

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |  |                         |  |                      |          |
|--|--|-------------------------|--|----------------------|----------|
| Customer :   |  |                         |  |                      |          |
| Product line : W22 IE3 Three-Phase   | Product code : 12862482  |                         |  |                      |          |
| Frame : 90S<br>Insulation class : F<br>Duty cycle : S1<br>Ambient temperature : -20°C to +40°C<br>Altitude : 1000 m.a.s.l.<br>Protection degree : IP55<br>Design : N   | Cooling method : IC411 - TEFC<br>Mounting : B3T<br>Rotation <sup>1</sup> : Both (CW and CCW)<br>Starting method : Direct On Line<br>Approx. weight <sup>2</sup> : 19.9 kg<br>Moment of inertia (J) : 0.0055 kgm <sup>2</sup> |                         |  |                      |          |
| Output [kW]  | 1.1  | 1.1                     | 1.1  | 1.1                  |          |
| Poles  | 4  | 4                       | 4  | 4                    |          |
| Frequency [Hz]   | 50   | 50                      | 50   | 60                   |          |
| Rated voltage [V]  | 220/380  | 230/400                 | 240/415  | 460                  |          |
| Rated current [A]  | 4.18/2.42  | 4.16/2.39               | 4.08/2.36  | 2.07                 |          |
| L. R. Amperes [A]  | 26.3/15.2  | 27.4/15.8               | 29.0/16.8  | 16.4                 |          |
| LRC [A]  | 6.3  | 6.6                     | 7.1  | 7.9                  |          |
| No load current [A]  | 2.07/1.20  | 2.43/1.40               | 2.59/1.50  | 1.30                 |          |
| Rated speed [RPM]  | 1435   | 1445                    | 1450   | 1755                 |          |
| Slip [%]   | 4.33   | 3.67                    | 3.33   | 2.50                 |          |
| Rated torque [Nm]  | 7.32   | 7.27                    | 7.25   | 5.99                 |          |
| Locked rotor torque [%]  | 210  | 229                     | 250  | 270                  |          |
| Breakdown torque [%]   | 240  | 270                     | 300  | 340                  |          |
| Service factor   | 1.00   | 1.00                    | 1.00   | 1.00                 |          |
| Temperature rise   | 80 K   | 80 K                    | 80 K   | 80 K                 |          |
| Locked rotor time  | 30s (cold) 17s (hot)   | 28s (cold) 16s (hot)    | 27s (cold) 15s (hot)   | 28s (cold) 16s (hot) |          |
| Noise level <sup>2</sup>   | 49.0 dB(A)   | 49.0 dB(A)              | 49.0 dB(A)   | 51.0 dB(A)           |          |
| Efficiency (%)   | 25%  |                         |  |                      |          |
|  | 50%  | 84.0                    | 83.0   | 82.0                 |          |
|  | 75%  | 84.1                    | 84.1   | 84.1                 |          |
|  | 100%   | 84.1                    | 84.1   | 84.1                 |          |
| Power Factor   | 25%  |                         |  |                      |          |
|  | 50%  | 0.64                    | 0.59   | 0.55                 |          |
|  | 75%  | 0.76                    | 0.72   | 0.69                 |          |
|  | 100%   | 0.82                    | 0.79   | 0.77                 |          |
| Losses at normative operating points (speed;torque), in percentage of rated output power   |  |                         |  |                      |          |
| Losses (%)   | P1 (0,9;1,0)   | 19.1                    | 19.1   | 19.1                 | 15.8     |
|  | P2 (0,5;1,0)   | 18.5                    | 18.5   | 18.5                 | 15.3     |
|  | P3 (0,25;1,0)  | 17.2                    | 17.2   | 17.2                 | 14.2     |
|  | P4 (0,9;0,5)   | 8.8                     | 8.8  | 8.8                  | 7.3      |
|  | P5 (0,5;0,5)   | 6.9                     | 6.9  | 6.9                  | 5.7      |
|  | P6 (0,5;0,25)  | 4.7                     | 4.7  | 4.7                  | 3.9      |
|  | P7 (0,25;0,25)   | 3.7                     | 3.7  | 3.7                  | 3.0      |
| Bearing type   | Drive end : 6205 ZZ  | Non drive end : 6204 ZZ | Foundation loads   |                      |          |
| Sealing  | : V'Ring   | : V'Ring                | Max. traction  | : 484 N              |          |
| Lubrication interval   | : -  | : -                     | Max. compression   | : 679 N              |          |
| Lubricant amount   | : -  | : -                     |  |                      |          |
| Lubricant type   | : Mobil Polyrex EM   |                         |  |                      |          |
| This revision replaces and cancel the previous one, which must be eliminated.<br>(1) Looking the motor from the shaft end.<br>(2) Measured at 1m and with tolerance of +3dB(A).<br>(3) Approximate weight subject to changes after manufacturing process.<br>(4) At 100% of full load. |  |                         | These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in IEC 60034-1. |                      |          |
| Rev.   | Changes Summary  |                         | Performed  | Checked              | Date     |
| Performed by   |  |                         |  |                      |          |
| Checked by   |  |                         |  | Page                 | Revision |
| Date   | 29/08/2023   |                         |  | 1 / 2                |          |

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Customer : \_\_\_\_\_

Notes

| Rev.         | Changes Summary | Performed | Checked | Date     |
|--------------|-----------------|-----------|---------|----------|
| Performed by |                 |           |         |          |
| Checked by   |                 |           | Page    | Revision |
| Date         | 29/08/2023      |           | 2 / 2   |          |