



Simplex Remote Electronic Unit (sREU)



Key functions

The sREU is a configurable, high-integrity LRU designed to perform localised closed-loop control of a hydraulic or other suitable actuator for applications such as primary flight control, steering, braking, high-lift and utility systems. The sREU pre-conditions, filters and digitises input signals and performs closed loop control of outputs. It acts upon received data bus commands and reports data and status information as required by the upper level controller.

The sREU provides the following key functions:

- Fully configurable Closed Loop Control (CLC) suitable for a single channel hydraulic or electric actuator or one channel of a multi-channel actuator
- Proportional drive for a EHSV actuator controller
- Excite and derive positional feedback from two VDT transducers
- Drive and monitor the status of a hydraulic SOV
- Excite and convert to pressure voltage signals from two d.c. differential pressure transducers
- Receive commands and transmit status via an ADB serial data interface
- Receive additional data from an ARINC429 input
- Be reconfigurable in terms of operational parameters without physical hardware change

Key features

- High Integrity Architecture
- Dual Sub Channel Architecture
- Highly Configurable Closed Loop Control
- Single Part Number supports multiple aircraft locations
- Covers-On Reconfigurable (off aircraft only)
- Can operate as a slave to an upper level controller e.g. from a flight control computer to control the position of a flight surface actuator or in response to a sensor input without the need for data bus commands.

Interfacing capabilities

Interface type	Qty
sREU Flexible Inputs	
VDT - 5 Wire	1
VDT - 4 Wire	1
Pressure Sensor	2
sREU Flexible Outputs & Excitations	
VDT Exc	1
DC Excitation 28V	2
Solenoid Drive - Hi & Lo Side (H/S current limited)	1
Current Output	1
sREU Serial Interfaces	
Actuator Data Bus (ADB)	1
ARINC 429 Rx	1
RS485 (Debug & Download)	1
sREU Miscellaneous Interfaces	
Power/Return	1
Configuration I/Ps	6
Download Enable	1

Physical characteristics

Dimensions	5 inches (127mm) x 4 inches (101.6mm) x 0.75 inches (19.05mm)
Weight	0.9lbs
Power	With one energized SOV
Consumption	(steady state conditions) 6W +SOV coil power
Environmental Qualification	RTCA / DO-160G