

|                                        |                              |        |            |
|----------------------------------------|------------------------------|--------|------------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>PERFORMANCE DATASHEET</b> | ISSUED | 01/15/2026 |
|                                        |                              | MODEL  | 50HP 6P    |

| NAMEPLATE INFORMATION |             |          |                                     |    |            |                |      |            |        |            |
|-----------------------|-------------|----------|-------------------------------------|----|------------|----------------|------|------------|--------|------------|
| OUTPUT                |             | RPM      | VOLTS                               | Hz | FRAME SIZE | ENCLOSURE TYPE | S.F. | INS. CALSS | RATING | AMB. TEMP. |
| HP                    | KW          |          |                                     |    |            |                |      |            |        |            |
| 50                    | 37          | 1185     | 575                                 | 60 | 365TC      | TEFC           | 1.25 | F          | CONT.  | 40°C       |
| TEMP. RISE            | NEMA DESIGN | kVA CODE | Class/Division Hazardous Location   |    |            |                |      |            |        |            |
| B                     | B           | G        | Class I, Division 2, Group B, C & D |    |            |                |      |            |        |            |

| TYPICAL PERFORMANCE DATA |      |          |          |                  |          |          |
|--------------------------|------|----------|----------|------------------|----------|----------|
| EFFICIENCY (%)           |      |          |          | POWER FACTOR (%) |          |          |
| FULL LOAD                |      | 3/4 LOAD | 1/2 LOAD | FULL LOAD        | 3/4 LOAD | 1/2 LOAD |
| MIN.                     | NOM. |          |          |                  |          |          |
| 93.0                     | 94.1 | 94.5     | 94.3     | 84.1             | 82.2     | 75.8     |

| CURRENT        |               |               |              |                       |                        |
|----------------|---------------|---------------|--------------|-----------------------|------------------------|
| FULL LOAD AMPS | 3/4 LOAD AMPS | 1/2 LOAD AMPS | NO LOAD AMPS | STARTING CURRENT AMPS | STARTING CURRENT % FLC |
| 47.3           | 36.2          | 26.2          | 15.4         | 307.5                 | 650                    |

| TORQUE            |                    |                  |               | ALLOWABLE STARTS PER HOUR |     |
|-------------------|--------------------|------------------|---------------|---------------------------|-----|
| FULL LOAD (lb-ft) | LOCKED ROTOR % FLT | BREAK DOWN % FLT | PULL UP % FLT | COLD                      | HOT |
| 221.8             | 150                | 200              | 119           | 2                         | 1   |

| MECHANICAL DATA                             |                                                 |                                                     |                                     |                  |              |
|---------------------------------------------|-------------------------------------------------|-----------------------------------------------------|-------------------------------------|------------------|--------------|
| INERTIA                                     |                                                 |                                                     | SOUND PRESSURE LEVEL @ 3 ft (dB(A)) | PROTECTION GRADE | WEIGHT (Lbs) |
| ROTOR WR <sup>2</sup> (lb-ft <sup>2</sup> ) | NEMA LOAD WK <sup>2</sup> (lb-ft <sup>2</sup> ) | MAX ALLOWABLE WK <sup>2</sup> (lb-ft <sup>2</sup> ) |                                     |                  |              |
| 25.558                                      | 620                                             | 816                                                 | 71                                  | 55               | 809          |

| BEARING |        | GREASE                   | MOUNTING             |                     |
|---------|--------|--------------------------|----------------------|---------------------|
| DE      | ODE    |                          | TYPE OF CONSTRUCTION | TERMINAL BOX DESIGN |
| 6314C3  | 6312C3 | GREASE(MOBIL Polyrex EM) | RIGID MOUNTING       | NEMA                |

