

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: KS22P022D60V34XSX

Catalog No: AL08D4930MFAFTOAOO

22.0 Kw, Crane Duty Slipring Motors , 3 phase, 6 Pole, 415 V, S4 Duty, KS225MA2 Frame, 60 CDF,  
150 Start/Hr., TEFC



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### Nameplate Specifications

|                               |                      |                            |                                    |
|-------------------------------|----------------------|----------------------------|------------------------------------|
| Output HP                     | <b>29.50 Hp</b>      | Output KW                  | <b>22.0 kW</b>                     |
| Frequency                     | <b>50 Hz</b>         | Voltage                    | <b>415 V</b>                       |
| Current                       | <b>48.0 A</b>        | Speed                      | <b>980 rpm</b>                     |
| Phase                         | <b>3</b>             | Duty                       | <b>S4</b>                          |
| Frame                         | <b>KS225MA2</b>      | Enclosure                  | <b>Totally Enclosed Fan Cooled</b> |
| Thermal Protection            | <b>No Protection</b> | Ambient Temperature        | <b>45 °C</b>                       |
| Drive End Bearing Size        | <b>6314</b>          | Opp Drive End Bearing Size | <b>6314</b>                        |
| UL                            | <b>No</b>            | CSA                        | <b>No</b>                          |
| CE                            | <b>No</b>            | IP Code                    | <b>55</b>                          |
| CDF                           | <b>60 %</b>          | Start/Hr                   | <b>150</b>                         |
| RA                            | <b>44 A</b>          | RV                         | <b>300 V</b>                       |
| Insulation class Stator/Rotor | <b>F/F</b>           | Temp. Rise Stator/Rotor    | <b>75/75 K</b>                     |
| Stator Connection             | <b>Delta</b>         | Rotor Connection           | <b>Star</b>                        |
| Efficiency Class              | <b>Standard</b>      |                            |                                    |

### Technical Specifications

|                       |                             |                       |                                 |
|-----------------------|-----------------------------|-----------------------|---------------------------------|
| Electrical Type       | <b>Slipring</b>             | Starting Method       | <b>Rotor resistance starter</b> |
| Rotation              | <b>Bi-Directional</b>       | Mounting              | <b>IMB3</b>                     |
| Motor Orientation     | <b>Horizontal</b>           | Drive End Bearing     | <b>Antifriction</b>             |
| Opp Drive End Bearing | <b>Antifriction</b>         | Frame Material        | <b>Cast Iron/Fabricated</b>     |
| Shaft Type            | <b>Single Cylinder</b>      | Overall Length        | <b>1077.00 mm</b>               |
| Frame Length          | <b>1077.00 mm</b>           | Shaft Diameter        | <b>60.000 mm</b>                |
| Shaft Extension       | <b>140 mm</b>               | Assembly/Box Mounting | <b>Top</b>                      |
| Rotor GD2             | <b>3.7 kg-m<sup>2</sup></b> | Pull Out Torque       | <b>3.8</b>                      |
| Connection Drawing    | <b>DP2356</b>               | Outline Drawing       | <b>CM19820.00</b>               |



\$\$\$ - 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  |    |        |     |     |     |     |     |     |
| 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   | E   | D   |                  | GA | F   |        | GD  |        | GE                                    |      | 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 |

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.

**marathon electric**  
A Regal Beloit Company

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TITLE: **OUTLINE DIMENSION DRAWING FOR KS225S & M KS250S & M MOTOR (CYLINDRICAL & TAPER SHAFT)**

DRAWN: S.B. 27.10.17 PROJECTION: DRAWING NO. REV. CM19820 00

CHECKED: KAUSIK SCALE IF ANY: N.T.S.

APPRVD: P.LAHIRI SIGN DATE

| REVISION | DATE | DETAIL OF REVISION | DONE BY | APPRVD |
|----------|------|--------------------|---------|--------|
|          |      |                    |         |        |
|          |      |                    |         |        |
|          |      |                    |         |        |

**Model No.** KS22P022D60V34XSX**Part No.** AL08D4930MFAFTOAOO

| 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] |    |     | %   |      |                   |          |
| 22   | 29.5 | 980   | 3.8  | 821  | 415 | 50   | 48  | 44 | 300 | 60  | S4   | 150               | KS225MA2 |

|                                  |           |   |                          |
|----------------------------------|-----------|---|--------------------------|
| Motor type                       | Slipring  | Degree of protection                      | IP-55                    |
| Enclosure                        | TEFC      | Motor weight - approx.                    | 535 kg                   |
| Frame Material                   | -         | Gross weight- approx.                     | kg                       |
| Mounting type                    | IMB3      | Motor GD2                                 | 3.7 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                     | 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                                | 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.