

## Chapter 55

# ACTUATOR, WESTERN, TYPE ERJ60, Mk. 25

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### LEADING PARTICULARS

Actuator, Western, Type ERJ60, Mk. 25 .....	Ref. No. 5W/2400
Voltage range .....	22 to 29 volts
Nominal load and current .....	60 lb. in. at 2.5 amp
Maximum working load .....	85 lb. in.
Angular travel.....	continuous rotation
Time of stroke.....	9 to 12 sec.
Rating of motor .....	1 minute
Gear and ratio .....	Epicycle 2,851 : 1
Maximum operating frequency .....	10 cycles per hour
Ambient temperature range .....	-40 deg. C. to +90 deg. C.
Weight of unit .....	2 lb. 5 oz.

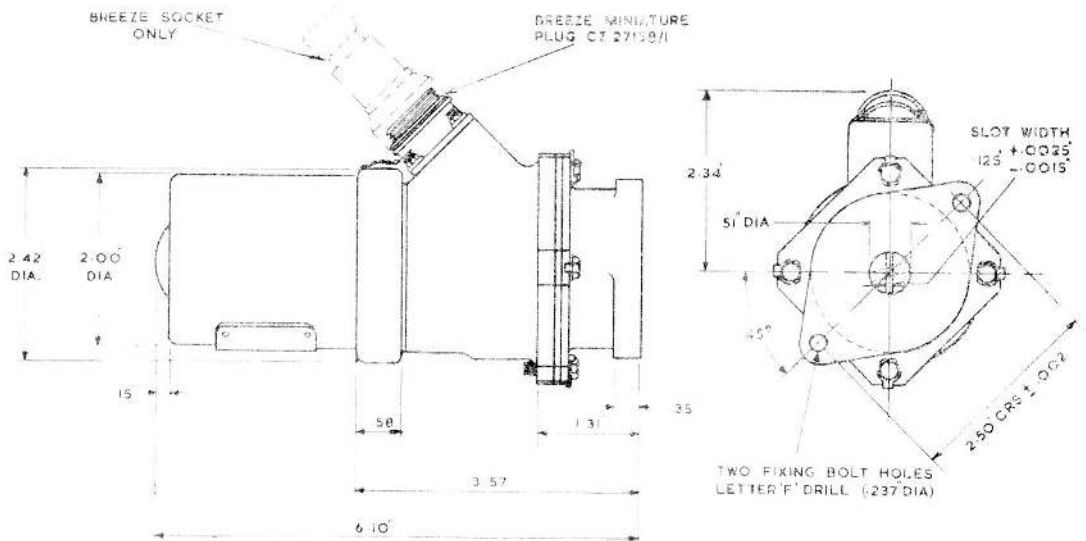


Fig. 1. Installation drawing

### Introduction

1. The rotary actuator, Type ERJ60, Mk. 25 is designed to operate within the ranges given under the heading Leading Particulars. It is rated to operate for 1 minute at a nominal load of 60 lb. in. with a maximum current consumption of 3.0 amperes. The application of this actuator in an aircraft is for door locking.

### DESCRIPTION

#### General

2. The Western Type ERJ60 series of actuators is described in A.P.4343, Vol. 1, Sect. 17, Chap. 1, App. 7. The ERJ60, Mk. 25 actuator varies from others in this series, in that it is not fitted with limit switches, and therefore does not restrict angular travel of the coupling shaft but is designed for continuous rotation.

3. The unit is a rotary actuator embodying a fractional horse power motor, driving through epicyclic gearing to an output shaft, giving continuous rotation. The motor incorporates an electro-magnetic brake.

4. No visual indicators are fitted with this actuator, to indicate travel limit, due to the absence of limit switches.

### Coupling unit

5. The coupling casting of the actuator has a two bolt mounting flange. The coupling shaft engages a slot in the main drive shaft and has a 0.125 in. slot to engage the applied load.

### Electrical connection

6. A Mk. 3 miniature Breeze, 3 pole plug is fitted, see fig. 2. When connecting the socket to this plug, ensure that there is correct alignment to avoid damage to the moulded projection of the plug.

#### Note . . .

*Further information on the motor and brake assembly and reduction gear train, together with a sectional view of the actuator is contained in A.P.4343, Vol. 1, Sect. 17, Chap. 1, App. 3.*

### INSTALLATION AND SERVICING

7. Information on installation and servicing will be contained in the appropriate Aircraft Handbook, and also simple servicing in A.P.4343, Vol. 1, Sect. 17, Chap 1, and App. 7.

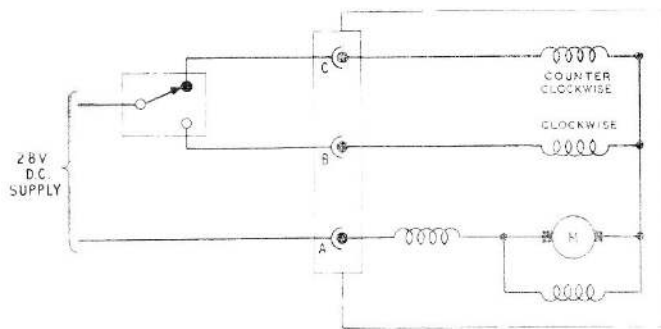


Fig. 2. Circuit diagram

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LIGHTNING MK. 1  
COVER PITOT HEAD  
EB2-88-511