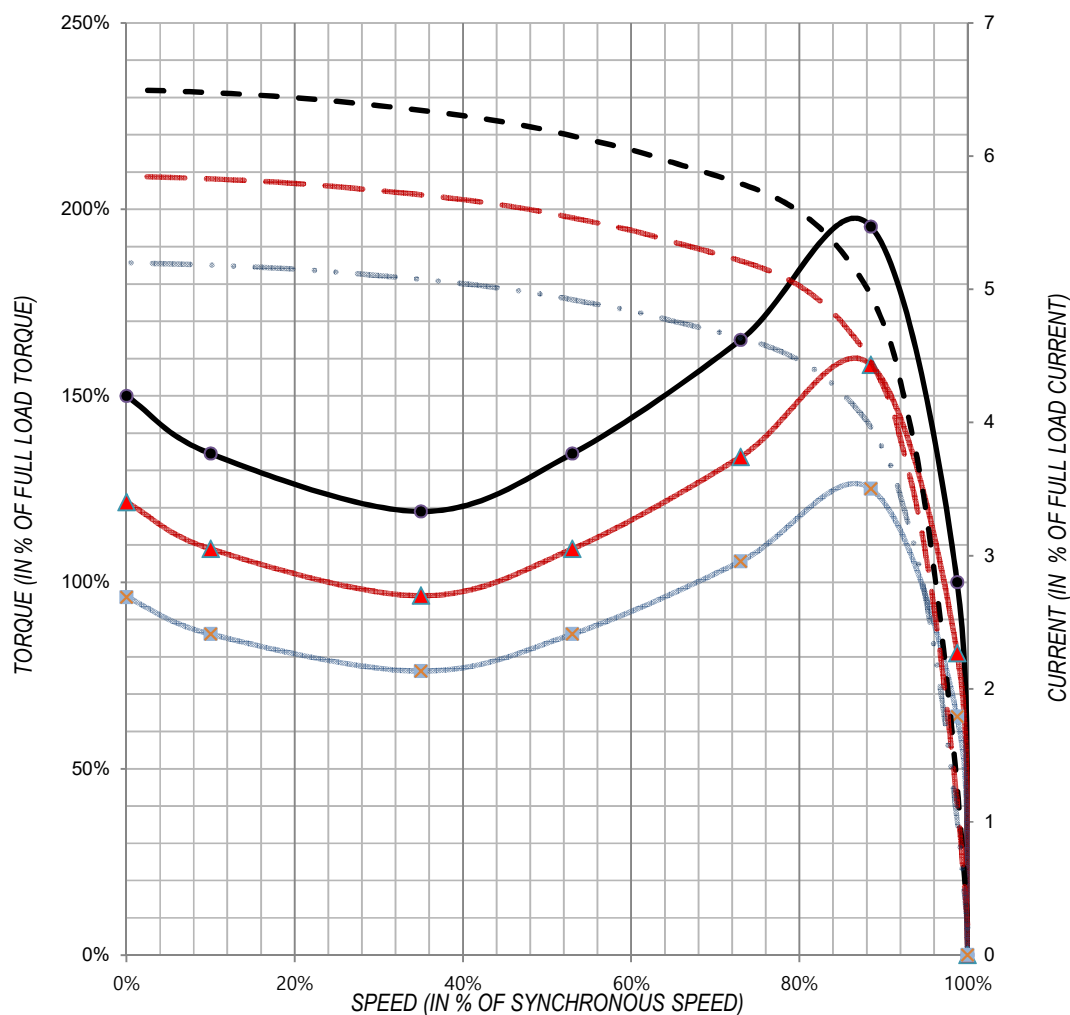
| INVERTER DUTY DATA |       |           |           |               |                                    |
|--------------------|-------|-----------|-----------|---------------|------------------------------------|
| TYPE               | HZ    | HP        | RPM       | TORQUE(LB-FT) | NOTE                               |
| VARIABLE TORQUE    | 3~60  | 0.0063~50 | 60~1200   | 0.555~221.8   | WITH TEMP. RISE CLASS F & S.F. 1.0 |
| CONSTANT TORQUE    | 6~60  | 5~50      | 120~1200  | 221.8         |                                    |
| CONSTANT HP        | 60~90 | 50        | 1200~1800 | 221.8~147.867 |                                    |

| DRAWING NO. | ES1AS180520 | REVISION | 0.1 |
|-------------|-------------|----------|-----|
|-------------|-------------|----------|-----|

