General characteristics

Motor characteristics at (1) 24 Vdc

At no load - A
- Speed (rpm) 4 000 ±10%
- Current A 0.34
- EMC (55/22) class B
- Life (h) 20 000

At max efficiency - B
- Speed (rpm) 3 660 ±10%
- Torque (Nm) 1.75
- Power output W 69
- Current A 3.5
- Efficiency % 82
- EMC (55/22) class B
- Life (h) 10 000

At nominal load - C
- Speed (rpm) 3 430 ±10%
- Torque (Nm) 2.90
- Power output W 104
- Current A 5.4
- Efficiency % 80
- EMC (55/22) class B
- Life (h) 2 000

Others
- Starting torque (Nm) 2 000
- Starting current A 35.5
- Max. output power W 209

Motor parameters (1)
- Allowed speed (rpm) 10 000 max
- Rated torque (Nm) 290
- Electrical time constant ms 1.1
- Mechanical time constant ms 13
- Factor torque / speed mNmm/rpm 0.50877
- Dry friction (Nm) 10
- Viscous friction (NmNrpm) 2.4
- Rotor inertia gcm² 650
- Thermal Resistance °C/W 4
- Slator poles 2
- Collector blades 12
- Cogging torque (Nm) 9
- Weight (g) 1 600
- Noise level dBA 35

Winding parameters (1)
- Torque constant mNmm/A 57.3 ±10%
- Constant electromotive force Volts/(rad/s) 0.057 ±10%
- Resistance Ohms 0.7 ±10%
- Inductance mH 0.73
- Start voltage Volts 0.6
- Current demagnetization (magnets at 150 °C) (A) 120

Generic parameters
- Motor for direct current supply
- EMC (55/22) class
- Output shaft with ball bearings
- Max. Radial force (20mm from front face) N 150
- Max. axial force N 100
- Temperature range °C -30 / 70
- Storage temperature °C -40 / 100
- Dielectric (1mm 2mA 50Hz) Vdc 500
- Motor insulation class
- Enamled wire insulation class F (150°C)
- Salt spray severity 2
- Degree of protection IP

EMC
- Electrostatic Discharge (2000V)
- Electrical fast transient / burst test (2000V)
- Surge test (2000V)
- Radiated emission class B

Approvals
- Designed in accordance with UL
- Designed for medical machines using the standard EN60601-1
- ROHS 2002/95/CE
- EC

Curves

Series 89 890

Specifications subject to change without notice. Updated February 29, 2012.