

**3 PHASE ASYNCHRON MOTOR TEST REPORT ACCORDING TO IEC 60034-2-1****ELECTRIC MOTOR PLANT**

NAMEPLATE VALUES

| | | | | | |
|----------------------|-----------|---------------------|---------|------------------------------|--------|
| Motor Type | Q3H112M4D | Voltage | 400/690 | Nominal limit for IE3 | 88,60% |
| Serial Number | | Current | 8,3/4,8 | Duty Type | S1 |
| Power | 4 kW | RPM | 1450 | Insulation Class | F |
| Frequency | 50Hz | Power Factor | 0,79 | IC | 41 |

NOLOAD TEST

TEST NUM: 16888
DATE: 20.10.2016

| U(V) | U ² | Im(A) | Pin(W) | Pcu(W) | Pfe+Pstv | P fe(W) | P stv(W) | R() |
|------|----------------|-------|--------|--------|----------|---------|----------|-------|
| 172 | 29645 | 1,45 | 47 | 5,4 | 41,1 | 28,0 | 13,1 | 2,575 |
| 199 | 39754 | 1,67 | 55 | 7,2 | 48,2 | 35,1 | 13,1 | 2,575 |
| 240 | 57751 | 2,06 | 72 | 11,0 | 61,4 | 48,3 | 13,1 | 2,575 |
| 301 | 90853 | 2,73 | 105 | 19,1 | 85,8 | 72,8 | 13,1 | 2,575 |
| 361 | 130191 | 3,66 | 160 | 34,5 | 125,0 | 112,0 | 13,1 | 2,575 |
| 380 | 144399 | 4,12 | 184 | 43,7 | 140,0 | 127,0 | 13,1 | 2,575 |
| 401 | 160830 | 4,72 | 221 | 57,4 | 163,3 | 150,2 | 13,1 | 2,575 |
| 442 | 195063 | 6,55 | 324 | 110,6 | 213,8 | 200,7 | 13,1 | 2,575 |

PERFORMANCE

Amb.Temp 20 °C Δt : 53 K

| | | | | | | | |
|-------------------|-----------------|-------|-------|-------|-------|-------|-------|
| Voltage | U(V) | 400 | 400 | 400 | 400 | 400 | 400 |
| Phase current | Im(A) | 5,00 | 5,74 | 6,91 | 8,30 | 9,24 | 9,96 |
| Input Power | Pin(W) | 1288 | 2305 | 3430 | 4536 | 5245 | 5771 |
| Resistance | R() | 2,575 | 2,575 | 2,575 | 2,575 | 2,575 | 2,575 |
| Copper Losses | Pcu(W) | 65 | 85 | 123 | 177 | 220 | 256 |
| Iron Losses | Pfe(W) | 127 | 127 | 127 | 127 | 127 | 127 |
| | Pcu+Pfe(W) | 191 | 212 | 250 | 304 | 347 | 383 |
| | Pin-Pcu-Pfe(W) | 1097 | 2093 | 3180 | 4231 | 4898 | 5388 |
| slip | s(%) | 0,87 | 1,53 | 2,47 | 3,33 | 3,80 | 4,33 |
| Rotor Losses | Pr(W) | 10 | 32 | 78 | 141 | 186 | 233 |
| Friction Losses | Pstv(W) | 13 | 13 | 13 | 13 | 13 | 13 |
| Stray load losses | PLL(W) | 2,9 | 11,0 | 25,5 | 45,4 | 60,7 | 73,1 |
| | Pr+Pstv+PLL (W) | 25 | 56 | 117 | 200 | 260 | 320 |
| Output Power | Pout (W) | 1072 | 2037 | 3063 | 4032 | 4638 | 5069 |
| Apparent Power | S(VA) | 3467 | 3977 | 4785 | 5749 | 6402 | 6903 |
| Power Factor | COSphi | 0,372 | 0,580 | 0,717 | 0,789 | 0,819 | 0,836 |
| Efficiency | Eta(%) | 83,2 | 88,4 | 89,3 | 88,9 | 88,4 | 87,8 |
| Torque | M(Nm) | 6,7 | 13,0 | 19,8 | 26,4 | 30,5 | 33,5 |
| Speed | n(U/min) | 1487 | 1477 | 1463 | 1450 | 1443 | 1435 |
| | Pmech(W) | 1036 | 2007 | 3033 | 4006 | 4611 | 5031 |

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