ALL DATA ABOVE ARE SUBJECTED TO CHANGE WITHOUT NOTICE.

|                                        |                                           |  |  |  |           |
|----------------------------------------|-------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>SPEED - TORQUE &amp; CURRENT CURVE</b> |  |  |  | Curve No. |
|                                        |                                           |  |  |  | 1ST       |

|                           |       |                    |                          |        |                    |
|---------------------------|-------|--------------------|--------------------------|--------|--------------------|
| OUTPUT                    | 50    | HP                 | POLES                    | 6      | P                  |
| VOLTAGE                   | 575   | V                  | FREQUENCY                | 60     | Hz                 |
| FULL LOAD TORQUE          | 221.8 | lb-ft              | FULL LOAD CURRENT        | 47.3   | A                  |
| LOCKED ROTOR TORQUE       | 150   | %                  | LOCKED-ROTOR CURRENT     | 650    | %                  |
| BREAKDOWN TORQUE          | 200   | %                  | SPEED (at FULL LOAD)     | 1185   | RPM                |
| GD <sup>2</sup> of LOAD : | -     | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 25.558 | lb-ft <sup>2</sup> |

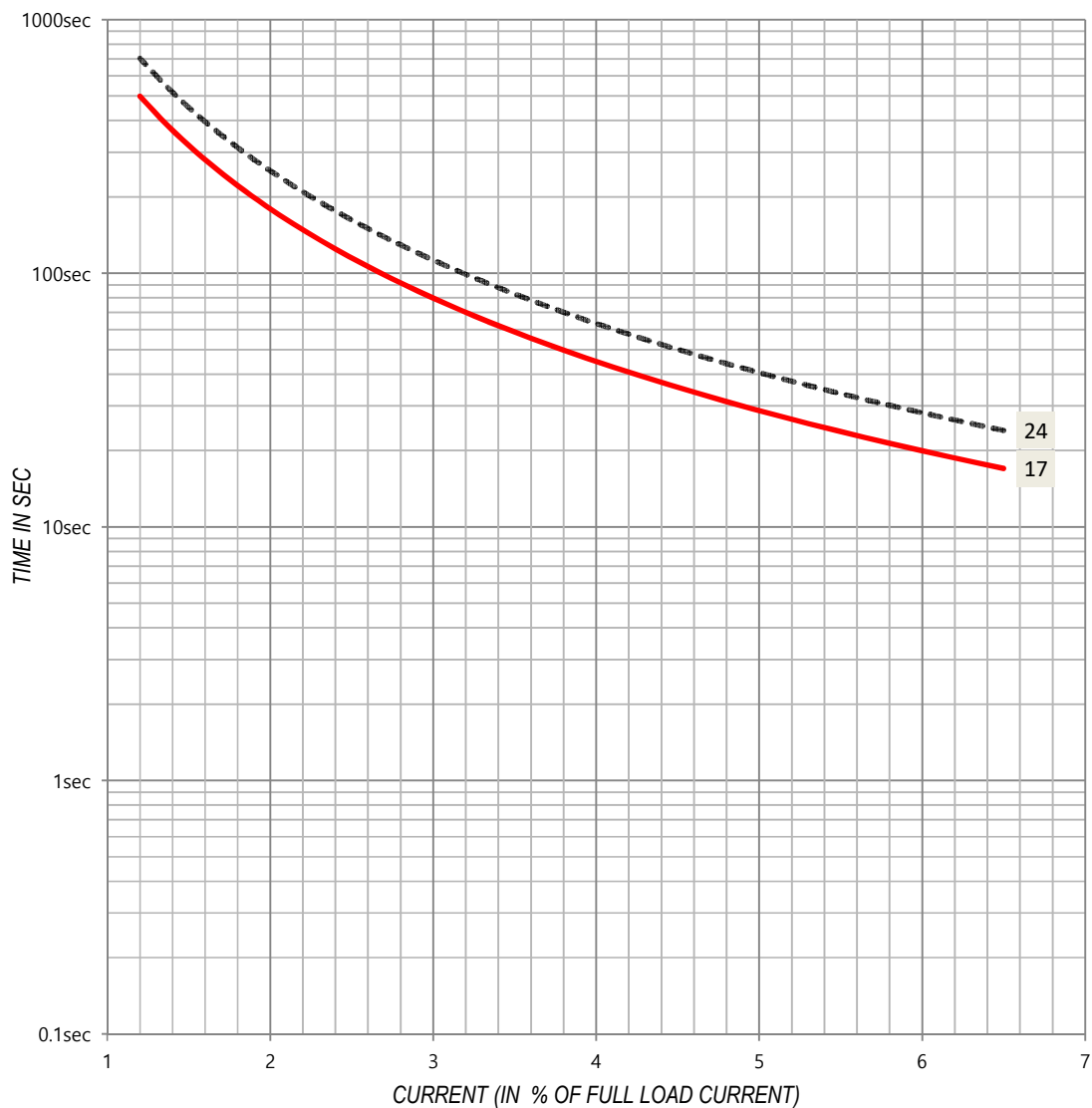


**NOTE**

|  |                            |                    |
|--|----------------------------|--------------------|
|  | A : SPEED-TORQUE CURVE AT  | 100% RATED VOLTAGE |
