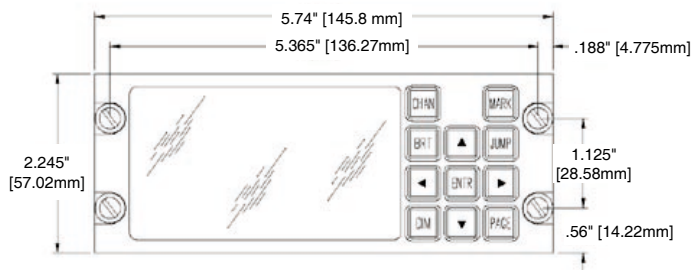


Cockpit Control Unit CCU-500

The CCU-500 provides a monochrome alphanumeric display with keypad for functions via full-duplex serial RS-422 communications.



General Data

Part Number	13300-xx
Power Supply	Protected from reverse polarity input (MIL-STD-704C)
Standards	Transient voltages (MIL-STD-704C)
Weight	< 2.73 Kilograms
Mechanical Interface	DZUS® rail mount per MS-25212
Cooling	Natural convection
Switches	11 keys standard
BIT Mode	Built-in test pattern

System Interface

Interface	RS-422 or RS-232
Connector	Circular MIL-C-38999

Power

Display	18–32 V DC (28 V DC nominal)
Switch Illumination	5 V AC
Mating Connector	P/N D38999/20WC35PN

Power Consumption

Display	28 Watts
Switch Illumination	3 Watts maximum

Options / Upgrades

Illuminated Display Color	Red, green, or amber
Softkeys on the Front	12 keys

Environmental

Temperature	-40°C to +70°C (MIL-STD-810)
Storage Temperature	+90°C / -54°C (MIL-STD-810)
Humidity	95% non-condensing (MIL-STD-810)
Vibration	Per MIL-STD-810E, Notice 2, Method 514.4
Shock	20 Gs, 6–9 ms (3 axis)
Altitude (Operational)	Up to 50,000 ft non-pressurized
EMI / EMC	Air limits: DCE01-03, DCS01-05, DRS01-02
	Sea limits: DMFS01, DRE01-02
Drip-Proof	Per MIL-STD-810
MTBF	24,200 hours

Electro-Optical

Display Type	Green LED, 5 x 7 alphanumeric
Display Configuration	5 rows, 16 characters
Character Dimensions	.190" H x .112" V (4.83 mm x 2.85 mm)
Chromaticity	NVIS per MIL-L-85762, Type 1 Class B
Intensity	NVIS per MIL-L-85762, Type 1 Class B
Contrast	NVIS per MIL-L-85762, Type 1 Class B
Viewing Angle	±45°H x ±45°V

Connector Pin-out

Pin	Signal	Description
1	+28 V DC PWR	Input Power
2	+28 V DC PWR	Power Supply Return
3	5 V AC BACK-LITE PWR	5 V AC Push-Button Lighting Power
4	5 V AC BACK-LITE RTN	5 V AC Push-Button Lighting Power Return
5	RESET	CCU Hardware Reset
6	ACFT GND	Aircraft Ground
7	DISPLAY RX+	Display RS-422 Signal Receive HI
8	DISPLAY RX-	Display RS-422 Signal Receive LO
9	DISPLAY TX+	Display RS-422 Signal Transmit HI
10	DISPLAY TX-	Display RS-422 Signal Transmit LO
11	CHAS GND	Display Chassis Ground (connect to aircraft ground)
12	28 V DC BACK-LITE PWR	28 V DC Push-Button Lighting Power
13	28 V DC BACK-LITE RTN	28 V DC Push-Button Lighting Power Return