

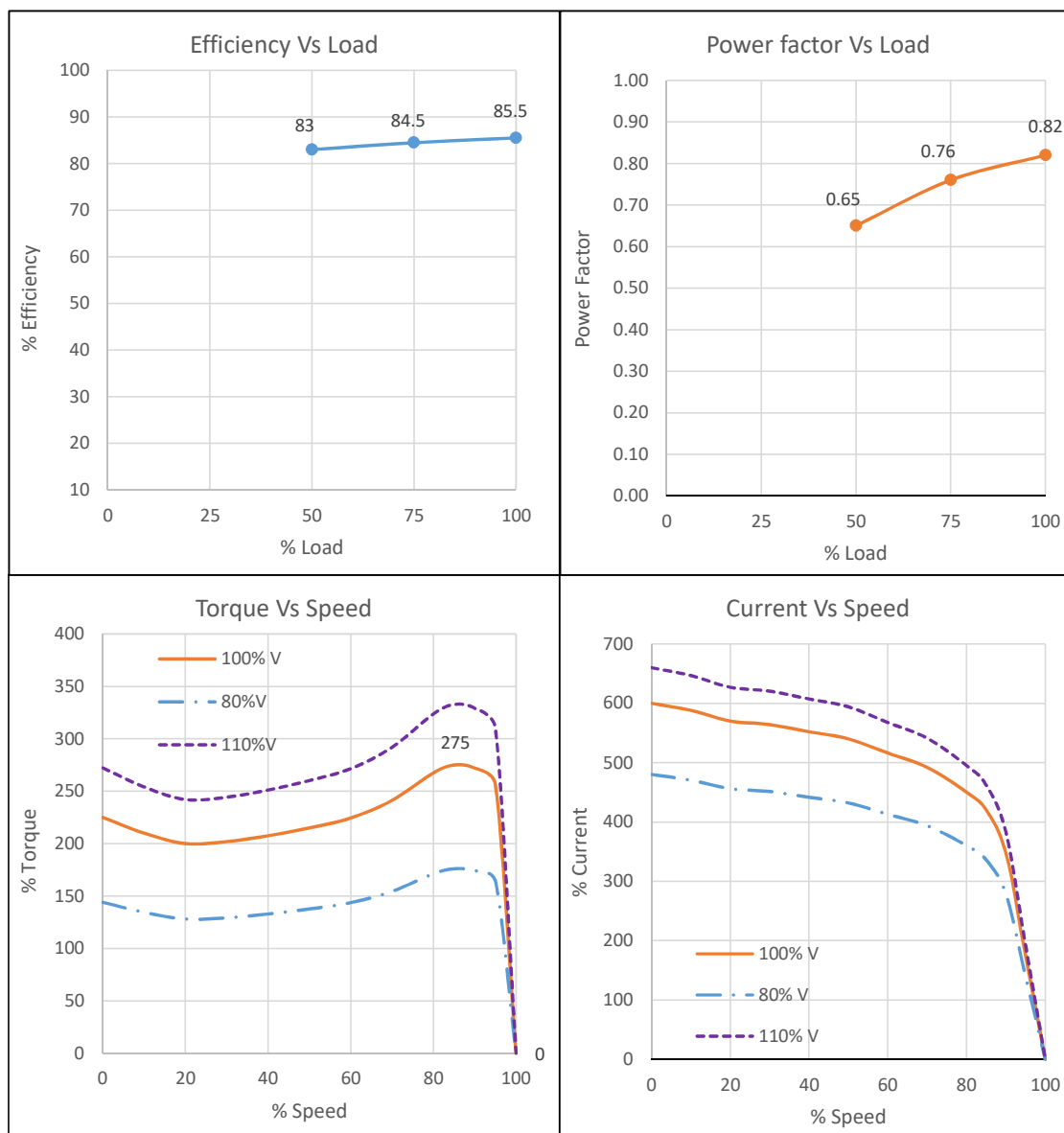
**IE2**

# **TECHNICAL DATASHEET** **3 PHASE INDUCTION MOTOR**



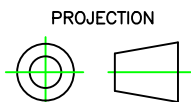
| Sr No                                                                                                                                         | Parameter                             | Unit              | Data                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------|--------------------------------------|
| <b>Product Specifications</b>                                                                                                                 |                                       |                   |                                      |
| 1                                                                                                                                             | Rated Output                          | kW                | 3.7                                  |
| 2                                                                                                                                             | Number of Poles                       | No                | 2                                    |
| 3                                                                                                                                             | Frame Designation                     |                   | KM100L                               |
| 4                                                                                                                                             | Product Code                          |                   | KM2.3T70.AIA.B35.TSS                 |
| 5                                                                                                                                             | Mounting                              |                   | B35                                  |
| <b>Electrical</b>                                                                                                                             |                                       |                   |                                      |
| 6                                                                                                                                             | Type of Duty                          |                   | Continuous S1                        |
| 7                                                                                                                                             | Rated Voltage                         | V                 | 415 ±10%                             |
| 8                                                                                                                                             | Rated Frequency                       | Hz                | 50 ±5%                               |
| 9                                                                                                                                             | Rated Speed                           | RPM               | 2875                                 |
| 10                                                                                                                                            | Rated Current                         | A                 | 7.40                                 |
| 11                                                                                                                                            | Method of Starting                    |                   | Direct On Line                       |
| 12                                                                                                                                            | Starting Current (SCC)                | % of FLA          | 600                                  |
| 13                                                                                                                                            | Rated Torque                          | Kg-m              | 1.25                                 |
| 14                                                                                                                                            | Starting Torque (STT)                 | % of FLT          | 225                                  |
| 15                                                                                                                                            | Maximum Torque (POT)                  | % of FLT          | 275                                  |
| 16                                                                                                                                            | Efficiency at 100% / 75% / 50% load   | %                 | 85.5 / 84.5/ 83                      |
| 17                                                                                                                                            | Power factor at 100% / 75% / 50% load |                   | 0.82 / 0.76 / 0.65                   |
| 18                                                                                                                                            | Thermal Withstand Time (Hot)          | s                 | 8                                    |
| 19                                                                                                                                            | Thermal Withstand Time (Cold)         | s                 | 16                                   |
| 20                                                                                                                                            | Thermal Time Constant (Stator)        | min               | 30                                   |
| 21                                                                                                                                            | Connection / Number of Terminals      |                   | Delta / 6                            |
| 22                                                                                                                                            | Permissible Starts/hour (Hot/Cold)    | Nos               | 2/3                                  |
