IM-2-23-PA0 T-N curve Electrical specifications Field weakening & Winding code: PA Symbol Unit Water cooling Continuous torque Nm49.8 IM-2-23-PA0 I_c A_{rms} 10.2 Continuous current DC BUS=600 V_{DC} Ts 42 Stall torque NmTorque(Nm) Power(kW) Stall current I_s 8.2 A_{rms} 80 T_p 76 Peak torque(for 1sec.) Nm 25.5 Peak current(for 1sec.) I_p A_{rms} 70 Nm/A_{rms} Kt 5.54 Torque constant 60 6 T_e 7.3 Electrical time constant ms Resistance (line to line at 25°C) R_{25} 0 3.5 50 5 25.5 / 37.49 Inductance (line to line) Ld / Lq mΗ 40 22 4 Number of poles 2p Back emf constant (line to line) K_v V_{rms}/rad/s 3.2 30 3 K_{m} 2.41 Motor constant (at 25°C) Nm/√W R_{th} K/W 0.192 Thermal resistance 20 2 PTC Thermal sensor SNM100+SNM130+Pt1000 Max. DC BUS V_{DC} 750 0 n 0.0051 J Inertia of rotor kgm² 1000 2000 3000 4000 5000 6000 T_{th} Speed(rpm) Thermal time constant 230 s Po W Tp Peak torque Max. continuous power dissipation 770 Max. peak power dissipation P_p W 4818 Max. speed(at 600VDC) 5000 rpm Continuous torque with Tc_wc water cooling Based speed(at 600VDC) 926 rpm Rated speed(at 600VDC) 5000 rpm Continuous torque with water cooling and field weakening Tc fw Mechanical specifications Field weakening & Symbol Unit Water cooling M, Mass of rotor kg 2.74 - • Power Power @ Tc_fw Ms 6.5 Mass of stator kg 80 Height of stator $H_{\mathbb{S}}$ mm Height of rotor H_R 51 mm 15 Н ength of rotor centring fit mm Κ 5 Water temperture difference for Po Δθ Minimum water flow I/min 2.3 q 1 Max. pressure drop △p bar Thermal sensor White Brown Green Red Blue Yellow PCD 185 (Both sides) 12.5 PH W PH W 9 max PH U PH V Pt1000 (8) PH U PH U H_R±0.2 SNM130 SNM100 General tolerance mm Nominal dimension Tolerance Motor wire table 6-M6x1.0Px12DP Color or wire no Signal U/L1 PH U Seal (O-ring) position V/L2 PH V Section X-X W/L3 PH W

Except dimensions, all the specifications in the table are in ±10% of tolerance

This drawing is only for reference, detail dimensions please refer to approval drawing.

Date: 2020/10/23

Version: 2.00

GND

Green/Yellow