MidContinent®
INSTRUMENTS+AVIONICS

Flex™ MD23 Series

FLEX™

Custom Function Display

Manufactured by Mid-Continent Instruments and Avionics

FLEX™ IS A CERTIFIED CUSTOM DISPLAY, CONTROLLER AND DATA CONVERTER, ALL-IN-ONE

The Flex™ MD23 Series features a customizable configuration, user interface and high-definition graphics. This enables Flex to function as a custom display, controller and data converter.

The 2-inch digital instrument can receive and display ARINC 429, analog, discrete, frequency, temperature, and absolute and differential pressure data to meet the unique requirements of the pilot, engineer or mission.

Flex delivers the convenience of a certified COTS (commercial-off-the-shelf) product with the custom flexibility of a build-your-own instrument.

The applications are virtually limitless.

Flex™ delivers new data to the cockpit or can be a modern replacement for aging instruments.

- Customizable configuration (inputs/outputs), user interface and graphics
- Receives and displays ARINC 429, analog, discrete, frequency, temperature, absolute and differential pressure data
- Standard 2-inch size
- Lightweight — 0.4 lbs
- Simple user interface — Push-and-turn control knob
- Daylight readable LCD and high-definition graphics
- External lighting control and built-in photocell for automatic dimming
- Field-upgradeable software via standard USB-A port
- TSO-certified hardware and software (Design Assurance Level A)
- Designed and built in Wichita, Kansas, USA
- Two-year limited warranty

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SPECIFICATIONS

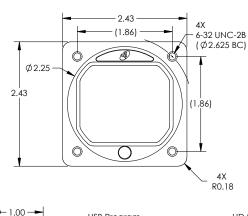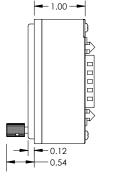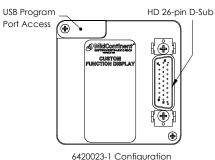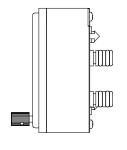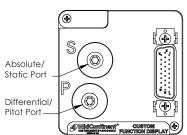|		
Power Input	10–32 VDC	
	0.14A @ 28 VDC; 4 watts nominal	
Data Inputs	ARINC 429	Low or high speed; labels per individual CID
	RS-232	Data format per individual CID
	Analog*	0-28 VDC, 1% accuracy (±0.050 V)
	Discrete*	Open, ground, high
	Thermocouple	Type K
	Frequency*	0.5-100 V pk-pk; 10-2,000 Hz; 10-20,000 Hz (-1 only)
	Pressure	Absolute/static and differential/pitot (-2 only)
	*Up to 12 programmable Analog, Discrete or Frequency inputs available	
Data Outputs	ARINC 429	High speed; labels per individual CID
	RS-232	Data format per individual CID
	Analog*	0-5 VDC, 1% accuracy (±0.050 V)
	Discrete*	Open, ground, high
	*Up to 12 programmable Analog or Discrete outputs available	
Lighting	5, 14, or 28 VDC external control or automatic internal photocell control	
Battery	Rechargeable coin cell (memory only)	
Weight	0.4 lbs (0.17 kg)	
Mounting	Rear panel mounted, (4) #6–32 screws, 2.25-inch round bezel	
Dimensions	2.43 x 2.43 x 1.0 inches	
Mating Connectors	MCIA P/N 9019162-1	26-pin D-Sub and backshell
	MCIA P/N 9019162-2	Pneumatic fittings
Certification	FAA/EASA TSO certified to C2d (Type B), C10c, C106, C113b	
	RTCA DO-160G qualified	
	RTCA DO-178C qualified, Design Assurance Level (DAL) A	
Rights	U.S. Patent Pending	

2.43
(1.86)
4X
6-32 UNC-2B
(⌀2.625 BC)
⌀2.25
2.43
(1.86)
4X
R0.18

1.00
USB Program
Port Access
HD 26-pin D-Sub
CUSTOM
FUNCTION DISPLAY
0.12
0.54
6420023-1 Configuration

S Absolute/
Static Port
P Differential/
Pitot Port
CUSTOM
FUNCTION DISPLAY
6420023-2 Configuration