| 23                                                                                                                                            | Insulation Class / Thermal Limit      |                   | F/F                                  |
| 24                                                                                                                                            | Winding Treatment                     |                   | VPI, Dual Coat Copper Wire           |
| <b>Mechanical</b>                                                                                                                             |                                       |                   |                                      |
| 25                                                                                                                                            | Degree of Protection                  |                   | IP55                                 |
| 26                                                                                                                                            | Enclosure / MOC /Method of Cooling    |                   | TEFC / AL/ IC411                     |
| 27                                                                                                                                            | Bearing DE/NDE                        |                   | 6206ZZ/6206ZZ                        |
| 28                                                                                                                                            | Type of Coupling                      |                   | Direct/Flexible                      |
| 29                                                                                                                                            | Noise Level                           |                   | As per IS12065                       |
| 30                                                                                                                                            | Vibration Level                       |                   | As per IS12075                       |
| 31                                                                                                                                            | Moment of Inertia GD <sup>2</sup>     | kg-m <sup>2</sup> | 0.0151                               |
| 32                                                                                                                                            | Position of Terminal Box              |                   | TOP                                  |
| 33                                                                                                                                            | Maximum Cable Size                    |                   | 2X3CX6 mm <sup>2</sup>               |
| 34                                                                                                                                            | Direction of Rotation                 |                   | Bidirectional ( Default: CW from DE) |
| 35                                                                                                                                            | Paint Shade                           |                   | RAL 7046- Telegrey                   |
| 36                                                                                                                                            | Net weight                            | kg                | 23.60                                |
| 37                                                                                                                                            | Accessories                           |                   | NA                                   |
| <b>Enviromental</b>                                                                                                                           |                                       |                   |                                      |
| 38                                                                                                                                            | Ambient Temperature /Temperature Rise | °C                | 50 / 80 (By resistance method)       |
| 39                                                                                                                                            | Altitude Above MSL                    | m                 | ≤ 1000                               |
| <b>Notes:</b> All performance data shall be subject to tolerances as per IS15999/IEC 60034.<br>Applicable Standards:IS 12615-2018, IS 15999-1 |                                       |                   |                                      |
| Customer                                                                                                                                      |                                       | PO No./ Enq. No   |                                      |
|                                                                                                                                               |                                       | Date              |                                      |
| Checked                                                                                                                                       | BMD                                   | 21-06-2023        |                                      |
| Approved                                                                                                                                      | SSN                                   | 21-06-2023        | Document No: KM2-001 Rev.0           |
| <b>KIRLOSKAR OIL ENGINES LTD.</b><br><b>ELECTRIC MOTORS</b>                                                                                   |                                       |                   |                                      |

