CMA-5025 Satellite Landing System (SLS) Control Panel

- **Optional controller for CMA-5024 SBAS receiver, meets RTCA/DO-229D LPV approach requirements**
- **GBAS capable, RTCA/DO-253B SLS approach ready**
- **Displays selected approach data, Distance-To-Go, and SBAS/GBAS data**
- **High contrast and wide viewing angle alpha-numeric LCD display**
- **Compact size and low weight**

The CMA-5025 SLS is an optional Control Panel (CP) designed to complement the CMA-5024 SBAS receiver. It allows the CMA-5024 to be installed as a stand-alone system, fully independent of all avionics systems. Alternately, the CMA-5024 can be fully integrated with a FMS such as CMC Electronics' CMA-9000 FMS.

When the CMA-5024 is installed as a stand-alone system, the CMA-5025 is required to enable the SBAS LPV or GBAS SLS approach function. In certain applications, the CMA-5025 can be installed as a fully independent back-up control panel to an integrated FMS solution.

The CMA-5025 does not connect to any other avionics system except the CMA-5024 SBAS receiver, and as a result, it does not disrupt any existing certifications or installations. The CMA-5025 and the CMA-5024 were designed to complement each other.

In a manner similar to a navigation radio control panel, the CMA-5025 CP allows the flight crew to select a SBAS or GBAS final approach. The CMA-5025 provides the flight crew with all necessary data to set up any GPS approach as either a SBAS LPV or a GBAS SLS approach.

The difference between the CMA-5025 and a standard navigation radio control panel is that the CMA-5025 conforms to RTCA/DO-229D/DO-253B alpha-numeric information display requirements. The CMA-5025 provides selection of the 5-digit ICAO tuning number for the selected approach, Runway and Approach identification, LPV database status, approach selection confirmation, among other items. The CMA-5025 is also compliant to all GBAS approach selection requirements.

Once the approach has been selected, the CMA-5025 will also provide a display of the Distance-To-Go to the Threshold Crossing Point of the LPV approach. This is useful in applications where it is not feasible to display this data on existing DME displays.

The CMA-5025 is based on the FAA's Human Factors Design Standard (FAAHFDS-001) and MIL-STD-1472F. The CMA-5025 uses state-of-the-art LCD technology to provide large viewing angles.

The Control Panel can be mounted in the cockpit panel or on a center pedestal DZUS rail with the use of an optional DZUS adapter kit. If required, two CMA-5025s can fit into a standard DZUS rail.

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CMA-5025 SLS Control Panel — Specifications

DIMENSIONS

Height: 2.625 inches
Width: 2.375 inches
Depth: 4.800 inches

WEIGHT

2.0 lb max

ELECTRICAL REQUIREMENTS

Power: 7 Watts max @ 28 VDC
Power interrupt: 50 msec

ICAO TUNING RANGE

GBAS 20,000 to 39,999
SBAS 40,000 to 99,999

CONTROL PANEL FUNCTIONS

Mode selector knob
Item selector knob
Active / Standby swap button
Message button
Standby tune annunciator (amber LED)
Message annunciator (bi-colour white/amber LED)
Display screen

LCD DISPLAY

White characters on dark blue background
FMTN display technology (non multiplexing for high contrast)
Two lines with 8 alpha-numeric characters per line,
14 segment characters
Character dimensions: Height: 0.208 inches
Width: 0.125 inches
Spacing: 0.080 inches

COLOR

Front panel gray FED-STD-595 color no.36231
Swap and Message buttons black FED-STD-595 color no.37038
Knobs black FED-STD-595 color no.37038
Marking white FED-STD-595 color no.37925

CONNECTOR

MIL-C-38999 Series II, 37 pins, to mate with MS27473T14B35S

INTERFACE

Two SDI (Source Destination Identifier) input discretes
Two spare discrete inputs
One ARINC 429 transmitter
One ARINC 429 receiver
One RS-232 maintenance port
External LCD brightness control (0 @ 5 VDC input)
External back-lighting control (28 VDC, 5 VAC or 5 VDC input)

FEATURES

MTBF 20,000 operating hours
First Minima Twisted Nematic (FMTN) LCD display
Built-in test capability (BIT)
Spill proof

CPU

ARM based microcontroller
256K Flash Memory
64K RAM
RS-232 maintenance port

COMPLIANCE

RTCA/DO-160E (environmental)
Lightning Cat. A3E3X
Power input Cat. Z (50 msec power interrupt)
Radio frequency susceptibility Cat. WW
Temperature altitude cat A1 (operating temperature -40 degrees C/+70 degrees C, 0 to 45,000 feet)
RTCA/DO-178B Level C (Software)
RTCA/DO-229D (GPS/SBAS)
RTCA/DO-253B (GPS/GBAS)

CERTIFICATION

TSO-C146 Delta-4

For more information, visit www.cmcelectronics.ca or email us at sales@cmcelectronics.ca

Over 100 Years of Innovation

CMC-CMA5025-GPS-19-008

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