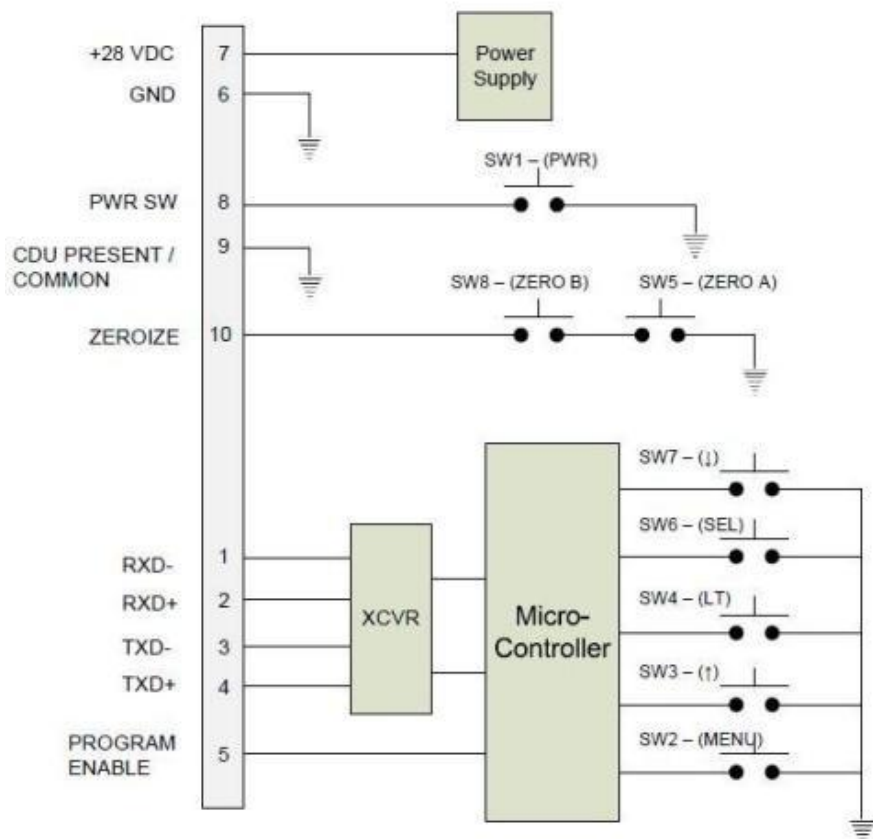# 70585-XX Mini Control Display Unit (CDU)

Features

- *Wide temp, sunlight readable 1.1" x 2.6" Character Display (4 rows of 14 characters)*

- *Sealed 8 key Keypad (4 x 2)*

- *RS-422 Serial Comm*

- *Dual-mode (white and NVIS) backlight*

- *11: Mighty Mouse I/O Connector*

- *-21: Samtec (flying leads) harness*

Introduction

The Mini-CDU is designed to provide a small light-weight rugged operator interface device that is easy to integrate into any system. Based on a low-power high reliability micro-controller architecture, the Mini-CDU interfaces through an industry standard RS-422 communication link. Commanded through a simple messaging structure, the Mini-CDU provides four rows of mono-chrome text information to the operator. Low Power Sunlight-Readable operation is provided through the Transflective STN technology, that reflects a portion of the ambient light back through the LCD display. The operator enters commands through the 2x4 keypad; the key press information is communicated across the RS-422 serial bus. The keypad is designed for heavy glove operation, typical in a fielded military application; each key is fully sealed and includes an "Egg Crate" style raised barrier between keys to eliminate inadvertent key presses. The Display and Keypad are backlit with an Night Vision Goggle compatible NVIS LED backlighting system. The Mini-CDU includes an integral sealed harness with a military circular connector.

