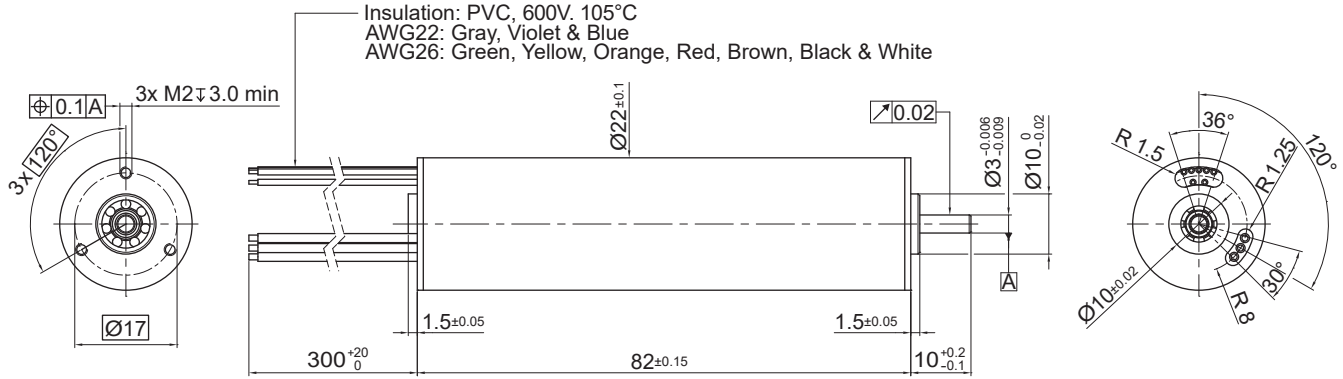


22ECT82 Ultra EC™

Ø 22 mm • 4-pole • 104 W



Dimensions in mm

| Electrical Data | Symbol | 22ECT82 10B-xxx.01 | | | Unit |
|--|-------------|--------------------|-------------|--------------|--|
| | | 6 | 9 | 15 | |
| 1 Nominal Voltage | U_N | 24 | 24 | 24 | Volt |
| 2 Optimization Direction | - | Symmetrical | Symmetrical | Symmetrical | - |
| 3 No Load Speed | n_0 | 18,550 | 12,390 | 7,800 | rpm |
| 4 Typical No Load Current | I_0 | 435 | 250 | 130 | mA |
| 5 Max. Continuous Mechanical Power (@25°C) | P_{max} | 104 | 104 | 104 | W |
| 6 Max. Continuous Current | $I_{e,max}$ | 7.9 | 5.3 | 3.2 | A |
| 7 Max. Continuous Torque | $M_{e,max}$ | 98.4 (13.94) | 98.8 (14) | 98.3 (13.92) | mNm (oz-in) |
| 8 Back EMF Constant | k_E | 1.30 | 1.96 | 3.22 | V/1000 rpm |
| 9 Torque Constant | k_M | 12.4 | 18.7 | 30.8 | mNm/A |
| 10 Motor Regulation | R/k^2 | 0.8 | 0.8 | 0.8 | 10 ³ /Nms |
| 11 Motor Regulation | $k/R^{1/2}$ | 35.8 (5.1) | 35.9 (5.1) | 36 (5.1) | mNm/W ^{1/2} (oz-in/W ^{1/2}) |
| 12 Internal Resistance - phase to phase | R_l | 0.13 | 0.27 | 0.73 | ohms |
| 13 Line to Line Resistance at Connectors | R_L | 0.16 | 0.30 | 0.76 | ohms |
| 14 Inductance Phase to Phase | L | 0.02 | 0.03 | 0.09 | mH |
| 15 Mechanical Time Constant | τ_m | 1.1 | 1.0 | 1.0 | ms |
| 16 Electrical Time Constant | τ_e | 0.12 | 0.13 | 0.13 | ms |

| General Data | | | | | |
|---|-----------|---------------------------|--|--|-------------------|
| 17 Maximum Motor Speed | n_{max} | 20,000 | | | rpm |
| 18 Ambient Working Temperature Range | - | -30 to +100 (-22 to +212) | | | °C (°F) |
| 19 Ambient Storage Temperature Range | - | -40 to +100 (-40 to +212) | | | °C (°F) |
| 20 Ball Bearings Preload | - | 6.8 | | | N |
| 21 Axial Static Force w/o Shaft Support (max) | - | 45.0 | | | N |
| 22 Maximum Winding Temperature | - | 125 (257) | | | °C (°F) |
| 23 Thermal Resistance | R_{th} | 1.4 / 8.2 | | | °C/W |
| 24 Thermal Time Constant | τ_w | 1,140 | | | s |
| 25 Weight | - | 174 (6.14) | | | g (oz) |
| 26 Rotor Inertia | J | 13.17 | | | g-cm ² |
| 27 Hall Sensor Electrical Phasing* | - | 120 | | | Electrical ° |

*Also available without Hall sensors

| Wire | Description |
|--------|---------------|
| Gray | Phase 1 |
| Violet | Phase 2 |
| Blue | Phase 3 |
| Green | 3.5 to 24V DC |
| Yellow | GND |
| Orange | Sensor 1 |
| Red | Sensor 2 |
| Brown | Sensor 3 |
| Black | NTC 10 kohm |
| White | NTC 10 kohm |

with hall effect sensor