|  | B : SPEED-TORQUE CURVE AT  | 90% RATED VOLTAGE  |
|  | C : SPEED-TORQUE CURVE AT  | 80% RATED VOLTAGE  |
|  | D : SPEED-CURRENT CURVE AT | 100% RATED VOLTAGE |
|  | E : SPEED-CURRENT CURVE AT | 90% RATED VOLTAGE  |
|  | F : SPEED-CURRENT CURVE AT | 80% RATED VOLTAGE  |

|                                        |                                                     |  |  |  |           |
|----------------------------------------|-----------------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>THERMAL LIMIT &amp;<br/>TIME - CURRENT CURVE</b> |  |  |  | Curve No. |
|                                        |                                                     |  |  |  | 1TL       |

|                           |       |                    |                          |        |                    |
|---------------------------|-------|--------------------|--------------------------|--------|--------------------|
| OUTPUT                    | 50    | HP                 | POLES                    | 6      | P                  |
| VOLTAGE                   | 575   | V                  | FREQUENCY                | 60     | Hz                 |
| FULL LOAD TORQUE          | 221.8 | lb-ft              | FULL LOAD CURRENT        | 47.3   | A                  |
| LOCKED ROTOR TORQUE       | 150   | %                  | LOCKED-ROTOR CURRENT     | 650    | %                  |
| BREAKDOWN TORQUE          | 200   | %                  | SPEED (at FULL LOAD)     | 1185   | RPM                |
| GD <sup>2</sup> of LOAD : | -     | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 25.558 | lb-ft <sup>2</sup> |

