

NOTES:

- 1. MAIN CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS
- 2. STANDARD PRODUCT USES BI-DIRECTIONAL FAN. OPPOSITE ROTATION AVAILABLE ONLY BY CONNECTION CHANGE.
- 3. KEY DIMENSIONS EQUAL

0.500"x 0.500"x 3.25"

(MOTOR SUPPLIED WITH KEY)

TOSHIBA RESERVES THE RIGHT TO MAKE CHANGES OF TECHNICAL IMPROVEMENT AND THE DATA MAY CHANGE WITHOUT NOTICE

PRELIMINARY

DO NOT USE FOR CONSTRUCTION, INSTALLATION, OR APPLICATION PURPOSES UNLESS THE DRAWING IS MARKED AS CERTIFIED

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TOTALLY ENCLOSED FAN COOLED
ROUND BODY C-FACED
3 PHASE INDUCTION MOTOR
284TC-286TC F1 ASSEMBLY

DRAWING #: MDSLV205-05

REV. DATE: 07/05/18 REV

REV. DESCRIP.:

REV. #: 1 PER.: M. O'DOWD



| Issued Date | 12/18/2019 | Transmit # |  |
|-------------|------------|------------|--|
| Issued By   | dschoeck   | Issued Rev |  |

## **TYPICAL MOTOR PERFORMANCE DATA**

Model: 0156SDSR44A-P

| HP        | kW | Pole       | FL RPM | Frame | Voltage           | Hz             | Phase    | FL Amps         |
|-----------|----|------------|--------|-------|-------------------|----------------|----------|-----------------|
| 15        | 11 | 6          | 1175   | 284TC | 230/460           | 60             | 3        | 40/19.8         |
| Enclosure | IP | Ins. Class | S.F.   | Duty  | NEMA<br>Nom. Eff. | NEMA<br>Design | kVA Code | Ambient<br>(°C) |
| TEFC      | 55 | F          | 1.15   | CONT  | 91.7              | В              | G        | 40 C            |

| Load         | HP    | kW   | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|-------|------|---------|----------------|------------------|
| Full Load    | 15    | 11.2 | 19.8    | 91.1           | 77.8             |
| ¾ Load       | 11.25 | 8.4  | 16.1    | 90.7           | 71.7             |
| ½ Load       | 7.50  | 5.6  | 13.1    | 88.8           | 60.1             |
| ¼ Load       | 3.75  | 2.8  | 11.1    | 81.6           | 38.7             |
| No Load      |       |      | 9.2     |                | 5.7              |
| Locked Rotor |       |      | 116     |                | 46.8             |

| Torque    |              |         |            |          |  |  |  |
|-----------|--------------|---------|------------|----------|--|--|--|
| Full Load | Locked Rotor | Pull Up | Break Down | Inertia  |  |  |  |
| (lb-ft)   | (% FLT)      | (% FLT) | (% FLT)    | (lb-ft²) |  |  |  |
| 67        | 240          | 215     | 260        | 4.68     |  |  |  |

| Safe Stall | Time(s)      | Sound      | Bearin  | ine*    | Approx. Motor Weight |  |
|------------|--------------|------------|---------|---------|----------------------|--|
| Cold       | Hot Pressure |            |         | 1       |                      |  |
|            |              | dB(A) @ 1M | DE      | NDE     | (lbs)                |  |
| 30         | 22           | -          | 6310ZC3 | 6310ZC3 | 434                  |  |

\*Bearings are the only recommended spare part(s).

Motor Options: Product Family:EQP Global SD Mounting:C-Face Round,Shaft:T Shaft

| Customer    |  |
|-------------|--|
| Customer PO |  |
| Sales Order |  |
| Project #   |  |

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|---|-----------|------------------|-------------|-------------|---------------|--|--|--|--|
| Engineering   | bmammen   | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 1 |  |  |  |  |
| Engr. Date  | 10/3/2018 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019     |  |  |  |  |



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## **TYPICAL MOTOR PERFORMANCE DATA**

