
התעשייה האווירית לישראל בע"מ
חטיבת מערכות טילים וחלל, מפעל תממ

15.2.2017

Reference: 3045.2

Subject - Tamam Reaction Wheel Assembly P/N 1712-XXXX Main Specification

התעשייה האווירית לישראל בע"מ**חטיבת מערכות טילים וחלל, מפעל תממ****Scope**

Reaction Wheel Assemblies are used as actuators to control the satellite attitude by providing reaction torques along the three main axes.

Momentum Wheel Assemblies are used for passive stabilization purpose along the two axes perpendicular to the spin axis, and for active pointing about the spin axis by providing reaction torques.

Main Features

The Reaction Wheel consists of a precision balanced flywheel suspended on a ball bearing and driven by an ironless armature brushless DC motor. A hermetically sealed aluminum case filled with an inert gas at low pressure contains the mechanical assembly and the electronics module necessary for operating the Wheel and interfacing with the satellite.

התעשייה האווירית לישראל בע"מ
חטיבת מערכות טילים וחלל, מפעל תממ

Main Specification

Parameter	Unit	typical
Reaction torque	Nm	±1.2
Torque loss @ max. speed	Nm	0.020
Stiction torque	Nm	0.003
Momentum	Nms	±15
Maximum speed	rpm	2,500
Temperature range (qual)	Deg C	-15 to 60
Power consumption <ul style="list-style-type: none"> @ 3 Nms, constant speed @ 15 Nms, constant speed @15 Nms, maximum torque 	W W W	2 10 350
Unbalance: <ul style="list-style-type: none"> Static Dynamic 	<ul style="list-style-type: none"> gr.cm gr.cm² 	2 20
Mass	kg	5.8
Dimensions (HxØ)	mm	110x370
First resonance frequency	Hz	135
Tachometer resolution	pulses/rev	2400
Input voltage	VDC	30-45
Temperature range	°C	-15 to 60
Sine vibration	g	As agreed for the application
Random vibration	grms	As agreed for the application
Mechanical shock	g	As agreed for the application
EMC	per condition	As agreed for the application

Note: other types with the leading above parameters may be required by the satellite manufacturer.