WINDING # 40WGX191

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1180 RPM 460 V 4056M

TORQUES (LB-FT): PO=291 PU=110 LR=160 LRA=177





