



# *CASTLEBERRY Instruments & Avionics*

## **MODEL 900-23EPAR P/N 504-0027-91900 & -91901 INSTALLATION GUIDE**

### **APPLICABILITY**

Before installing the Model 900-23EPAR gyro, determine that it is appropriate for the application. This gyro comes either as a lighted (-91900) or a non-lighted (-91901) model. The lighted version has lighting options as indicated in the outline drawing. Also this gyro is designed for use in fixed wing applications. This gyro can travel unrestricted 360 degrees through the roll axis but is limited to  $\pm 90$  degrees of pitch travel.

This product conforms to FAA technical specifications TSO C4c. It is responsibility of the installer and their authority to determine proper use, purpose, and documentation required to install this product.

There are no life limited parts or periodic scheduled maintenance requirements on this product to generate a need for continued airworthiness procedures. It is recommended that if the gyro is stored for more than 60 days that it is powered on for at least 30 minutes prior to use to re-distribute lubricants in the spin bearings.

### **OPTIONS**

Panel tilt is an important specification required to be known when ordering or installing a panel mounted attitude gyro in an aircraft. If panel tilt is not known, the manufacturer of the aircraft should be able to provide that information. This gyro can be calibrated for a panel tilt from zero to twenty degrees and should be specified when ordering. A label is attached to the gyro to indicate the tilt calibration of each unit. If a newly installed attitude gyro settles more than  $\pm 1\frac{1}{2}$  degrees pitch above or below where the expected horizon should be, then panel tilt or aircraft trimming issues should be suspected. Note that the gyro comes as a custom tilt that should be specified by the customer when any tilt other than zero degrees is desired.

### **ELECTRICAL**

Current production models use approximately 15 Watts starting and 12 Watts running. Therefore current rating for the 28 Volt model is  $\frac{1}{2}$  Amps maximum. Power to gyro is applied through a pigtail to a common 10 pin circular connector on rear of unit as shown on the drawings of following pages. The mating connector is MIL-SPEC P/N MS3126F10-6S or PT06A-10-6S(SR). Recommended wire size is 22 to 20 AWG and should be of aircraft approved type. Circuit breaker or protection devices must be high enough current to support the maximum current for voltage type but low current enough to protect aircraft wiring. Recommended circuit breaker size for this gyro is 1 Amp.

**WARNING:** Applying power to gyro reverse polarity or allowing a voltage spike exceeding 39 VDC will blow an internal fuse to protect the gyro circuitry. If fuse becomes blown, unit must be repaired and tested before returning to service.

**CAUTION:** This device is an avionics item and should get power from a buss that is not powered during engine start up.

### **MECHANICAL**

Panel cut out and mounting hole information and electrical pin out with other leading particulars may be found on the latest revision outline drawing of the specific part number or model type. Read all notes on following outline drawings to be aware of any limitations or specifications that may apply to your installation requirements. This gyro is designed to be installed rear mounted. Be sure that installation screw length penetrates into gyro bezel approximately 1 inch after considering panel thickness including any shim or wedge application.

**CASTLEBERRY Instruments & Avionics**  
Austin, Texas

**LIMITED WARRANTY CERTIFICATE**

**CASTLEBERRY Instruments & Avionics** (herein called **CIA**) warrants each item of new equipment manufactured or sold by it to be free from defects in material and workmanship under normal use for which intended for a period of **15** months from date of shipment by **CIA**. No claim for breach of warranty will be allowed unless **CIA** is notified thereof in writing within thirty (30) days after the material or workmanship defect is found.

**The obligation of CIA shall be limited to replacing or repairing at it's factory, the equipment found defective under the terms of this warranty certificate: providing that such equipment is returned in an approved shipping container, transportation charges prepaid, to:**

**CASTLEBERRY Instruments & Avionics**  
13405 Immanuel Road, Bldg 1, Ste A  
Pflugerville, TX. 78660  
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**or such other location as CIA may authorize. CIA reserves the right to have necessary repairs performed by an authorized agency.**

**This warranty shall not apply to any unit or part thereof which has not been installed or maintained in accordance with CIA instructions, or has been repaired or altered in any way so as to adversely affect its performance or reliability, or which has been subjected to misuse, negligence or accident.**

**This warranty is exclusive and is accepted by buyer in lieu of all other guaranties or warranties of merchantability and fitness for a particular purpose. Buyer agrees that in no event will CIA liability for all losses from any cause, whether based in contract, negligence, strict liability, other tort or otherwise, exceed buyer's net purchase price,, nor will CIA be liable for any special, incidental, consequential or exemplary damages.**

**CIA reserves the right to make changes in design or additions to or improvements in its equipment without the obligation to install such additions or improvements in equipment theretofore manufactured.**