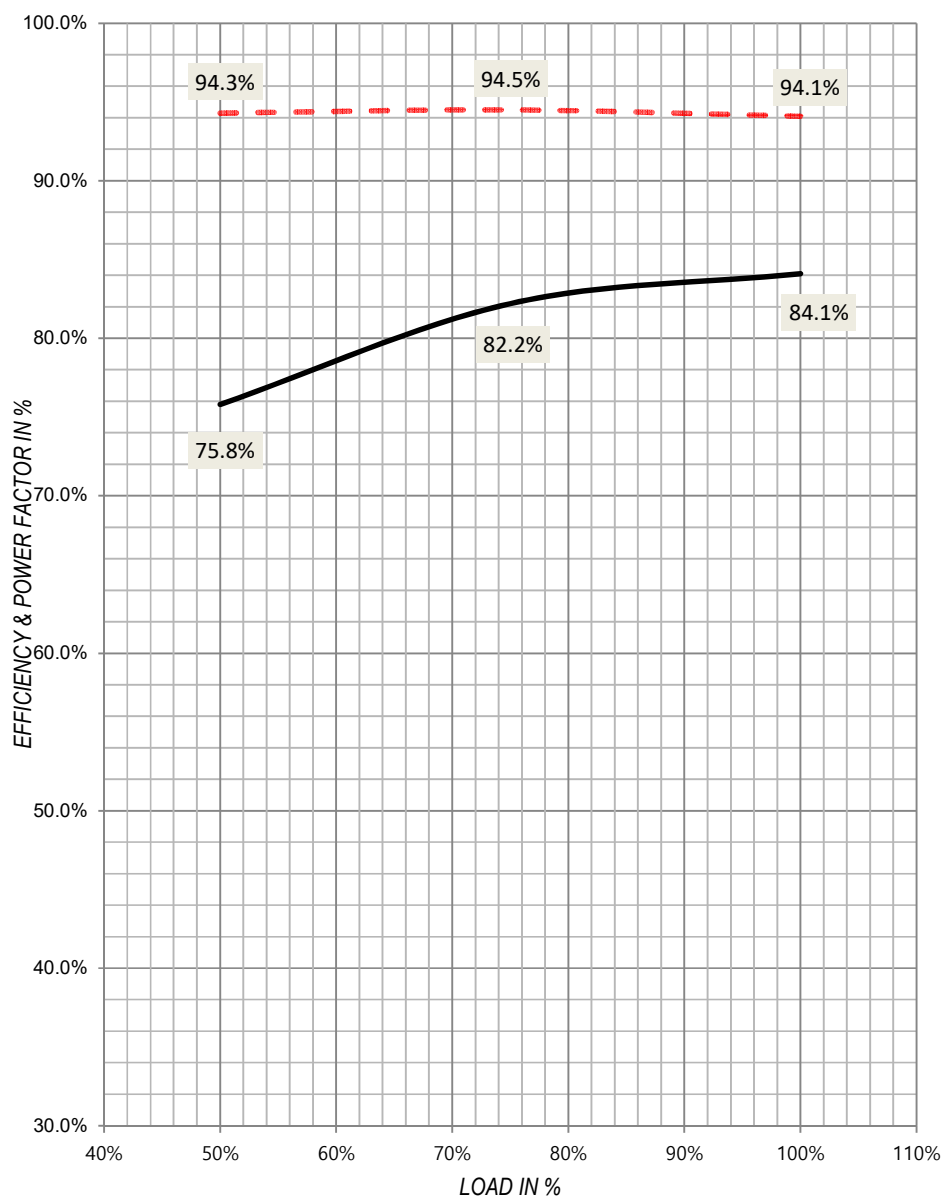


**NOTE**

- A : THERMAL LIMIT CURVE AT HOT CONDITION
- B : THERMAL LIMIT CURVE AT COLD CONDITION
- - - C : ※TIME-CURRENT CURVES(C,D,E) NEED BELOW DATA TO BE DRAWN
- - - D : \* LOAD GD2 AT MOTOR SHAFT
- - - E : \* SPEED-TORQUE CURVE OF LOAD

|                                        |                                                       |  |  |  |           |
|----------------------------------------|-------------------------------------------------------|--|--|--|-----------|
| <b>HICO</b><br>3 PHASE INDUCTION MOTOR | <b>LOAD - POWER FACTOR<br/>&amp; EFFICIENCY CURVE</b> |  |  |  | Curve No. |
|                                        |                                                       |  |  |  | 1PE       |

