

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



|  |  |                      |                      |                      |     |
|--|--|----------------------|----------------------|----------------------|-----|
| Customer :   |  |                      |                      |                      |     |
| Product line : W22 IE3 Three-Phase   | Product code : 12883080  |                      |                      |                      |     |
| Frame : 132S<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> : 64.7 kg<br>Moment of inertia (J) : 0.0491 kgm <sup>2</sup> |                      |                      |                      |     |
| Output [kW]  | 5.5  | 5.5                  | 5.5                  | 5.5                  |     |
| Poles  | 4  | 4                    | 4                    | 4                    |     |
| Frequency [Hz]   | 50   | 50                   | 50                   | 60                   |     |
| Rated voltage [V]  | 220/380  | 230/400              | 240/415              | 460                  |     |
| Rated current [A]  | 18.7/10.8  | 18.3/10.5            | 18.0/10.4            | 9.18                 |     |
| L. R. Amperes [A]  | 140/81.0   | 152/87.2             | 158/91.5             | 82.6                 |     |
| LRC [A]  | 7.5  | 8.3                  | 8.8                  | 9.0                  |     |
| No load current [A]  | 8.12/4.70  | 9.04/5.20            | 9.68/5.60            | 4.70                 |     |
| Rated speed [RPM]  | 1460   | 1465                 | 1470                 | 1770                 |     |
| Slip [%]   | 2.67   | 2.33                 | 2.00                 | 1.67                 |     |
| Rated torque [Nm]  | 36.0   | 35.9                 | 35.7                 | 29.7                 |     |
| Locked rotor torque [%]  | 210  | 229                  | 250                  | 250                  |     |
| Breakdown torque [%]   | 300  | 330                  | 360                  | 390                  |     |
| Service factor   | 1.00   | 1.00                 | 1.00                 | 1.00                 |     |
| Temperature rise   | 80 K   | 80 K                 | 80 K                 | 80 K                 |     |
| Locked rotor time  | 25s (cold) 14s (hot)   | 21s (cold) 12s (hot) | 21s (cold) 12s (hot) | 28s (cold) 16s (hot) |     |
| Noise level <sup>2</sup>   | 56.0 dB(A)   | 56.0 dB(A)           | 56.0 dB(A)           | 58.0 dB(A)           |     |
| Efficiency (%)   | 25%  |                      |                      |                      |     |
|  | 50%  | 89.0                 | 89.0                 | 89.4                 |     |
|  | 75%  | 89.6                 | 89.6                 | 89.6                 |     |
|  | 100%   | 89.6                 | 89.7                 | 89.8                 |     |
| Power Factor   | 25%  |                      |                      |                      |     |
|  | 50%  | 0.71                 | 0.66                 | 0.63                 |     |
|  | 75%  | 0.81                 | 0.78                 | 0.75                 |     |
|  | 100%   | 0.86                 | 0.84                 | 0.82                 |     |
| Losses at normative operating points (speed;torque), in percentage of rated output power   |  |                      |                      |                      |     |
| Losses (%)   | P1 (0,9;1,0)   | 11.4                 | 11.2                 | 11.1                 | 8.9 |
|  | P2 (0,5;1,0)   | 10.1                 | 10.0                 | 9.9                  | 7.9 |
|  | P3 (0,25;1,0)  | 9.8                  | 9.7                  | 9.6                  | 7.7 |
|  | P4 (0,9;0,5)   | 5.3                  | 5.2                  | 5.2                  | 4.1 |
|  | P5 (0,5;0,5)   | 3.9                  | 3.8                  | 3.8                  | 3.0 |
|  | P6 (0,5;0,25)  | 2.5                  | 2.5                  | 2.5                  | 2.0 |
|  | P7 (0,25;0,25)   | 1.8                  | 1.8                  | 1.8                  | 1.4 |
| Bearing type : Drive end 6308 ZZ Non drive end 6207 ZZ<br>Sealing : V'Ring V'Ring<br>Lubrication interval : - -<br>Lubricant amount : - -<br>Lubricant type : Mobil Polyrex EM   | Foundation loads<br>Max. traction : 1827 N<br>Max. compression : 2461 N  |                      |                      |                      |     |
| 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   |  |                      |                      |                      |     |
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Customer : \_\_\_\_\_

Notes

| Rev.         | Changes Summary | Performed | Checked | Date     |
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Customer : \_\_\_\_\_

### Thermal protection

| ID | Application | Type                 | Quantity  | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1  | Winding     | Thermistor - 2 wires | 1 x Phase | 155 °C              |

| Rev.         | Changes Summary | Performed     | Checked | Date     |
|--------------|-----------------|---------------|---------|----------|
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