Table 3-4 1FT6034 natural cooling

| 1FT6034 | | | | |
|---|---|---|---|---|
| ***Technical data*** | ***Code*** | ***Units*** | ***-4AK71*** | |
| Engineering data | | | | |
| Rated speed | $n_N$ | rpm | 6000 | |
| Number of poles | 2p | | 4 | |
| Rated torque (100 K) | $M_{N(100\ K)}$ | Nm | 1.4 | |
| Rated current (100K) | $I_N$ | A | 2.1 | |
| Stall torque (60K) | $M_{0(60\ K)}$ | Nm | 1.65 | |
| Stall torque (100K) | $M_{0(100\ K)}$ | Nm | 2 | |
| Stall current (60K) | $I_{0(60\ K)}$ | A | 2.1 | |
| Stall current (100K) | $I_{0(100\ K)}$ | A | 2.6 | |
| Moment of inertia (with brake) | $J_{mot}$ | $10^{-4}$ kgm$^2$ | 1.22 | |
| Moment of inertia (without brake) | $J_{mot}$ | $10^{-4}$ kgm$^2$ | 1.1 | |
| Optimum operating point | | | | |
| Optimum speed | $n_{opt}$ | rpm | 6000 | |
| Optimum power | $P_{opt}$ | kW | 0.88 | |
| Limiting data | | | | |
| Max. permissible speed (mech.) | $n_{max}$ | rpm | 9700 | |
| Maximum torque | $M_{max}$ | Nm | 7.7 | |
| Maximum current | $I_{max}$ | A | 10.5 | |
| Physical constants | | | | |
| Torque constant | $k_T$ | Nm/A | 0.75 | |
| Voltage constant | $k_E$ | V/1000 rpm | 49 | |
| Winding resistance at 20 °C | $R_{ph}$ | Ohm | 2.6 | |
| Rotating field inductance | $L_D$ | mH | 10 | |
| Electrical time constant | $T_{el}$ | ms | 3.8 | |
| Shaft torsional stiffness | $c_t$ | Nm/rad | 7500 | |
| Mechanical time constant | $T_{mech}$ | ms | 1.5 | |
| Thermal time constant | $T_{th}$ | min | 20 | |
| Weight with brake | m | kg | 4.8 | |
| Weight without brake | m | kg | 4.4 | |

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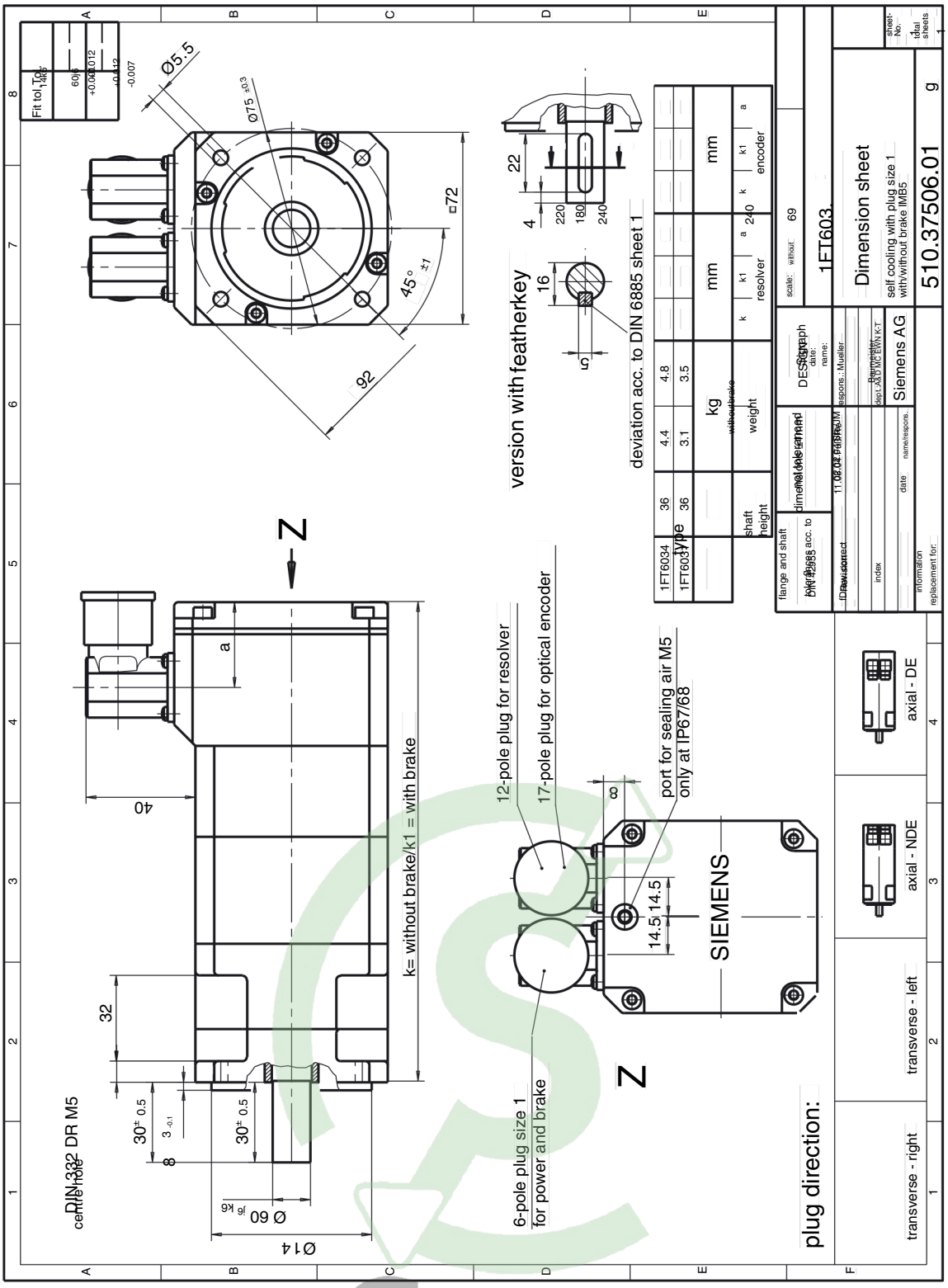


Fig. 6-2 1FT603 naturally cooled with connector, Size 1

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