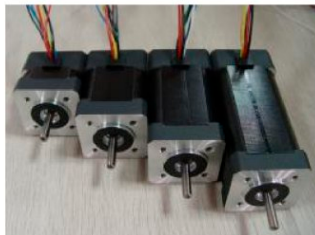
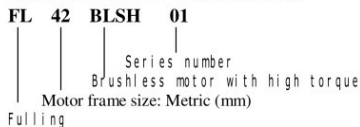


Brushless DC Motor

FL42BLSH SERIES

u INDICATIONS OF THE MODELS



u GENERAL SPECIFICATIONS

| | |
|-----------------------|-----------------------------|
| Winding type | Delta |
| Hall effect angle | 120 degree electrical angle |
| Shaft run out | 0.025mm |
| Radial play | 0.02mm@450g |
| End play | 0.08mm@450g |
| Max. radial force | 28N @ 20mm from the flange |
| Max. axial force | 10N |
| Insulation class | Class B |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100M Ω Min., 500VDC |

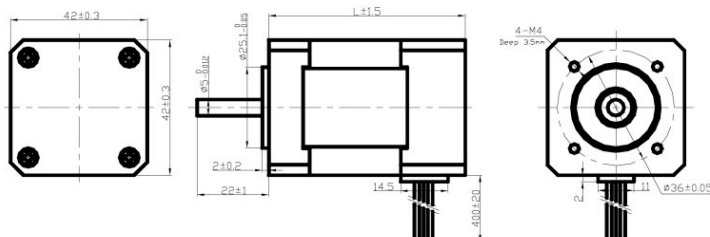
ELECTRIC CONNECTION

| Lead No. | Lead Color | Lead Gauge | FUNCTION | DESCRIPTION |
|----------|------------|--------------|----------|---------------------------------|
| 1 | Red | UL1430 26AWG | Vcc | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Blue | | HALL A | |
| 3 | Green | | HALL B | |
| 4 | White | | HALL C | |
| 5 | Black | UL1430 20AWG | GND | GROUND FOR HALL SENSORS |
| 6 | Yellow | | PHASE A | |
| 7 | Red | | PHASE B | |
| 8 | Black | | PHASE C | |

ELECTRICAL SPECIFICATIONS

| Model | | FL42BLSH01 | FL42BLSH02 | FL42BLSH03 | FL42BLSH04 |
|-------------------------|-------------------|------------|------------|------------|------------|
| Number of poles | | 10 | | | |
| Number of phase | | 3 | | | |
| Rated voltage | VDC | 24 | | | |
| Rated speed | RPM | 3000 | | | |
| Continuous stall torque | N.m | 0.084 | 0.19 | 0.31 | 0.43 |
| Rated torque | N.m | 0.07 | 0.16 | 0.26 | 0.36 |
| Rated power | W | 22 | 50 | 81 | 113 |
| Peak torque | N.m | 0.3 | 0.65 | 1.1 | 1.44 |
| Peak current | A | 6.2 | 11.8 | 16.8 | 25.6 |
| Resistance | ohms | 2.6 | 1.1 | 0.7 | 0.48 |
| Inductance | mH | 1.83 | 0.96 | 0.58 | 0.44 |
| Torque constant | Nm/A | 0.054 | 0.054 | 0.054 | 0.054 |
| Back E.M.F | Vrms/Krpm | 4.06 | 3.44 | 3.51 | 4.2 |
| Rotor inertia | g.cm ² | 48 | 101 | 154 | 207 |
| Body length (L) | mm | 40.3 | 60.3 | 80.3 | 100.3 |
| Mass | Kg | 0.26 | 0.46 | 0.65 | 0.85 |

u DIMENSIONS:



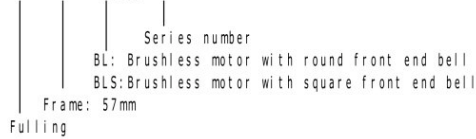
Brushless DC Motor

C4

FL57BL(S) SERIES

u INDICATIONS OF THE MODELS

FL 57 BL(S) 01



u GENERAL SPECIFICATIONS

| | |
|-----------------------|-----------------------------|
| Winding type | Delta |
| Hall effect angle | 120 degree electrical angle |
| Shaft run out | 0.025mm |
| Radial play | 0.025mm@460g |
| End play | 0.025mm@4000g |
| Max. radial force | 75N @ 20mm from the flange |
| Max. axial force | 15N |
| Insulation class | Class B |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ Min., 500VDC |

ELECTRIC CONNECTION

| Lead No. | Lead Color | Lead Gauge | FUNCTION | DESCRIPTION |
|----------|------------|--------------|----------|---------------------------------|
| 1 | Red | UL1430 26AWG | Vcc | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Blue | | HALL A | |
| 3 | Green | | HALL B | |
| 4 | White | | HALL C | |
| 5 | Black | | GND | GROUND FOR HALL SENSORS |
| 6 | Yellow | UL1430 28AWG | PHASE A | |
| 7 | Red | | PHASE B | |
| 8 | Black | | PHASE C | |

ELECTRICAL SPECIFICATIONS

Model **FL57BL(S)005 FL57BL(S)01 FL57BL(S)02 FL57BL(S)03 FL57BL(S)04**

| Number of poles | 4 | | | | | |
|---------------------------------|-------|------|-------|-------|-------|--|
| Number of phase | 3 | | | | | |
| Rated voltage VDC | 36 | | | | | |
| Rated speed RPM | 4400 | 4000 | 4300 | 4000 | 4000 | |
| Rated torque N.m | 0.055 | 0.11 | 0.22 | 0.33 | 0.44 | |
| Rated power W | 25 | 46 | 99 | 138 | 184 | |
| Peak torque N.m | 0.16 | 0.39 | 0.7 | 1 | 1.27 | |
| Peak current A | 3.5 | 6.8 | 11.5 | 16.5 | 20.5 | |
| Line to line resistance ohms | 4.3 | 1.63 | 0.64 | 0.45 | 0.33 | |
| Line to line inductance mH | 8.6 | 4.39 | 2 | 1.5 | 0.95 | |
| Torque constant Nm/A | 0.052 | 0.06 | 0.060 | 0.063 | 0.063 | |
| Back E.M.F V/KRPM | 3.8 | 4.5 | 4.45 | 4.8 | 4.6 | |
| Rotor inertia g.cm ² | 30 | 75 | 119 | 173 | 230 | |
| Body length(L) mm | 43.6 | 53.6 | 73.6 | 93.6 | 113.6 | |
| Weight Kg | 0.33 | 0.44 | 0.72 | 0.95 | 1.2 | |