Mini CDU Interface Block Diagram

Summary Specification

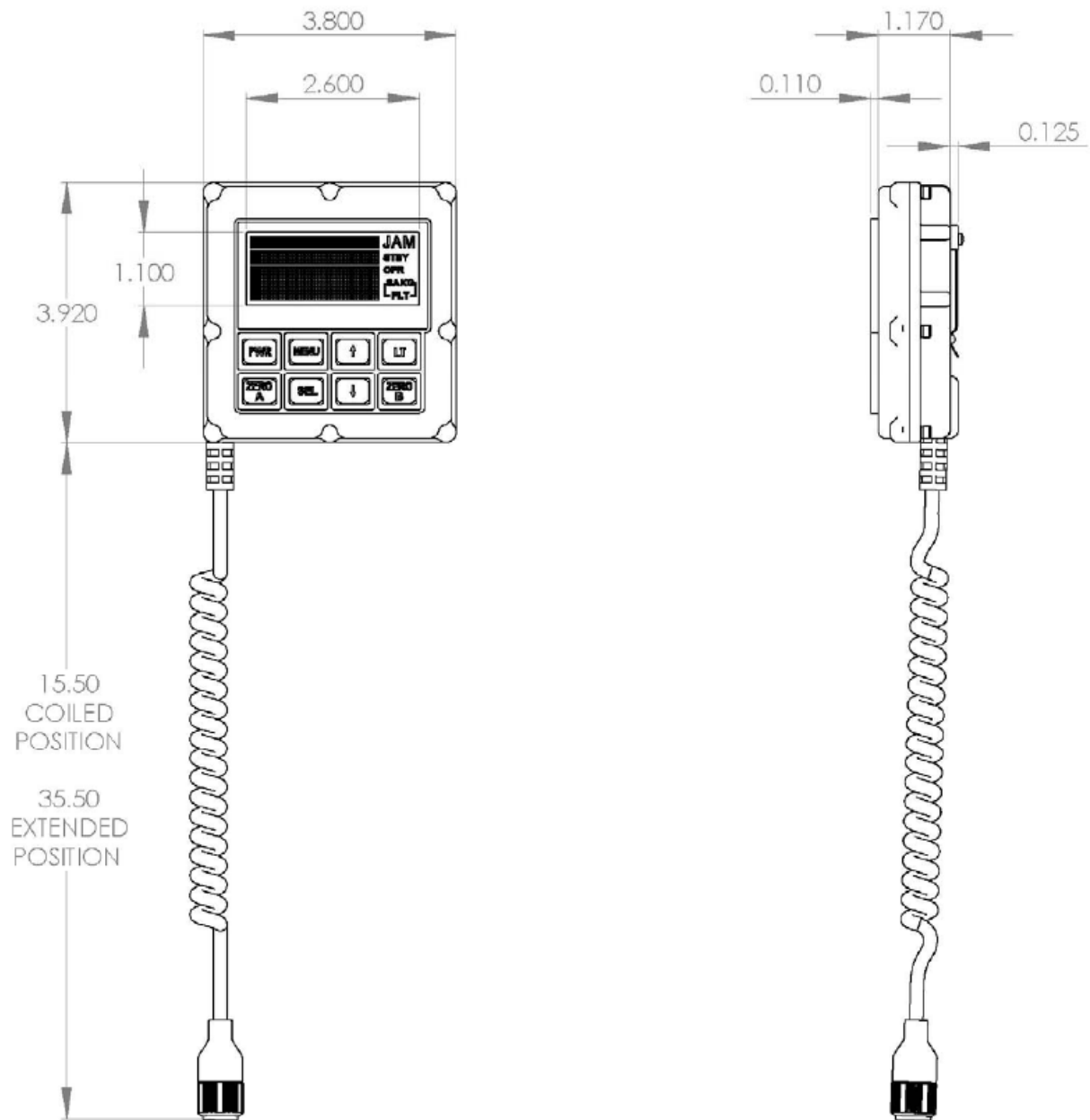|	
External Dimensions	3.80" x 3.92" x 1.17"
Display Size	1.1" x 2.6" LCD
Display Technology	Wide-temp, sunlight readable LCD, 1/16 MUX, transflective STN
Character Display Configuration	• 4 rows of 14 characters • 5 x 7 dot matrix characters with underbar cursor • 8 annunciators • Dark character over yellow/green background
Contrast Ratio	3:1 min, in 10,000 ft – candles ambient
Backlight Technology	• Dual-mode backlight with selectable intensity (Off/Dim/Bright) • Unfiltered light • NVIS-B filtered light
Processing Element	Microcontroller based
Communication Interface	• RS-422, 9600 baud

- 8 bit ASCII
- IEE Messaging Protocol

Input Power	28Vdc, +/- 7Vdc
Power Consumption	0.65W typical
Keypad/Button Configuration	4 columns x 2 rows of 0.50"(W) x 0.37"(H) keys
Keypad Lighting	White legend on black, NVIS Edgelight Illumination
Key Technology	Snap -action dome switch
I/O Connector (and Interface Table)	Glenair 801-007-16NF7-10PA
	Coiled Interface cable: 15.5" to 35.5"
External Dimensions	3.80" x 3.92" x 1.17"
Housing Material	GE Ultem – Mottled Gray/Green
Weight	0.8 pounds
Temperature – Operating	-40°C to +71°C (with heater)
Temperature - Storage	-52°C to +85°C
Altitude - Operating	36,000 ft
Shock	Transit Shock
Vibration	.04g **2/Hz, 20 – 2KHz, 1 hr/axis, ground mobile
Sealing/Immersion	Submersion to 1M of water for 2 hours
EMI/EMC	MIL-STD-461/462
Reliability – MTBF (hours)	17,690
Options	GPS Interface
	LED Annunciators

Mini CDU Panel Layout and Side View