|                           |       |                    |                          |        |                    |
|---------------------------|-------|--------------------|--------------------------|--------|--------------------|
| OUTPUT                    | 50    | HP                 | POLES                    | 6      | P                  |
| VOLTAGE                   | 575   | V                  | FREQUENCY                | 60     | Hz                 |
| FULL LOAD TORQUE          | 221.8 | lb-ft              | FULL LOAD CURRENT        | 47.3   | A                  |
| LOCKED ROTOR TORQUE       | 150   | %                  | LOCKED-ROTOR CURRENT     | 650    | %                  |
| BREAKDOWN TORQUE          | 200   | %                  | SPEED (at FULL LOAD)     | 1185   | RPM                |
| GD <sup>2</sup> of LOAD : | -     | lb-ft <sup>2</sup> | GD <sup>2</sup> of MOTOR | 25.558 | lb-ft <sup>2</sup> |



**NOTE**

A : LOAD - POWER FACTOR CURVE  
 B : LOAD - EFFICIENCY CURVE

# HICO

3 PHASE INDUCTION MOTOR

## CONNECTION DIAGRAM

ISSUED

12/01/2024

| DOUBLE VOLTAGE<br>DELTA CONNECTION |                 | DOUBLE VOLTAGE<br>STAR CONNECTION |                 | SINGLE VOLTAGE<br>STAR-DELTA CONNECTION |                     | DOUBLE VOTAGE - STAR-DELTA CONNECTION |             |              |             |
|------------------------------------|-----------------|-----------------------------------|-----------------|-----------------------------------------|---------------------|---------------------------------------|-------------|--------------|-------------|
| LOW<br>VOLTAGE                     | HIGH<br>VOLTAGE | LOW<br>VOLTAGE                    | HIGH<br>VOLTAGE | STAR<br>CONNECTION                      | DELTA<br>CONNECTION | LOW VOLTAGE                           |             | HIGH VOLTAGE |             |
|                                    |                 |                                   |                 |                                         |                     | STAR CONN.                            | DELTA CONN. | STAR CONN.   | DELTA CONN. |
|                                    |                 |                                   |                 |                                         |                     |                                       |             |              |             |
|                                    |                 |                                   |                 |                                         |                     |                                       |             |              |             |
| DIRECT-ON-LINE<br>STARTING         |                 | DIRECT-ON-LINE<br>STARTING        |                 | WYE-DELTA<br>STARTING                   |                     | WYE-DELTA<br>STARTING                 |             |              |             |

| SINGLE VOLTAGE PART-<br>WINDING CONNECTION |     | DOUBLE VOLTAGE<br>PART WINDING CONNECTION                                       |     |                 | DOUBLE VOTAGE - STAR-DELTA AND<br>PART WINDING (ot LOW VOLTAGE) CONNECTION                 |                        |     |                        |     |
|--------------------------------------------|-----|---------------------------------------------------------------------------------|-----|-----------------|--------------------------------------------------------------------------------------------|------------------------|-----|------------------------|-----|
| PART<br>WINDING<br>CONNECTION              | RUN | LOW VOLTAGE                                                                     |     | HIGH<br>VOLTAGE | LOW VOLTAGE                                                                                |                        |     | HIGH VOLTAGE           |     |
|                                            |     | STARTING                                                                        | RUN |                 | PART-WINDING<br>STARTING                                                                   | STAR-DELTA<br>STARTING | RUN | STAR-DELTA<br>STARTING | RUN |
|                                            |     |                                                                                 |     |                 |                                                                                            |                        |     |                        |     |
|                                            |     |                                                                                 |     |                 |                                                                                            |                        |     |                        |     |
| PART-WINDING<br>STARTING                   |     | LOW VOLTAGE<br>PART-WINDING STARTING<br>HIGH VOLTAGE<br>DIRECT-ON-LINE STARTING |     |                 | LOW VOLTAGE<br>PART-WINDING/STAR-DELTA STARTING<br>HIGH VOLTAGE<br>DIRECT-ON-LINE STARTING |                        |     |                        |     |

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