AL523
UNIVERSAL INDICATOR DISPLAY

FEATURES

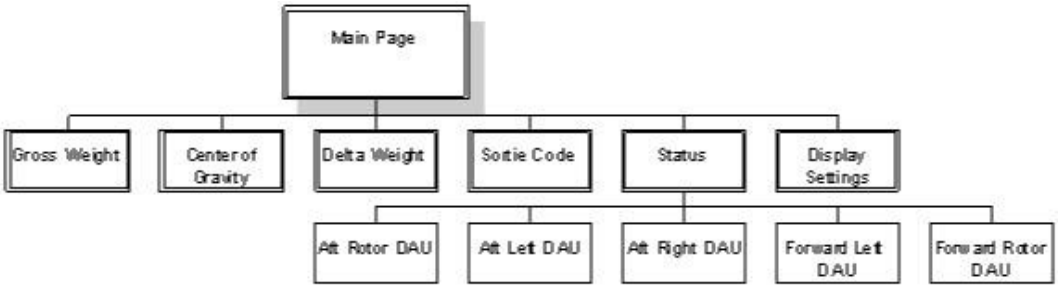
- 6.5" diagonal User Programmable LCD Display
- Multiple Pages per display
- Mil-Spec Certified
- Chapter 10 compatible
- NVIS compatible
- Widely separated keys for operation control
- Optional GUI software package
- Operates on 18-36 VDC power
- Dzus rail compatible - Bulk head and instrument panel options

OVERVIEW

The AL523 is a 6.45 inch diagonal mil spec certified user programmable LCD display. Originally designed for bulkhead mounting variants had bee developed to accommodate mounting in standard Dzus rail instrument panels. The unit features and 10/100/1000 Ethernet interface capable of receiving Chapter 10 data packets from multiple sources. The data packets are then then processed for display. The display is also capable of sending Chapter 10 messages to control and update other devices.

AL523's currently in use are configured to monitor and annotate the on board data recorders with current flight profile information not available via the instrument package. These parameters include flight number, sortie number, gross weight and center of gravity. These abilities combined with the Mil-spec certification have enabled our customers to collect and analyze flight test data collected under unique mission conditions that cannot easily be recreated in the test environment. Since the AL523 like all Apogee labs configurable displays are not tied to a single instrument once a flight test profile is completed the system can be reconfigured for another profile by downloading a new user developed display page. These pages can be any combination of dialog boxes, standard gauges (dials, and bars, custom gauges such as tether hover , strip charts, XY plots and text display of system parameters. When used in conjunction with the Apogee Labs gauge setup software.

Example of hierarchal page configuration



MECHANICAL & ENVIRONMENTAL

Connectors :
- Power Input :MIL – 38999 Series III
- 6-Pin Male Bulkhead
- Part # - D38999/20WA98PN

Ethernet Series 80 Mighty Mouse 10-Pin Bulkhead
- Part # - 805-004-02NF9-10PA

Operating Temperature: -31.7°C to+70°C
- MIL-STD-810F, Method 501.4, Procedure II
- MIL-STD-810F, Method 502.4, Procedure II

Storage Temperature: -55°C to +85 °C
- MIL-STD-810F, Method 501.4, Procedure I
- MIL-STD-810F, Method 502.4, Procedure I

Humidity:
- MIL-STD-810F, Method 507.4, Procedure II.

Altitude: up to 20,000 ft
- MIL-STD-810F, Method 500.4, Procedure II

Transportation Conditions: up to 50,000 ft
- MIL-STD-810F, Method 500.4, Procedure I

Sand and Dust
- MIL-STD-810F, Method 510.4, Procedure I and II

Water Proofness
- MIL-STD-810F, Method 506.4, Procedure III

Explosive Atmosphere
- MIL-STD-810F, Method 511.4

Vibration: Boeing ICH Helicopter Specification
- D724-10009-1, Rev A

Shock:
- Operational - 20 g: MIL-STD-810 F, Method 516.5, Procedures I
- Crash - 40 g: MIL-STD-810 F, Method 516.5, Procedures V

EMI: MIL-STD-461E

CE101 Conducted Emissions,
Power Leads, 30 Hz to 10 kHz

CE102 Conducted Emissions,
Power Leads, 10 kHz to 10 MHz

CS101 Conducted Susceptibility,
Power Leads, 30 Hz to 150 kHz

CS114 Conducted Susceptibility,
Bulk Cable Injection, 10 kHz to 200 MHz

CS115 Conducted Susceptibility,
Bulk Cable Injection, Impulse Excitation

CS116 Conducted Susceptibility,
Damped Sinusoidal Transients,
10 kHz to 100 MHz

RE101 Radiated Emissions,
Magnetic Field, 30 Hz to 100 kHz

RE102 Radiated Emissions,
Electric Field, 10 kHz to 18 GHz

RS101 Radiated Susceptibility,
Magnetic Field, 30 Hz to 100 kHz

RS103 Radiated Susceptibility,
Electric Field, 2 MHz to 40 GHz

DISPLAY CHARACTERISTICS

- 6.5” inch diagonal LCD
- Display control: selected by pushbuttons
- Resolution: 480(h) x 640(v) pixels (Viewed in Landscape orientation)
- Contrast Ratio: 600:1 typical
- Viewing Angle: >60°
- Rugged LED-based backlight
- Day Mode - Sunlight Readable(Luminance up to 800 cd/m^2)
- Night Vision Mode – NVIS
- (Type II) Class B compatible

ELECTRICAL

18-36 VDC @ < 1.0 Amps

OPTIONS

- Bulkhead mount
- Dzus rail mount
- Gauge software