# PRODUCT INFORMATION PACKET



Model No: KS20P022E10U43XSX Catalog No: AL08D5240MFAFTOAOO

20.0 Kw, Crane Duty Slipring Motors, 3 phase, 8 Pole, 415 V, S3 Duty, KS225MB Frame, 100 CDF,

6 Start/Hr., TEFC





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## Nameplate Specifications

| 27 Hp         | Output KW  | 20.0 kW   |
|---------------|--|---|
| 50 Hz         | Voltage  | 415 V   |
| 51.5 A        | Speed  | 735 rpm   |
| 3             | Duty   | <b>S</b> 3  |
| KS225MB       | Enclosure  | Totally Enclosed Fan Cooled   |
| No Protection | Ambient Temperature  | 45 °C   |
| 6314          | Opp Drive End Bearing Size   | 6314  |
| No            | CSA  | No  |
| No            | IP Code  | 55  |
| 100 %         | Start/Hr   | 6   |
| 45.5 A        | RV   | 265 V   |
| F/F           | Temp. Rise Stator/Rotor  | 75/75 K   |
| Delta         | Rotor Connection   | Star  |
| Standard      |  |   |
|               | 50 Hz 51.5 A 3 KS225MB No Protection 6314 No No 100 % 45.5 A F/F Delta | 50 Hz         Voltage           51.5 A         Speed           3         Duty           KS225MB         Enclosure           No Protection         Ambient Temperature           6314         Opp Drive End Bearing Size           No         CSA           No         IP Code           100 %         Start/Hr           45.5 A         RV           F/F         Temp. Rise Stator/Rotor           Delta         Rotor Connection |

### **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        | 1077.00 mm               |
| Frame Length          | 1077.00 mm      | Shaft Diameter        | 60.000 mm                |
| Shaft Extension       | 140 mm          | Assembly/Box Mounting | Тор                      |
| Rotor GD2             | 5.12 kg·m²      | Pull Out Torque       | 4.6                      |
| Connection Drawing    | DP2401          | Outline Drawing       | CM19820.00               |

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#### DIMENSIONAL DETAILS:-

| - FDAME | NO OF | Н   |      | FIXING DIMENSION |     |     |    | HA   | AC-DIA | HD  | AA  | AB  | BA  | BA1 | BB  |
|---------|-------|-----|------|------------------|-----|-----|----|------|--------|-----|-----|-----|-----|-----|-----|
| FRAME   | POLE  | NOM | TOL  | Α                | В   | C   | K  | 11/4 | AC DIA | пи  | AA  | AD  | DA  | DAI | DD  |
| KS225S  | 4 -12 | 225 | -0.5 | 356              | 286 | 149 | 19 | 27   | 500    | 635 | 108 | 457 | 108 | 108 | 345 |
| KS225M  | 4 -12 | 225 | -0.5 | 356              | 311 | 149 | 19 | 27   | 500    | 635 | 108 | 457 | 108 | 108 | 370 |
| KS250S  | 4 -12 | 250 | -0.5 | 406              | 311 | 168 | 24 | 30   | 500    | 660 | 108 | 483 | 115 | 115 | 382 |
| KS250M  | 4 -12 | 250 | -0.5 | 406              | 349 | 168 | 24 | 30   | 500    | 660 | 108 | 483 | 115 | 115 | 420 |