# PERFORMANCE CURVE

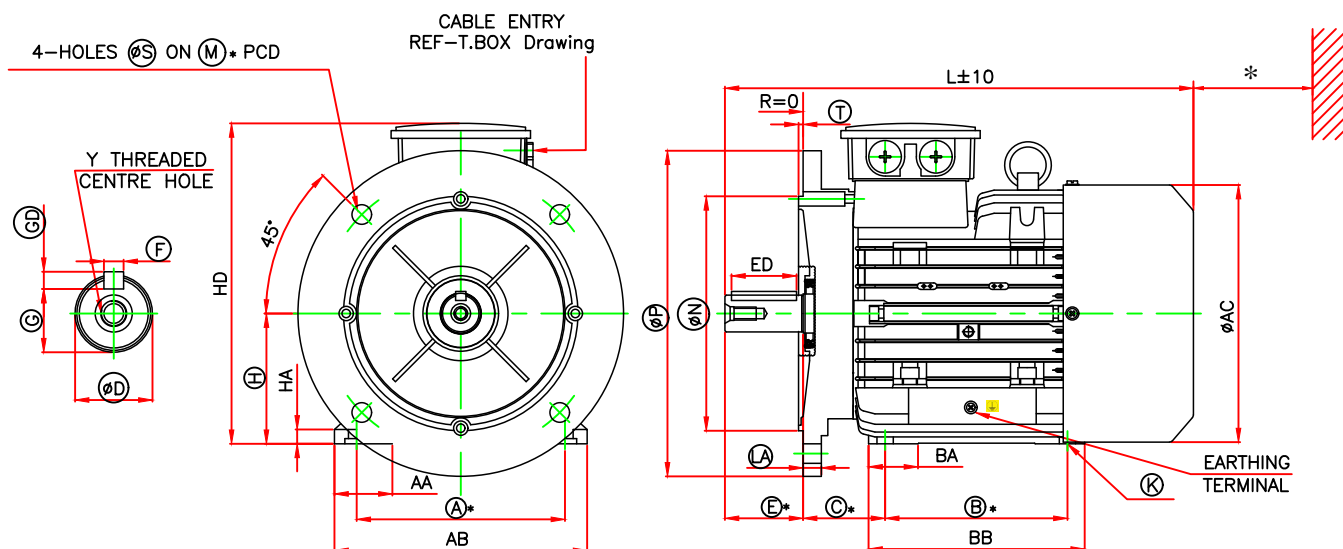


|          |        |                 |                            |
|----------|--------|-----------------|----------------------------|
| kW       | 3.7    | Customer        |                            |
| Pole     | 2      | PO No / Enq. No |                            |
| Frame    | KM100L | Date            |                            |
| Mounting | B35    | Product Code    | KM2.3T70.AIA.B35.TSS       |
| Checked  | BMD    | 21-06-2023      |                            |
| Approved | SSN    | 21-06-2023      | Document No KM2-002 Rev. 0 |

