

# AH-9060 Powered Hinge System

## General Description

The Starsys AH-9060 Powered Hinge System provides unmatched performance characteristics for panel deployment systems.

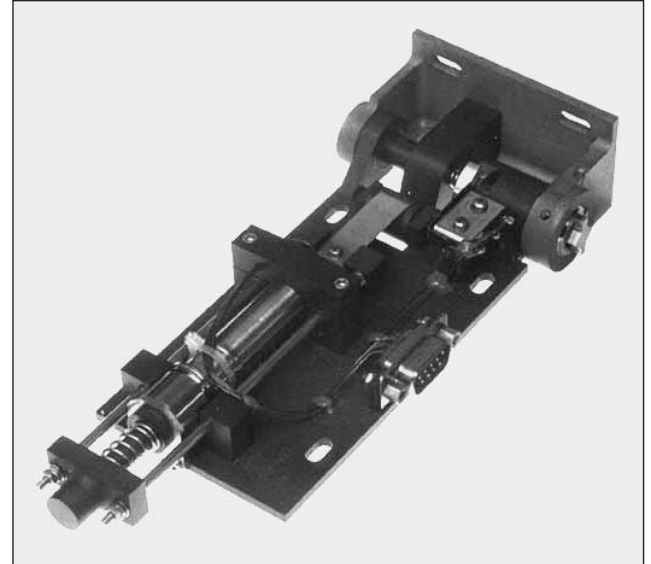
The AH-9060 system comprises two components: a powered drive hinge and a multiple degree-of-freedom floating hinge. Powered deployment is provided by a High Output Paraffin (HOP) linear motor acting through a redundant metal band/cam drive. The output torque profile of the hinge is established by the shape of the drive cam, and can be modified to meet specific panel requirements.

Deployment is initiated by providing power to the actuator. After a 90 second warm-up period the actuator begins to slowly extend, rotating the hinge. Full 90° rotation occurs during the next 100 seconds as the actuator fully extends. If at any time during the deployment the panel experiences resistance to motion, the actuator slowly increases the available torque to overcome resistance.

Once the panel is in the deployed position, a torsion bar latch drops into position locking the panel in the fully deployed position. Resetting during testing is accomplished by manually unlatching the hinge and moving the panel to the stowed position. The cycle of deployment and re-stowing can be repeated as often as required during testing to verify total system function.

## Features

- High torque capability
- Resettable, actively-driven panel deployment
- No-shock deployment without the need for dampers
- Fully redundant, self-lubricating rotating surfaces
- Exceptional reliability from simplicity of operation
- Simple control



Resettable, actively-driven, powered hinge system  
(Floating hinge not shown)

## Specifications

Mechanical	US	SI
Mass	10.2 oz	290 grams
Response time	~210 sec. from +75°F	~210 sec. from +24°C
Latched hinge stiffness	>50 in-lbf/°	>5.65 N-m/°
Operating environment	-148° to +176°F	-100° to +80°C
Latching accuracy	± 0.50°	
Lifetime	>100 operations	
Height	1.375 in.	3.5 cm
Deployment angle	90°	
Deployment torque	>30 lbf-in at start	>3.38 N-m at start
	>60 lbf-in at end	>6.79 N-m at end
Electrical		
Power/Voltage	15 watts @ 28 V	
Thermal		
Power/Voltage	15 watts @ 28 V	

Data for information only and subject to change. Contact Starsys for design data.

