## **PRODUCT INFORMATION PACKET**

Model No: KS31P525F40V44XSX Catalog No: AL08D5540MFAFTOAOO 31.5 Kw, Crane Duty Slipring Motors , 1 phase, 8 Pole, 415 V, S4 Duty, KS250SB Frame, 40 CDF, 150 Start/Hr., TEFC



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### Nameplate Specifications

| Phase                         | 3                           | Output HP                  | 42.20 Hp      |
|-------------------------------|-----------------------------|----------------------------|---------------|
| Output KW                     | 31.5 kW                     | Voltage                    | 415 V         |
| Speed                         | 733 rpm                     | Frame                      | KS250SB       |
| Enclosure                     | Totally Enclosed Fan Cooled | Thermal Protection         | No Protection |
| Ambient Temperature           | 45 °C                       | Frequency                  | 50 Hz         |
| Current                       | 71.0 A                      | Duty                       | S4            |
| Drive End Bearing Size        | 6315 C3                     | Opp Drive End Bearing Size | 6315 C3       |
| UL                            | No                          | CSA                        | No            |
| CE                            | Νο                          | IP Code                    | 55            |
| CDF                           | 40 %                        | Start/Hr                   | 150           |
| RA                            | 70.5 A                      | RV                         | 270 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              | <b>Bi-Directional</b> | 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        | 1117.00 mm               |
| Frame Length          | 1117.00 mm            | Shaft Diameter        | 65.000 mm                |
| Shaft Extension       | 140 mm                | Assembly/Box Mounting | Тор                      |
| Rotor GD2             | 6.34 kg⋅m²            | Pull Out Torque       | 3.9                      |
| Connection Drawing    | DP2696                | Outline Drawing       | CM19820.00               |

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#### DIMENSIONAL DETAILS:-

|   | FRAME  | NO OF | Н   |      | FIXING DIMENSION |     |     |    | НА | AC-DIA | HD  | AA  | AB  |     |     | BB  |
|---|--------|-------|-----|------|------------------|-----|-----|----|----|--------|-----|-----|-----|-----|-----|-----|
|   |        | POLE  | NOM | TOL  | Α                | В   | С   | К  |    |        | ΗU  | AA  | AB  | BA  | BA1 | DD  |
| ł | KS225S | 4 -12 | 225 | -0.5 | 356              | 286 | 149 | 19 | 27 | 500    | 635 | 108 | 457 | 108 | 108 | 345 |
| ł | KS225M | 4 -12 | 225 | -0.5 | 356              | 311 | 149 | 19 | 27 | 500    | 635 | 108 | 457 | 108 | 108 | 370 |
| ł | KS250S | 4 -12 | 250 | -0.5 | 406              | 311 | 168 | 24 | 30 | 500    | 660 | 108 | 483 | 115 | 115 | 382 |
| ł | 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   | Е   | [   | C                | GA |     | F      | G   | D      | Ģ   | Ε    | L1                                    | LC1  | D1   | D2    | E1  | E2  | F1 | H1 | G1   | Q |
|        |  |      |     | NOM | TOL              |    | NOM | TOL    | NOM | TOL    | NOM | TOL  | 1                                     |      |      |       |     |     |    |    |      |   |
| 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 |

|          |      |           |          |         |        |   |         | narati<br>al Beloit Co                         |      | Paha     |              | lotors (India) Limited<br>3 Taratala Road.<br>NDIA |      |
|----------|------|-----------|----------|---------|--------|---|---------|--|------|----------|--------------|--|------|
|          |      |           |          |         |        |   |         | OUTLINE DIMENSION DRAWING FOR KS225S & M       |      |          |              |  |      |
|          |      |           |          |         |        | 1.0 ALL DIMENSIONS ARE IN mm EXCEPT OTHERWISE SPECIFIED.<br>2.0 FOR TOLERANCES OF DIMENSIONS(NOT MENTIONED) REFER TO IS:2102. | TITLE   | E KS250S & M MOTOR (CYLINDRICAL & TAPER SHAFT) |      |          |              |  | AFT) |
|          |      |           |          |         |        | 3.0 DIMENSIONS MARKED * ARE MAXIMUM VALUES.   |         |  |      |          |              |  | -    |
|          |      |           |          |         |        |   | DRAWN   | S.B  |      | 27.10.17 | PROJECTION   | DRAWING NO.  | REV. |
|          |      |           |          |         |        |   | CHECKED | KAUSIK   |      |          | -⊕∈          |  |      |
|          |      |           |          |         |        |   | APPRVD. | P.LAHIRI                                       |      |          | SCALE IF ANY | CM19820  | 00   |
| REVISION | DATE | DETAIL OF | REVISION | DONE BY | APPRVD |   |         |  | SIGN | DATE     | N.T.S        | 010110020  | 00   |



| Model No. KS31P525F40V44XSX | Part No. | AL08D5540MFAFTOAOO |
|-----------------------------|----------|--------------------|
|-----------------------------|----------|--------------------|

| Р    | Р    | n     | ΡΟΤ  | Т    | U   | f    | Ι   | RA   | RV  | CDF | Duty | No. of Starts/Hr. | Frame   |  |  |
|------|------|-------|------|------|-----|------|-----|------|-----|-----|------|-------------------|---------|--|--|
| [kW] | [hp] | [RPM] | XFLT | [Nm] | (V) | [Hz] | [A] |      |     | %   |      |                   | Frame   |  |  |
| 31.5 | 42.2 | 733   | 3.9  | 1498 | 415 | 50   | 71  | 70.5 | 270 | 40  | S4   | 150               | KS250SB |  |  |

| Motor type                       | Slipring  | Degree of protection                      | IP-55                    |                  |
|----------------------------------|-----------|---|--------------------------|------------------|
| Enclosure                        | TEFC      | Motor weight - approx.                    | 660                      | kg               |
| Frame Material                   | -         | Gross wight- approx.                      |                          | kg               |
| Mounting type                    | IMB3      | Motor GD2                                 | 6.34                     | kgm <sup>2</sup> |
| 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                     | <b>Bi-directional</b>    |                  |
| 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                                | 6315 C3                  |                  |
| Rotor Connection                 | Star      | NDE Bearing                               | 6315 C3                  |                  |
|                                  |           | 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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