DF10D32

Analog Current Input Board Level Signal Conditioner

DESCRIPTION

Each DF10D32 analog current input module interfaces to a wide range of sensors and equipment used in industrial and test and measurement applications which output process current level signals.

Each module provides a single channel of differential or single-ended analog current input which is filtered, isolated, amplified, and converted to 24-bit digital data for precise measurement of analog current signals.

The analog current input channel is configurable for alarm limits and averaging to match the most demanding applications. Alarms provide essential monitoring and warning functions to ensure optimum process flow and fail-safe operation. Hardware low-pass filtering provides rejection of 50 and 60Hz power line frequencies.

Input-to-Output isolation is a robust 1500Vrms and the input channel is protected against overload in case of inadvertent wiring errors.

Over-range and under-range up to 2% beyond the specified input values is allowed, and accuracy is guaranteed to ±f.s

The DF10D32 is housed in a vertically standing or horizontal package and is fully specified over the –40°C to +85°C temperature range.

FEATURES

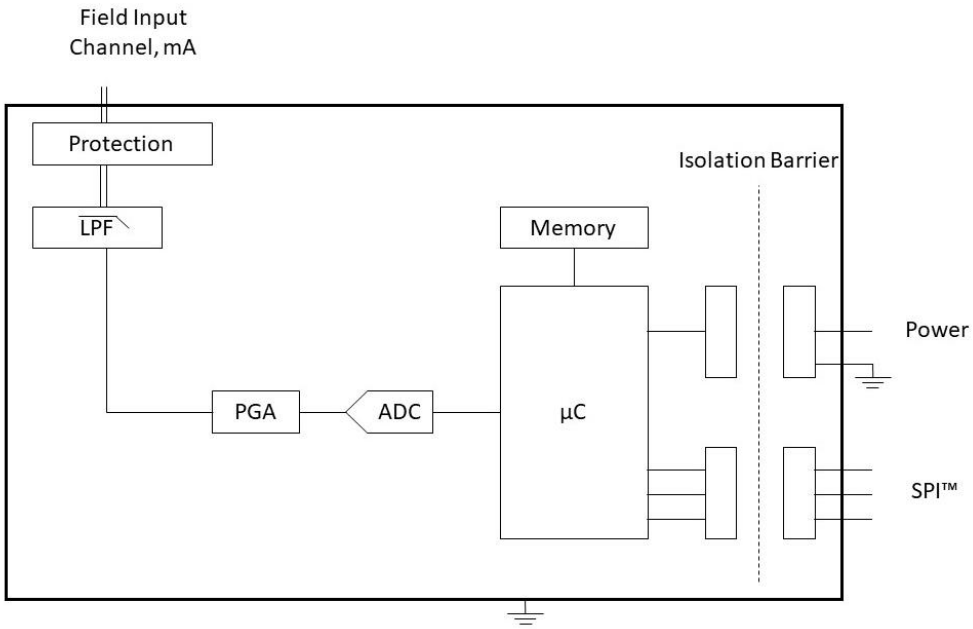
- Interface to Process Current Signals
- 1 Input Channel
- Configurable for Alarms and Averaging
- 1500Vrms Input-to-SPI™ Isolation
- Protected against Overload
- CE compliant
- 24-Bit Resolution
- Operating temperature: –40°C to +85°C

BENEFITS

- Small footprint
- Simplifies sensor interface and signal conditioning design
- Reduces system BOM
- Provides isolation of external sensors
- Protects sensitive system components
- Breaks ground loops
- Reduces EMC concerns

APPLICATIONS

- Signal Conditioning
- Signal Isolation
- Signal Filtering
- Industrial Process Control
- Test & Measurement
- System & Signal Monitoring



DF10D32 Block Diagram - For dimensions see page xxx

Specifications

Typical* at T_A = +25°C and +5VDC power

Module	DF10D32-xxx
DF10D32-xxx	1 input channel, mA
Channel Setup	Configurable for alarms and averaging
Input Range DF10D32-01x DF10D32-02x DF10D32-03x Input Protection Continuous Transient	 0mA to 20mA 4mA to 20mA ±20mA TBD Vrms max CE
CMV Channel-to-Bus Transient CMR NMR	 1500Vrms, 1min CE TBD 30dB/decade
Accuracy (1) Linearity ADC Resolution Stability Zero Span	±0.035% Span ±0.002% Span 24-bit TBD ppm/°C TBD ppm/°C
Bandwidth, -3dB Sampling Rate Alarms	3Hz TBD S/s High, Low
Digital Output Resolution	 24-bit
Interface Clock Input	SPI™ 5MHz
Power Supply Voltage Power Supply Current	+2.8VDC to +5.5VDC TBD mA (1-ch) / TBD mA (4-ch)
Mechanical Dimensions (h)(w)(d) Vertical package Horizonal package	 TBD" x TBD" x TBD" (TBDmm x TBDmm x TBDmm) TBD" x TBD" x TBD" (TBDmm x TBDmm x TBDmm)
Environmental Operating Temp. Range Storage Temp. Range Relative Humidity Emissions EN61000-6-4 Radiated, Conducted Immunity EN61000-6-2 RF ESD, EFT	 –40°C to +85°C –40°C to +85°C 0 to 95% Noncondensing ISM, Group 1 Class A ISM, Group 1 Performance A ±0.5% Span Error Performance B

NOTES:
*Contact factory or your local Dataforth sales office for maximum values.
(1) Includes linearity, hysteresis and repeatability.

Ordering Information

Model	Channels / Input	Output
DF10D32-01V	1 Channel, 0-20mA, vertical	SPI™
DF10D32-02V	1 Channel, 4-20mA, vertical	SPI™
DF10D32-03V	1 Channel, ±20mA, vertical	SPI™
DF10D32-01H	1 Channel, 0-20mA, horizonal	SPI™
DF10D32-02H	1 Channel, 4-20mA, horizontal	SPI™
DF10D32-03H	1 Channel, ±20mA, horizontal	SPI™