Model: 0156SDSR44A-P

| HP        | kW | Pole       | FL RPM | Frame | Voltage           | Hz             | Phase    | FL Amps         |
|-----------|----|------------|--------|-------|-------------------|----------------|----------|-----------------|
| 15        | 11 | 6          | 960    | 284TC | 190/380           | 50             | 3        | 48/24           |
| Enclosure | IP | Ins. Class | S.F.   | Duty  | NEMA<br>Nom. Eff. | NEMA<br>Design | kVA Code | Ambient<br>(°C) |
| TEFC      | 55 | F          | 1.0    | CONT  | 88.5              | В              | G        | 40 C            |

| Load         | HP    | kW   | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|-------|------|---------|----------------|------------------|
| Full Load    | 15    | 11.2 | 24.0    | 91.7           | 75.5             |
| ¾ Load       | 11.25 | 8.4  | 18.5    | 92.0           | 71.5             |
| ½ Load       | 7.50  | 5.6  | 14.3    | 91.2           | 62.6             |
| ¼ Load       | 3.75  | 2.8  | 9.7     | 83.6           | 52.2             |
| No Load      |       |      | 9.1     |                | 5.7              |
| Locked Rotor |       |      | 130     |                | 47.1             |

| Torque    |              |         |            |          |  |  |  |
|-----------|--------------|---------|------------|----------|--|--|--|
| Full Load | Locked Rotor | Pull Up | Break Down | Inertia  |  |  |  |
| (lb-ft)   | (% FLT)      | (% FLT) | (% FLT)    | (lb-ft²) |  |  |  |
| 82.1      | 185          | 175     | 230        | 4.68     |  |  |  |

| Safe Stall | Time(s)      | Sound      | Bearin  | ine*    | Approx. Motor Weight |  |
|------------|--------------|------------|---------|---------|----------------------|--|
| Cold       | Hot Pressure |            |         | 1       |                      |  |
|            |              | dB(A) @ 1M | DE      | NDE     | (lbs)                |  |
| 27         | 17           | -          | 6310ZC3 | 6310ZC3 | 434                  |  |

\*Bearings are the only recommended spare part(s).

Motor Options: Product Family:EQP Global SD Mounting:C-Face Round,Shaft:T Shaft

| Customer    |  |
|-------------|--|
| Customer PO |  |
| Sales Order |  |
| Project #   |  |

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|---|----------|------------------|-------------|-------------|---------------|--|--|--|--|
| TOSHIBA INTERNATIONAL CORPORATION · HOUSTON, TEXAS U.S.A. |          |                  |             |             |               |  |  |  |  |
| Engineering   | jhock    | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 1 |  |  |  |  |
| Engr. Date  | 4/9/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019     |  |  |  |  |



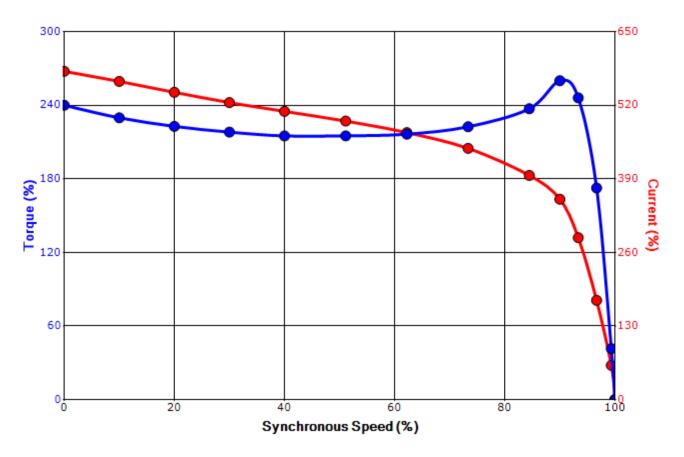
| Issued Date | 12/18/2019 | Transmit # |  |
|-------------|------------|------------|--|
| Issued By   | dschoeck   | Issued Rev |  |

#### SPEED TORQUE/CURRENT CURVE

Model: 0156SDSR44A-P

| HP                   | kW        | Pole       | FL RPM | Frame      | Voltage           | Hz             | Phase    | FL Amps         |
|----------------------|-----------|------------|--------|------------|-------------------|----------------|----------|-----------------|
| 15                   | 11        | 6          | 1175   | 284TC      | 230/460           | 60             | 3        | 40/19.8         |
| Enclosure            | IP        | Ins. Class | S.F.   | Duty       | NEMA<br>Nom. Eff. | NEMA<br>Design | kVA Code | Ambient<br>(°C) |
| TEFC                 | 55        | F          | 1.15   | CONT       | 91.7              | В              | G        | 40 C            |
| Lealind Dates        | Rotor wk² |            |        |            | Torque            |                |          |                 |
| Locked Rotor<br>Amps | Inertia   | Full Load  | Locked | l Rotor    | Pull U            | р              | Break    | Down            |
| Allips               | (lb-ft²)  | (lb-ft)    | (%     | <b>6</b> ) | (%)               |                | (%       | <b>%</b> )      |
| 116                  | 4.68      | 67         | 240    |            | 215               |                | 26       | 60              |

