**MOTOR SPECIFICATION**

**Motor: AIREX P12-1 Linear Motor**

**Delta Connection, Series Connected Coil**

**Data Used in the program:**

|  |  |  |
| --- | --- | --- |
| **Parameters** | **Value** | **Remarks** |
| **Magnetic Pole Pitch** | **30.48 mm** | **For Determination of Electrical Cycle Length** |
| **Motor Dc Voltage** | **60V** | **P=sqrt(3)\*V\*I** |
| **Motor Continuous Power** | **81W** |  |
| **Motor Continuous Current** | **3.18A** |  |
| **Motor Peak Current** | **10.06A** | **For Determination of I2t trip & Set, MaxDac** |
| **Controller Bus Voltage** | **46.5672V** | **1.25\*(BEMF Const. \* Velocitymax) + (Rhot\_phase\*Icontinious)** |

**Other Data:**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Force Constant | 8.4 N/amp |
| PHASE RESISTANCE \*\* (@25º C IN DELTA) | 5.80 ohms |
| PHASE RESISTANCE \*\* (@125º C IN DELTA) | 8.04 ohms |
| INDUCTANCE (6 LEAD [DELTA] @ 1KHZ) | 1.3 mH |
| CONTINUOUS FORCE | 26.7 N |
| PEAK FORCE | 84 N |
| BACK EMF CONSTANT | 8.4 V/m/s |
| ELECTRICAL TIME CONSTANT \*\* | 0.22 msec |
| THERMAL RESISTANCE | 1.60 0C/WATT |
| MOTOR CONSTANT | 2.96 N/√W |
| Coil resistance (6 lead @25º C) | 8.7 ohms |
| Coil resistance (6 lead @125º C) | 12.05 ohms |