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# GENERAL ARRANGEMENT DRAWING FOR TEFC 3 PHASE INDUCTION MOTOR



| FRAME  | FOOT FIXING |     |    |          |    |     |    |     |           | FLANGE FIXING |                 |     |    |   |    |
|--------|-------------|-----|----|----------|----|-----|----|-----|-----------|---------------|-----------------|-----|----|---|----|
|        | A           | B   | C  | H TOL.   | AA | AB  | BA | BB  | K TOL.    | M TOL.        | N TOL.          | P   | S  | T | LA |
| KM100L | 160         | 140 | 63 | 100/99.5 | 44 | 194 | 38 | 166 | 18 X 12.5 | 215           | 180.014/179.989 | 250 | 15 | 4 | 11 |

| D END SHAFT EXTENSION AND KEY |    |    |         |         |         |        | OVER ALL |     |     |    |
|-------------------------------|----|----|---------|---------|---------|--------|----------|-----|-----|----|
| D TOL.                        | E  | ED | F TOL.  | GD TOL. | G       | Y      | AC       | L   | HD  | HA |
| 28.009/27.996                 | 60 | 50 | 8/7.964 | 7/6.91  | 24/23.9 | M10X24 | 198      | 360 | 245 | 11 |

| kW   | PRODUCT CODE         | PRODUCT CODE         | PRODUCT CODE         | PRODUCT CODE         |
|------|----------------------|----------------------|----------------------|----------------------|
|      | 2 POLE               | 4 POLE               | 6 POLE               | 8 POLE               |
| 0.75 | --                   | --                   | --                   | KM2.0T75.DIA.B35.TSS |
| 1.1  | --                   | --                   | --                   | KM2.1T10.DIA.B35.TSS |
| 1.5  | --                   | --                   | KM2.1T50.CIA.B35.TSS | --                   |
| 2.2  | --                   | KM2.2T20.BIA.B35.TSS | --                   | --                   |
| 3.7  | KM2.3T70.AIA.B35.TSS | --                   | --                   | --                   |

## NOTES:

- ONE EARTHING TERMINAL IS PROVIDED INSIDE MAIN TERMINAL BOX.
- \* 80mm MINIMUM DISTANCE TO BE MAINTAINED FOR EFFICIENT COOLING OF THE MOTOR.
- \* TOLERANCES ON MANDATORY DIMENSIONS ARE AS PER IS:1231/IS:2223/IEC:60072

RINGED DIMENSIONS ARE AS PER IS:1231/IS:2223/IEC:60072-1

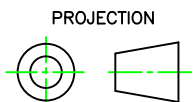
ALL DIMENSIONS ARE IN mm,

|          | NAME | DATE       | kW              | REFER TABLE            | FRAME    | KM100L                           |
|----------|------|------------|-----------------|------------------------|----------|----------------------------------|
| DRAWN    | KSK  | 09/06/2023 | POLE            | REFER TABLE            | MOUNTING | B35 (HORIZONTAL FOOT CUM FLANGE) |
| CHECKED  | SGS  | 09/06/2023 | PRODUCT CODE    | REFER TABLE            | CUSTOMER |                                  |
| APPROVED | SSN  | 09/06/2023 | MAX. CABLE SIZE | 1RX3CX6MM <sup>2</sup> | PO NO    |                                  |
|          |      |            | PROJECT         |                        | CLIENT   |                                  |

