

EC flat



| Motor Data | | CE3715 | CE3717 | CE3712 | CE3718 | | | | |
|----------------------------------|---|------------------|--------|--------|--------|-------|--|--|--|
| Values at nominal voltage | | | | | | | | | |
| 1 | Nominal voltage | V | 18 | 24 | 36 | 48 | | | |
| 2 | No load speed | rpm | 5740 | 6250 | 6060 | 5740 | | | |
| 3 | No load current | mA | 277 | 238 | 151 | 104 | | | |
| 4 | Nominal speed | rpm | 4690 | 5170 | 5010 | 4710 | | | |
| 5 | Nominal torque | mNm | 112 | 91.1 | 90.9 | 102 | | | |
| 6 | Nominal current (max. continuous current) | A | 3.68 | 2.52 | 1.63 | 1.27 | | | |
| 7 | Stall torque ¹ | mNm | 1190 | 918 | 895 | 1040 | | | |
| 8 | Stall current | A | 40 | 26 | 16 | 13 | | | |
| 9 | Max. efficiency | % | 84.4 | 82 | 81.9 | 83.4 | | | |
| Characteristics | | | | | | | | | |
| 10 | Terminal resistance phase to phase | Ω | 0.447 | 0.942 | 2.240 | 3.610 | | | |
| 11 | Terminal inductance phase to phase | mH | 0.243 | 0.363 | 0.868 | 1.730 | | | |
| 12 | Torque constant | mNm/A | 29.5 | 36 | 55.7 | 78.6 | | | |
| 13 | Speed constant | rpm/V | 324 | 265 | 171 | 121 | | | |
| 14 | Speed/torque gradient | rpm/mNm | 4.910 | 6.920 | 6.890 | 5.580 | | | |
| 15 | Mechanical time constant | ms | 6.940 | 9.790 | 9.750 | 7.890 | | | |
| 16 | Rotor inertia | gcm ² | 135 | 135 | 135 | 135 | | | |

| Values listed in the table are nominal. | | Gear | Sensor | Motor Control |
|---|--------------------------------|-------------|------------------|-------------------------------|
| Connection V1 | V2 (sensors, AWG 24) | | | |
| Pin 1 | Hall sensor 1* | 420_GP 32 A | 492_Encoder MILE | 532_ESCON Module 24/2 |
| Pin 2 | Hall sensor 2* | 424_GP 32 C | | 533_ESCON 36/3 EC |
| Pin 3 | V _{Hall} 3.5...24 VDC | 433_GP 42 C | | 533_ESCON Module 50/5 |
| Pin 4 | Motor winding 3 | 435_GS 45 A | | 535_ESCON 50/5 |
| Pin 5 | Hall sensor 3* | | | 537_DEC Module 24/2 |
| Pin 6 | GND | | | 537-DEC Module 50/5 |
| Pin 7 | Motor winding 1 | | | 541_EPOS4 Micro 24/5 |
| Pin 8 | Motor winding 2 | | | 542_EPOS4 Module 24/1.5 |
| | V2 (motor, AWG 22) | | | 542_EPOS4 Module 50/5 |
| Pin 1 | Motor winding 1 | | | 543_EPOS4 Compact 24/5 3-axes |
| Pin 2 | Motor winding 2 | | | 544_EPOS4 Compact 24/1.5 |
| Pin 3 | Motor winding 3 | | | 545_EPOS4 Compact 50/5 |
| Pin 4 | N.C. | | | 547_EPOS4 50/5 |
| *Internal pull-up (7 ...13 kΩ) on V _{Hall} | | | | 548_EPOS4 Disk 60/8 |
| Wiring diagram for Hall sensors see p. 65 | | | | |