

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: KS86P031B40V45XSX

Catalog No: KS86P031B40V45XSX

86.0 Kw, Crane Duty Slipring Motors , 3 phase, 8 Pole, 415 V, S5 Duty, KS315M2 Frame, 40 CDF,
150 Start/Hr., TEFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2023 Regal Rexnord Corporation, All Rights Reserved. MC017097E

RegalRexnord

Nameplate Specifications

| | | | |
|-------------------------------|---------------|----------------------------|-----------------------------|
| Output HP | 115.30 Hp | Output KW | 86.0 kW |
| Frequency | 50 Hz | Voltage | 415 V |
| Current | 165.0 A | Speed | 737 rpm |
| Phase | 3 | Duty | S5 |
| Frame | KS315M2 | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 45 °C |
| Drive End Bearing Size | 6319 | Opp Drive End Bearing Size | 6319 |
| UL | No | CSA | No |
| CE | No | IP Code | 55 |
| CDF | 40 % | Start/Hr | 150 |
| RA | 140 A | RV | 370 V |
| Insulation class Stator/Rotor | F/F | Temp. Rise Stator/Rotor | 75/75 K |
| Stator Connection | Delta | Rotor Connection | Star |
| Efficiency Class | Standard | | |

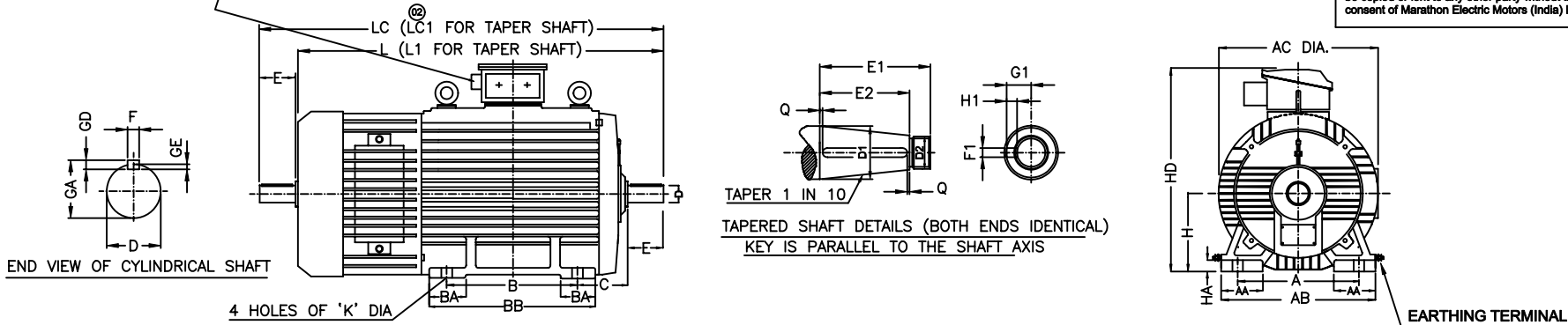
Technical Specifications

| | | | |
|-----------------------|-----------------|-----------------------|--------------------------|
| Electrical Type | Slipring | Starting Method | Rotor resistance starter |
| Rotation | Bi-Directional | Mounting | IMB3 |
| Motor Orientation | Horizontal | Drive End Bearing | Antifriction |
| Opp Drive End Bearing | Antifriction | Frame Material | Cast Iron/Fabricated |
| Shaft Type | Single Cylinder | Overall Length | 1425.00 mm |
| Frame Length | 1425.00 mm | Shaft Diameter | 80.000 mm |
| Shaft Extension | 170 mm | Assembly/Box Mounting | Top |
| Rotor GD2 | 26.3 kg·m² | Pull Out Torque | 3.4 |
| Connection Drawing | DP3087 | Outline Drawing | cm5906 |

AUX. TER. BOX FOR SPACE HEATER \$\$\$
WITH D/C CABLE GLAND, SIZE: 1X2CX2.5mm²

These drawing and design are the property of Marathon Electric Motors (India) Limited. These must not be copied or lent to any other party without the written consent of Marathon Electric Motors (India) Limited.

\$\$\$ ~ PROVIDED ON DEMAND



DIMENSIONAL DETAILS:-

| FRAME | NO OF POLE | H | | FIXING DIMENSION | | | | HA | AC-DIA | HD | AA | AB | BA | BA1 | BB |
|--------|------------|-----|-----|------------------|-----|-----|----|----|--------|-----|-----|-----|-----|-----|-----|
| | | NOM | TOL | A | B | C | K | | | | | | | | |
| KS280S | 4 -12 | 280 | -1 | 457 | 368 | 190 | 24 | 32 | 560 | 830 | 112 | 560 | 120 | 120 | 490 |
| KS280M | 4 -12 | 280 | -1 | 457 | 419 | 190 | 24 | 32 | 560 | 830 | 112 | 560 | 120 | 120 | 490 |
| KS315S | 4 -12 | 315 | -1 | 508 | 406 | 216 | 28 | 36 | 620 | 885 | 120 | 620 | 143 | 143 | 520 |
| KS315M | 4 -12 | 315 | -1 | 508 | 457 | 216 | 28 | 36 | 620 | 885 | 120 | 620 | 143 | 143 | 520 |