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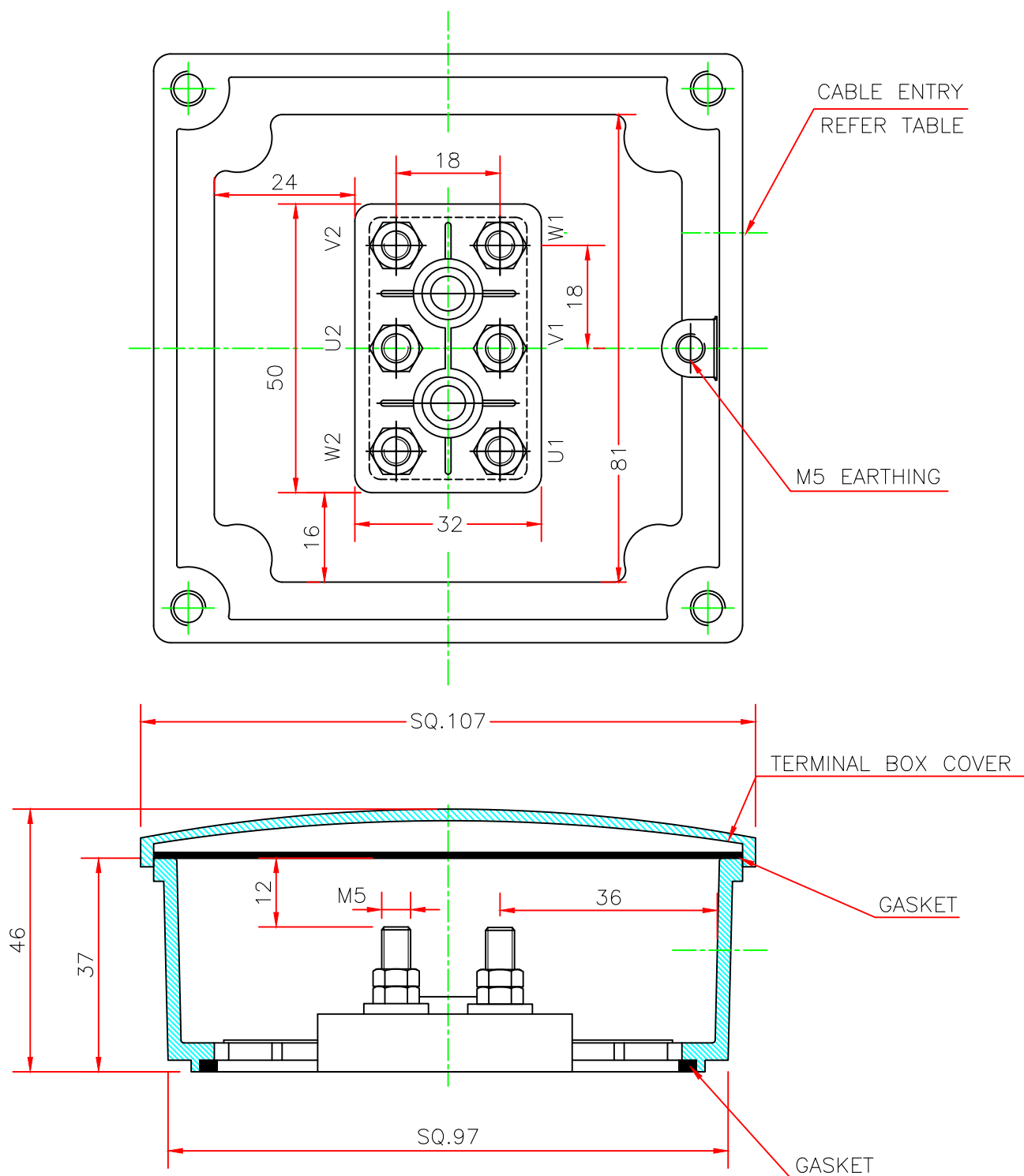
DO NOT SCALE  
FORMAT NO.:KM-GA-2021 R0

DRAWING NO  
KM100LB35TSALR0



# TERMINAL ARRANGEMENT DRAWING

**kirloskar**  
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ALL DIMENSIONS ARE IN mm

|                                               |      |            |                 |                                          |                         |        |
|-----------------------------------------------|------|------------|-----------------|------------------------------------------|-------------------------|--------|
|                                               | NAME | DATE       | kW              |                                          | FRAME                   | KM100L |
| DRAWN                                         | SGS  | 24/12/2021 | POLE            |                                          | CUSTOMER                |        |
| CHECKED                                       | SGS  | 24/12/2021 | PRODUCT CODE    |                                          | PO NO                   |        |
| APPROVED                                      | SSN  | 24/12/2021 | MAX. CABLE SIZE | 2RX3CX6MM <sup>2</sup>                   | CLIENT                  |        |
|                                               |      |            | CABLE ENTRY     | M20X1.5P-2NOS.                           | PROJECT                 |        |
| KIRLOSKAR OIL ENGINES LTD.<br>ELECTRIC MOTORS |      |            |                 | DO NOT SCALE<br>FORMAT NO.:KM-TB-2021 R0 | DRAWING NO<br>KM100TBR1 |        |