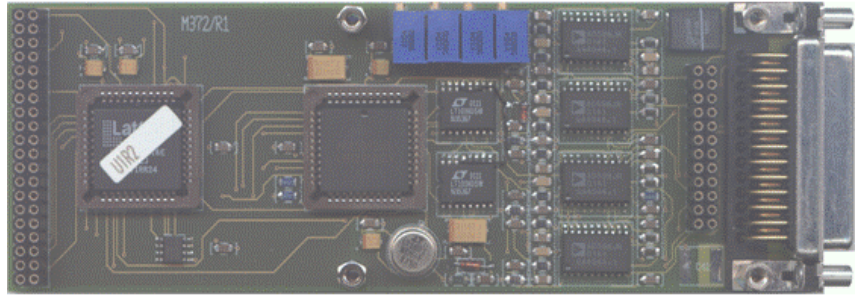


M372

LVDT/RVDT Controller M-module



The M372 LVDT/RVDT Controller M-module is capable of handling up to four LVDT/RVDT devices. All conversions are made with 13-bit resolution using the National Semiconductor LM12458 Data Acquisition System. The device contains a sequencer that allows complex conversion algorithms to execute without host intervention. Conversion results are stored in an on-chip FIFO from which it can be read by the host.

The LVDT/RVDT signal conditioner is implemented using the AD598 from Analog Devices. This device generates the excitation for the LVDT/RVDT devices and measures the feedback on the secondary coils. As a result, it generates a DC voltage that is representative for the core displacement.

Features:

- > AD598 integrated LVDT signal conditioner for each LVDT channel
- > Wide range adjustable LVDT excitation frequency and amplitude
- > Interfaces with 4/5/6-wire LVDT/RVDT devices
- > Distance between LVDT/RVDT devices and M372 can be up to 100 meters
- > LM12458 Integrated Data Acquisition System with 13-bit resolution and sequencer
- > Programmable conversion rate, resolution, number of conversions and comparison limits
- > Interrupt on numerous programmable events (i.e. sequence completion, limit crossing)
- > Operates with minimum CPU intervention after initialization

M-module Compliancy

- * A08/D16 (8-bit address and 16-bit data)
- * INTA (software-end-of-interrupt)
- * IDENT (identification EEPROM)

Data Acquisition

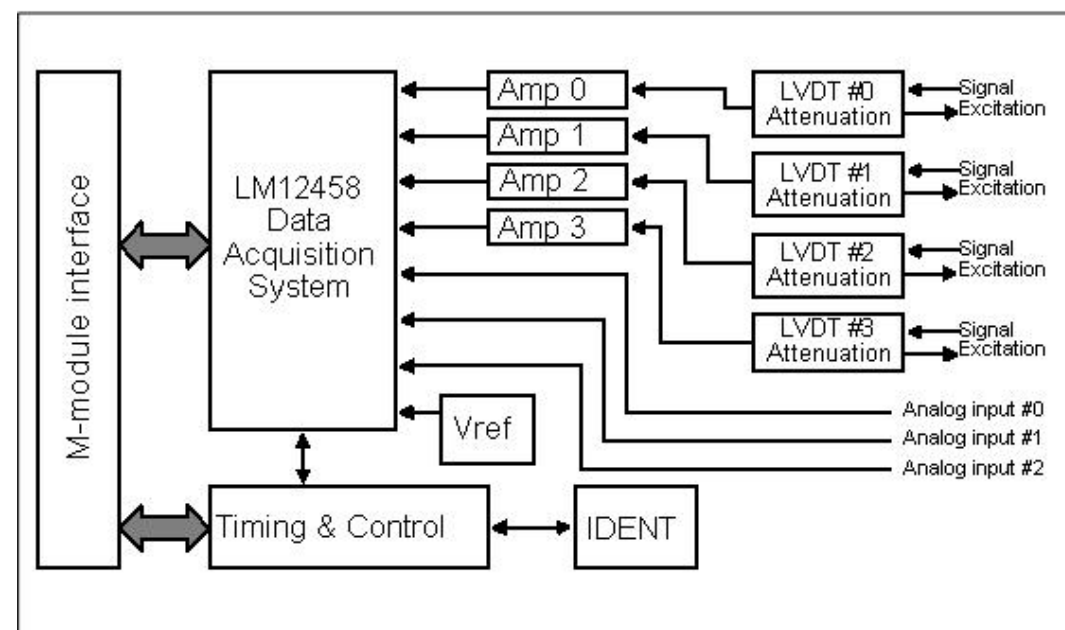
- * LM12458 DAS (Data Acquisition System)
- * Self-calibrating
- * Programmable resolution (8-bit + sign or 12-bit + sign)
- * 8.8 microseconds conversion time in 13-bit mode
- * Internal 32-word FIFO buffer
- * Timer and multiplexer
- * Programmable sequencer

Signal Conditioning

- * AD598 LVDT Signal Conditioner
- * Internal excitation voltage oscillator and ratiometric demodulator with outstanding performance (linearity error max. 0.05% of full scale)
- * Excitation frequency from 20Hz to 20kHz
- * Amplitude in the range of 0 to 5.7 Vrms
- * The four AD598 devices are synchronized to avoid beat notes

Ordering Information

- * **M372/T01** M-module
- * **M372/SW** APIS based software
- * **M372/MAN** manual on paper



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