| CYLINDRICAL SHAFT DIMENSIONS DETAILS (BOTH ENDS) | | | | | | | | | | | | TAPER SHAFT DIMENSIONS DETAILS (BOTH) | | | | | | | | | | |
|--|------|------|-----|-----|------------------|------|-----|--------|-----|------|-----|---------------------------------------|------|------|------|-------|-----|-----|----|----|------|---|
| FRAME | L | LC | E | D | | GA | F | | GD | | GE | | L1 | LC1 | D1 | D2 | E1 | E2 | F1 | H1 | G1 | Q |
| | | | | NOM | TOL | | NOM | TOL | NOM | TOL | NOM | TOL | | | | | | | | | | |
| KS280S | 1300 | 1428 | 140 | 75 | +0.030 +0.011 | 79.5 | 20 | -0.052 | 12 | -110 | 7.5 | +0.2 | 1330 | 1488 | T 80 | M56x4 | 170 | 130 | 20 | 12 | 41.3 | 5 |
| KS280M | 1300 | 1428 | 140 | 75 | +0.030 +0.011 | 79.5 | 20 | -0.052 | 12 | -110 | 7.5 | +0.2 | 1330 | 1488 | T 80 | M56x4 | 170 | 130 | 20 | 12 | 41.3 | 5 |
| KS315S | 1425 | 1602 | 170 | 80 | +0.030 +0.011 | 85 | 22 | -0.052 | 14 | -110 | 9 | +0.2 | 1425 | 1602 | T 90 | M64x4 | 170 | 130 | 22 | 14 | 46.7 | 5 |
| KS315M | 1425 | 1602 | 170 | 80 | +0.030 +0.011 | 85 | 22 | -0.052 | 14 | -110 | 9 | +0.2 | 1425 | 1602 | T 90 | M64x4 | 170 | 130 | 22 | 14 | 46.7 | 5 |

NOTE:
1.0 ALL DIMENSIONS ARE IN mm EXCEPT OTHERWISE SPECIFIED.
2.0 FOR TOLERANCES OF DEMENSIONS(NOT MENTIONED) REFER TO IS:2102.
3.0 DIMENSIONS MARKED * ARE MAXIMUM VALUES.



Marathon Electric Motors (India) Limited
Paharpur Works, 58 Taratala Road.
Kolkata - 700024 , INDIA

TITLE
OUTLINE DIMENSION DRAWING FOR KS280S & M
KS315S & M MOTOR (CYLINDRICAL & TAPER SHAFT)

| | | | | | |
|---------|----------|----------|--------------|-------------|------|
| DRAWN | S.B | 18.12.07 | PROJECTION | DRAWING NO. | REV. |
| CHECKED | KAUSIK | | SCALE IF ANY | | |
| APPRVD. | R.RANJAN | | N.T.S | CM5906 | 02 |
| 4 of 5 | | | SIGN | DATE | |

| | | | | |
|----------|----------|--|---------|--------|
| 02 | 28.11.11 | IN THE FIGURE 'L1' AND 'LC1' DIM. INCORPORATED | | |
| 01 | 06.06.11 | EARTHING TERMINAL INCORPORATED | | |
| REVISION | DATE | DETAIL OF REVISION | DONE BY | APPRVD |

Model No. KS86P031B40V45XSX

Part No.

| P | P | n | POT | T | U | f | I | RA | RV | CDF | Duty | No. of Starts/Hr. | Frame |
|------|------|-------|------|------|-----|------|-----|-----|-----|-----|------|-------------------|---------|
| [kW] | [hp] | [RPM] | XFLT | [Nm] | (V) | [Hz] | [A] | | | % | | | |
| 86 | 115 | 737 | 3.4 | 3892 | 415 | 50 | 165 | 140 | 370 | 40 | S5 | 150 | KS315M2 |

| | | | |
|----------------------------------|-----------|---|--------------------------|
| Motor type | Slipring | Degree of protection | IP-55 |
| Enclosure | TEFC | Motor weight - approx. | 1475 kg |
| Frame Material | - | Gross wight- approx. | kg |
| Mounting type | IMB3 | Motor GD2 | 26.3 kgm ² |
| Cooling method | IC411 | Vibration level | As per IS:12075 mm/s |
| Voltage variation | +/-10% | Noise level (1meter distance from motor) | As per IS:12065 dB(A) |
| Frequency variation | +/-5% | Starting method | Rotor resistance starter |
| Combined variation | 10% | Coupling | Direct / Gearbox |
| Insulation class | F/F | Direction of rotation | Bi-directional |
| Ambient temperature | 45 | Paint shade | RAL5011 |
| Temperature rise (by resistance) | 75/75 | Type of Terminal Box | Standard |
| Altitude above sea level | Upto 1000 | Terminal box position | Top |
| Efficiency | | Max. Cable size | Refer to TBA drg. |
| Power Factor | | Bearing type | Antifriction |
| Stator Connection | Delta | DE Bearing | 6319 |
| Rotor Connection | Star | NDE Bearing | 6319 |
| | | Type of Lubrication | Grease |

NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.