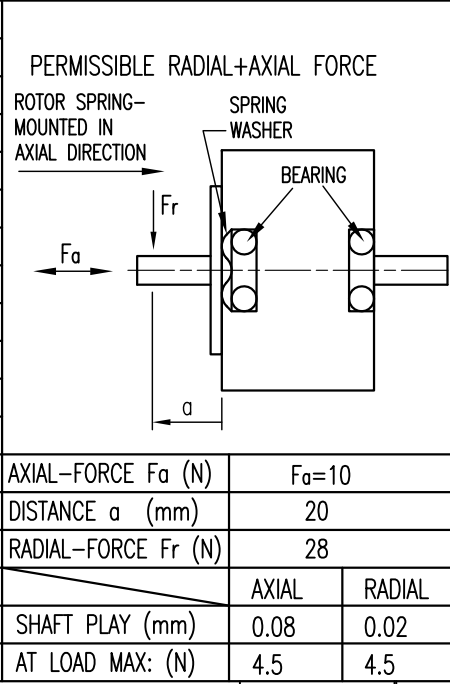


| SPECIFICATION  | CONNECTION | DELTA   |
|--|------------|---|
| NO. OF POL./PHASE  |            | 8/3   |
| VOLTAGE RATED (VDC)  |            | 48  |
| CURRENT NO LOAD/RATED/PEAK (AMP)   |            | 0.4/4.63/13.89                                |
| RESISTANCE/PHASE TO PHASE (Ohms) @25°C   |            | 0.58±15%                                      |
| INDUCTANCE/PHASE TO PHASE (mH) @1KHz   |            | 1.21±20%                                      |
| TORQUE RATED/PEAK (Nm) [lb-in]   |            | 0.25/0.75 [2.213/6.638]                       |
| TORQUE/VOLTAGE CONSTANT (Nm/A)/(Vrms/KRPM)   |            | 0.054/4.4=BACK EMF                            |
| POWER RATED/PEAK (W)   |            | 160/650                                       |
| SPEED RATED/NO LOAD (U/min)  |            | 6000/8500                                     |
| ROTOR INERTIA (Kg-m <sup>2</sup> ) [lb-in <sup>2</sup> ]                           |            | 9.6x10 <sup>-6</sup> [3.28x10 <sup>-2</sup> ] |
| WEIGHT (Kg) [lb]   |            | 0.75 [1.654]                                  |
| TEMPERATURE RISE: MAX.80°C   |            |   |
| AMBIENT TEMPERATURE -10°~ 50°C [14°F ~ 122°F]                                      |            |   |
| INSULATION RESISTANCE 100 MOhm (UNDER NORMAL TEMPERATURE AND HUMIDITY)             |            |   |
| INSULATION CLASS B 130° [266°F]  |            |   |
| DIELECTRIC STRENGTH 500VAC FOR 1 MIN. (BETWEEN THE MOTOR COILS AND THE MOTOR CASE) |            |   |
| AMBIENT HUMIDITY MAX. 85% (NO CONDENSATION)  |            |   |



| TWINTUS CONNECTOR M12 12 POLE |           |
|-------------------------------|-----------|
| PIN NO.                       | ENC./HALL |
| 1                             | GND       |
| 2                             | 5 V       |
| 3                             | GND       |
| 4                             | A         |
| 5                             | A\        |
| 6                             | B         |
| 7                             | B\        |
| 8                             | I         |
| 9                             | I\        |
| 10                            | H1        |
| 11                            | H2        |
| 12                            | H3        |

| TWINTUS CONNECTOR M16 3 POLE |          |
|------------------------------|----------|
| PIN NO.                      | FUNCTION |
| 1                            | U        |
| 2                            | V        |
| 3                            | W        |

| WIRING DIAGRAMM |          |     |     |     |     |     |
|-----------------|----------|-----|-----|-----|-----|-----|
| FUNCTION        | Dir. ← → |     |     |     |     |     |
| U               | X        | HI  | HI  | X   | LOW | LOW |
| V               | HI       | X   | LOW | LOW | X   | HI  |
| W               | LOW      | LOW | X   | HI  | HI  | X   |
| +5V             |          |     |     |     |     |     |
| H1              | 0        | 0   | 0   | 1   | 1   | 1   |
| H2              | 0        | 1   | 1   | 1   | 0   | 0   |
| H3              | 1        | 1   | 0   | 0   | 0   | 1   |
| GND             |          |     |     |     |     |     |

|     |                        |          |      |
|-----|------------------------|----------|------|
| 3   | LENGTH CHANGED         | 07.03.12 | J.W. |
| 2   | PIN NO. 3 SUPPLEMENTED | 02.01.12 | J.W. |
| 1   | PIN ASSIGNMENT CHANGED | 08.12.11 | J.W. |
| REV | DESCRIPTION            | DATE     | APVD |

**Nanotec**  
PLUG & DRIVE

ASB42C048060-ENM

|            |           |      |          |
|------------|-----------|------|----------|
| SCALE FREE | APVD      | S.H. | 28.07.11 |
| X ±0.5     | CHKD      |      |          |
| 1PL ±0.2   | DRN       | J.W. | 28.07.11 |
| 2PL ±0.1   | SIGNATURE | DATE |          |
| ANGLE ±30° |           |      |          |

**DC MOTOR IN PROTECTION**

DWG.NO ASB42C048060-ENM