# Design Values





| Customer    | wk² Load Inertia (lb-f | -      |
|-------------|------------------------|--------|
| Customer PO | Load Ty                |        |
| Sales Order | Voltage (              | 6) 100 |
| Project #   | Accel. Tin             | ie -   |

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|---|-----------|------------------|-------------|-------------|-------------|--|--|--|
| Engineering   | bmammen   | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121/1 |  |  |  |
| Engr. Date  | 10/3/2018 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019   |  |  |  |



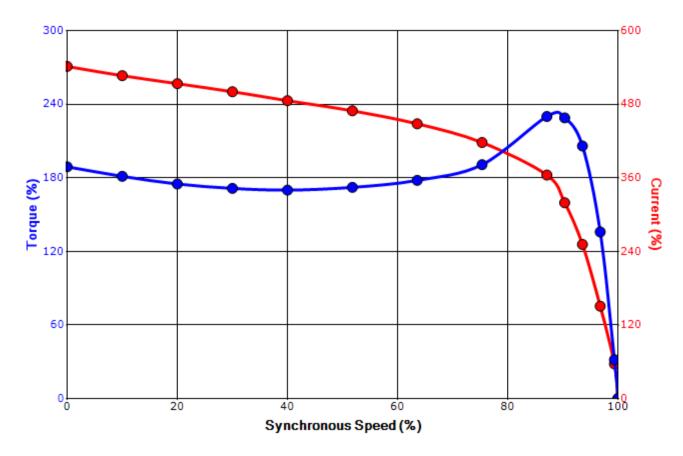
| Issued Date | 12/18/2019 | Transmit # |  |
|-------------|------------|------------|--|
| Issued By   | dschoeck   | Issued Rev |  |

#### SPEED TORQUE/CURRENT CURVE

Model: 0156SDSR44A-P

| HP                   | kW        | Pole       | FL RPM | Frame      | Voltage           | Hz             | Phase    | FL Amps         |
|----------------------|-----------|------------|--------|------------|-------------------|----------------|----------|-----------------|
| 15                   | 11        | 6          | 960    | 284TC      | 190/380           | 50             | 3        | 48/24           |
| Enclosure            | IP        | Ins. Class | S.F.   | Duty       | NEMA<br>Nom. Eff. | NEMA<br>Design | kVA Code | Ambient<br>(°C) |
| TEFC                 | 55        | F          | 1.0    | CONT       | 88.5              | В              | G        | 40 C            |
| Lealind Dates        | Rotor wk² |            |        |            | Torque            |                |          |                 |
| Locked Rotor<br>Amps | Inertia   | Full Load  | Locked | l Rotor    | Pull U            | р              | Break    | Down            |
| Allips               | (lb-ft²)  | (lb-ft)    | (%     | <b>6</b> ) | (%)               |                | (%       | <b>%</b> )      |
| 130                  | 4.68      | 82.1       | 185    |            | 175               |                | 23       | 30              |

# Design Values





| Customer    | wk² Load Inerti | a (lb-ft²)         |
|-------------|-----------------|--------------------|
| Customer PO | Lo              | ad Type            |
| Sales Order | Vol             | <b>age (%)</b> 100 |
| Project #   | Acc             | el. Time -         |

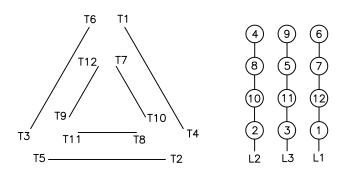
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|---|----------|------------------|-------------|-------------|-------------|--|--|--|--|
| Engineering   | jhock    | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121/1 |  |  |  |  |
| Engr. Date  | 4/9/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 9/20/2019   |  |  |  |  |

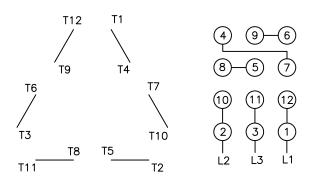
# Motor Connection Diagrams <a href="mailto:12">12 Leads</a>

### Across-the-Line Starting / Running Connections

Low Voltage Delta



High Voltage Delta



Switch L1 and L2 to reverse rotation

Suitable for Wye-Delta Starting and Limited Part-Winding-Starting. Please Contact Toshiba International for specific connections.

By: R. Murillo Date: 4/9/08 Checked: MDC Date: 5/17/11 Revision 1