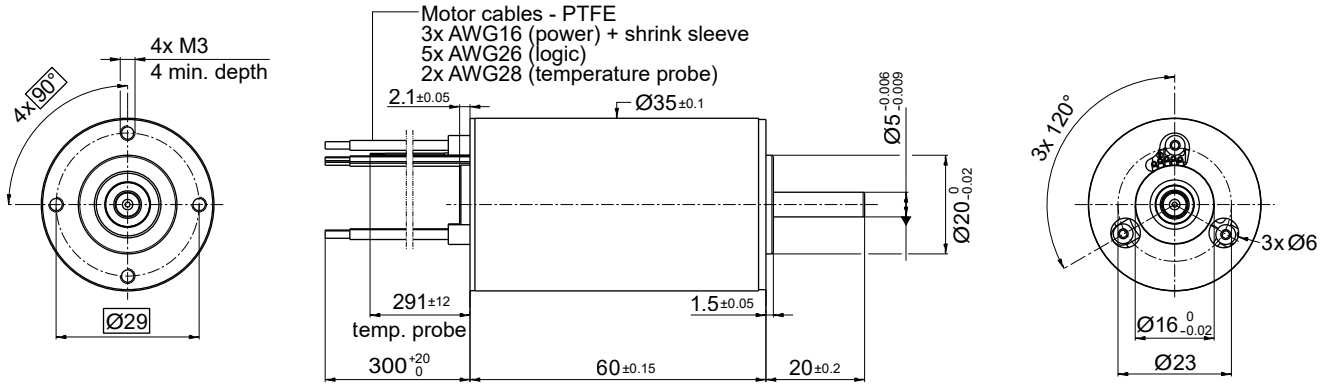


35ECS60 Ultra EC™

Ø 35 mm • 2-pole • 262 W



Dimensions in mm.

| Electrical Data | Symbol | 35ECS60 10B-xxx.01 | | | | Unit |
|--|-------------|--------------------|--------------|--------------|--------------|--|
| | | 8 | 10 | 15 | 20 | |
| 1 Nominal Voltage | U_N | 20 | 24 | 36 | 48 | Volt |
| 2 Optimization Direction | - | Symmetrical | Symmetrical | Symmetrical | Symmetrical | - |
| 3 No Load Speed | n_0 | 38,900 | 38,500 | 39,000 | 39,300 | rpm |
| 4 Typical No Load Current | I_0 | 1000 | 900 | 500 | 360 | mA |
| 5 Max. Continuous Mechanical Power (@25°C) | P_{max} | 262 | 262 | 262 | 262 | W |
| 6 Max. Continuous Current | $I_{e,max}$ | 25.3 | 20.1 | 13.2 | 9.8 | A |
| 7 Max. Continuous Torque | $M_{e,max}$ | 120.6 (17.1) | 120.6 (17.1) | 117.9 (16.7) | 115.8 (16.4) | mNm (oz-in) |
| 8 Back EMF Constant | k_E | 0.51 | 0.63 | 0.94 | 1.24 | V/1000 rpm |
| 9 Torque Constant | k_M | 4.90 | 6.01 | 8.94 | 11.83 | mNm/A |
| 10 Motor Regulation | R/k^2 | 0.832 | 0.886 | 0.928 | 0.961 | $10^3/Nms$ |
| 11 Motor Regulation | $k/R^{1/2}$ | 34.6 (4.9) | 33.6 (4.76) | 32.8 (4.65) | 32.3 (4.57) | mNm/W ^{1/2} (oz-in/W ^{1/2}) |
| 12 Internal Resistance - phase to phase | R_l | 0.02 | 0.032 | 0.074 | 0.135 | ohms |
| 13 Line to Line Resistance at Connectors | R_L | 0.026 | 0.044 | 0.086 | 0.147 | ohms |
| 14 Inductance Phase to Phase | L | 0.011 | 0.017 | 0.037 | 0.064 | mH |
| 15 Mechanical Time Constant | τ_m | 1.6 | 1.8 | 1.9 | 2.0 | ms |
| 16 Electrical Time Constant | τ_e | 0.6 | 0.5 | 0.5 | 0.5 | ms |

| General Data | | | | |
|---|-----------|--|-----------------------------|-------------------|
| 17 Maximum Motor Speed | n_{max} | | 40,000 | 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 | - | | 9 | N |
| 21 Axial Static Force w/o Shaft Support (max) | - | | 134 | N |
| 22 Maximum Winding Temperature | - | | 150 (302) | °C (°F) |
| 23 Thermal Resistance | R_{th} | | 0.8/5.7 | °C/W |
| 24 Thermal Time Constant | τ_w | | 1,618 | s |
| 25 Weight | - | | 315 (11.11) | g (oz) |
| 26 Rotor Inertia | J | | 20.4 | g-cm ² |
| 27 Hall Sensor Electrical Phasing | - | | 120 | Electrical ° |

*Available without hall sensor

| Wire | Description |
|--------|-------------|
| Gray | Phase 1 |
| Violet | Phase 2 |
| Blue | Phase 3 |
| Green | 4 to 24V DC |
| Yellow | GND |
| Orange | Sensor 1 |
| Red | Sensor 2 |
| Brown | Sensor 3 |
| White | NTC 10 kohm |
| White | NTC 10 kohm |

with hall effect sensor