|        | CYLINDRICAL SHAFT DIMENSIONS DETAILS (BOTH ENDS) |      |     |     |                  |    |     |        | ;)  | TAPER SHAFT DIMENSIONS DETAILS (BOTH) |     |      |      |      |      |       |     |     |    |    |      |   |
|--------|--|------|-----|-----|------------------|----|-----|--------|-----|---------------------------------------|-----|------|------|------|------|-------|-----|-----|----|----|------|---|
| FRAME  | L  | LC   | Ε   | [   | )                | GA | f   | F      | G   | D                                     | G   | E    | L1   | LC1  | D1   | D2    | E1  | E2  | F1 | H1 | G1   | Q |
|        |  |      |     | NOM | TOL              |    | NOM | TOL    | NOM | TOL                                   | NOM | TOL  |      |      |      |       |     |     |    |    |      |   |
| KS225S | 1053   | 1194 | 140 | 60  | +0.030<br>+0.011 | 64 | 18  | -0.052 | 11  | -0.011                                | 7   | +0.2 | 1053 | 1194 | T 60 | M42x3 | 140 | 105 | 16 | 10 | 31.4 | 5 |
| KS225M | 1077   | 1218 | 140 | 60  | +0.030<br>+0.011 | 64 | 18  | -0.052 | 11  | -0.011                                | 7   | +0.2 | 1077 | 1218 | T 60 | M42x3 | 140 | 105 | 16 | 10 | 31.4 | 5 |
| KS250S | 1117   | 1256 | 140 | 65  | +0.030<br>+0.011 | 69 | 18  | -0.052 | 11  | -0.011                                | 7   | +0.2 | 1117 | 1256 | T 70 | M48x3 | 140 | 105 | 18 | 11 | 36.4 | 5 |
| KS250M | 1155   | 1294 | 140 | 65  | +0.030<br>+0.011 | 69 | 18  | -0.052 | 11  | -0.011                                | 7   | +0.2 | 1155 | 1294 | T 70 | M48x3 | 140 | 105 | 18 | 11 | 36.4 | 5 |

REVISION DATE DETAIL OF REVISION DONE BY APPRVD

NOTE:

1.0 ALL DIMENSIONS ARE IN mm EXCEPT OTHERWISE SPECIFIED.

2.0 FOR TOLERANCES OF DIMENSIONS(NOT MENTIONED) REFER TO IS:2102.

3.0 DIMENSIONS MARKED \* ARE MAXIMUM VALUES.

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OUTLINE DIMENSION DRAWING FOR KS225S & M

TLE KS250S & M MOTOR (CYLINDRICAL & TAPER SHAFT)

| DRAWN   | S.B      |      | 27.10.17 | PROJECTION     |   |
|---------|----------|------|----------|----------------|---|
| CHECKED | KAUSIK   |      |          | <del>•</del> □ |   |
| APPRVD. | P.LAHIRI |      |          | SCALE IF ANY   | C |
|         |          | SIGN | DATE     | N.T.S          | ) |

DRAWING NO. REV. CM19820 00



Model No. KS20P022E10U43XSX

Part No.

AL08D5240MFAFTOAOO

| Р    | Р    | n     | РОТ  | Т    | U   | f    | I    | RA   | RV  | CDF | Duty | No. of Starts/Hr.  | Frame   |
|------|------|-------|------|------|-----|------|------|------|-----|-----|------|--------------------|---------|
| [kW] | [hp] | [RPM] | XFLT | [Nm] | (V) | [Hz] | [A]  |      |     | %   |      | NO. Of Starts/III. | Frame   |
| 20   | 27   | 735   | 4.6  | 1117 | 415 | 50   | 51.5 | 45.5 | 265 | 100 | S3   | 6                  | KS225MB |

| Motor type                       | Slipring  | Degree of protection                    | IP-55                    |      |
|----------------------------------|-----------|---|--------------------------|------|
| Enclosure                        | TEFC      | Motor weight - approx.                  | 580                      | kg   |
| Frame Material                   | -         | Gross wight- approx.                    |                          | kg   |
| Mounting type                    | IMB3      | Motor GD2                               | 5.12                     | kgm  |
| Cooling method                   | IC411     | Vibration level<br>Noise level ( 1meter | As per IS:12075          | mm,  |
| Voltage variation                | +/-10%    | 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                   | Тор                      |      |
| Efficiency                       |           | Max. Cable size                         | Refer to TBA drg.        |      |
| Power Factor                     |           | Bearing type                            | Antifriction             |      |
| Stator Connection                | Delta     | DE Bearing                              | 6314                     |      |
| Rotor Connection                 | Star      | NDE Bearing                             | 6314                     |      |
|                                  |           | 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.

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