



Flex® MD23 Series

## FLEX

### Custom Function Display

Manufactured by Mid-Continent Instruments and Avionics

FLEX® IS THE ONLY CERTIFIED CUSTOM DISPLAY,  
CONTROLLER AND DATA CONVERTER, ALL-IN-ONE

The Flex® MD23 series is a blank slate for designers, avionics and system engineers. It is the only controller, data converter and custom display, all-in-one.

The certified, 2-inch digital instrument receives and displays ARINC 429, analog, discrete, frequency, temperature, absolute and differential pressure data to meet the specific needs of any pilot or mission.

Streamline your product development process, save hundreds of thousands of dollars in NRE and certification costs, and compress your project timeline by up to two years.

Go from concept to cockpit in 30 days.

#### Bring new data to the cockpit and develop retrofit instruments in half the time, at half the cost.

- Customizable configuration (inputs/outputs), user interface and graphics
- Receives and displays ARINC 429, analog, discrete, frequency, temperature, absolute and differential pressure data
- Fits standard 2-inch panel cutout
- Rechargeable, field-replaceable emergency battery (available)
- Lightweight – 0.4 lbs
- Simple user interface – Single, push-and-turn control knob
- Daylight readable LCD and smooth, high-resolution graphics
- Manual external lighting control or built-in photocell for automatic dimming
- Field-upgradeable software and configuration via standard USB-A port
- Night Vision Imaging System (NVIS) compatible (available)
- TSO certified (Design Assurance Level A)
- Designed and built in Wichita, Kansas, USA
- Two-year limited warranty

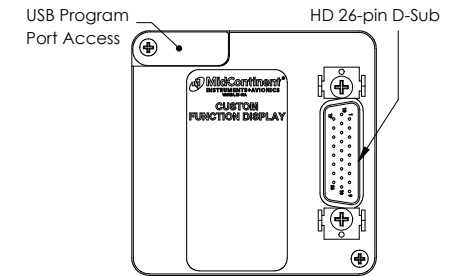
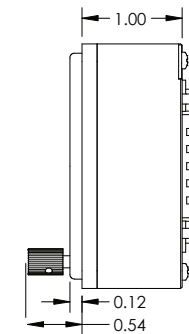
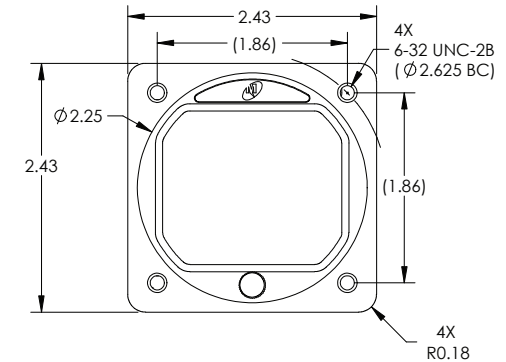
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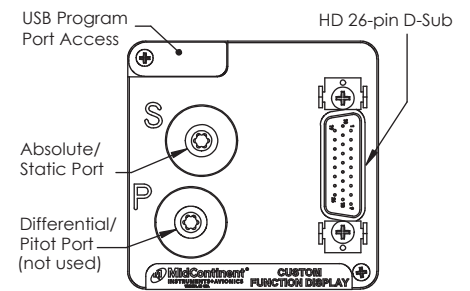
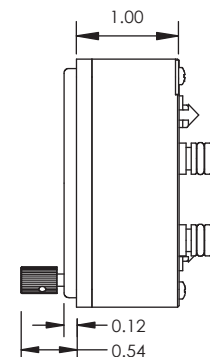


## SPECIFICATIONS

Power Input	10–32 VDC 0.14A @ 28 VDC; 4 watts nominal	
Data Input	ARINC 429	Low or high speed; labels per individual CID
	RS-232	Data format per individual CID
	RS-422/485	Data format per individual CID (-3 only)
	Analog*	0-28 VDC, 1% accuracy ( $\pm 0.050$ V) (-1 and -2) -24-29 VDC, 1% accuracy ( $\pm 0.050$ V) (-3 only)
	Discrete*	Open, ground, high
	Thermocouple	Type K (-1 and -2)
	Frequency*	0.5-100 V pk-pk; 10-20,000 Hz (-1 only)
	Pressure	Absolute/static and differential/pitot (-2 only)
	*Up to 12 programmable Analog, Discrete or 3 Frequency inputs available	
Data Output	ARINC 429	Low or high speed; labels per individual CID
	RS-232	Data format per individual CID
	RS-422/485	Data format per individual CID (-3 only)
	Analog*	0-5 VDC, 1% accuracy ( $\pm 0.050$ V) (-1 and -2) -8-8 VDC, 1% accuracy ( $\pm 0.050$ V) (-3 only)
	Discrete*	Open, ground, high
	*Up to 12 programmable Analog or Discrete outputs available	
Lighting	5, 14, or 28 VDC external control or internal photocell for automatic dimming	
Battery	Rechargeable coin cell (clock memory only)	
	Rechargeable, field-replaceable emergency battery power supply (available) P/N 6430006-(1)	
	Technology	Nickel Metal Hydride (NiMH)
	Attributes	0.25A @ 24 VDC nominal (6 Wh capacity)
	Run time	60 minutes @ 0.25A
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 Connector	P/N 9019162-1	26-pin, D-Sub electrical connector (Quick Disconnect)
	P/N 9019162-2	Pneumatic fittings (Quick Disconnect)
Certification	FAA TSO certified to C2d (Type B), C3e, C4c, C8e, C10c, C106, C113b, C201 RTCA DO-160G qualified RTCA DO-178C qualified, Design Assurance Level (DAL) A	
Rights	U.S. Patent 11,048,389	



6420023-1 and 6420023-3 Configurations



6420023-2 Configuration