

Section 2

OPERATION

The **IF302** accepts signals from mA generators such as most conventional transmitters. It is therefore ideal for interfacing existing equipment to a Fieldbus system.

Functional Description – Electronics

Refer to the block diagram (See Figure 2.1 - IF302 Block Diagram). The function of each block is described below.

MUX Multiplexer

The MUX multiplexes the input terminals to ensure that all three channels reach the A/D converter.

A/D Converter

The A/D converts the input signals to a digital format for the CPU.

Signal Isolator

Its function is to isolate the data signal between the input and the CPU.

(CPU) Central Processing Unit, RAM and FLASH

The CPU is the intelligent portion of the converter, being responsible for the management and operation of block execution, self-diagnostics and communication. The program is stored in Flash memory. For temporary storage of data there is a RAM. The data in the RAM is lost if the power is switched off, however the device also has a nonvolatile EEPROM where data that must be retained are stored. Examples of such data are: calibration, configuration and identification data.

Communication Controller

It monitors line activity, modulates and demodulates the signal from network line.

Power Supply

Takes power of the loop-line to power the converter circuitry.

Power Isolation

Just like the signals from the input section, the power to the input section must be isolated.

Display Controller

Receives data from the CPU and drives the Liquid Crystal Display.

Local Adjustment

They are two switches that are magnetically activated. They can be activated by the magnetic tool without mechanical or electrical contact.

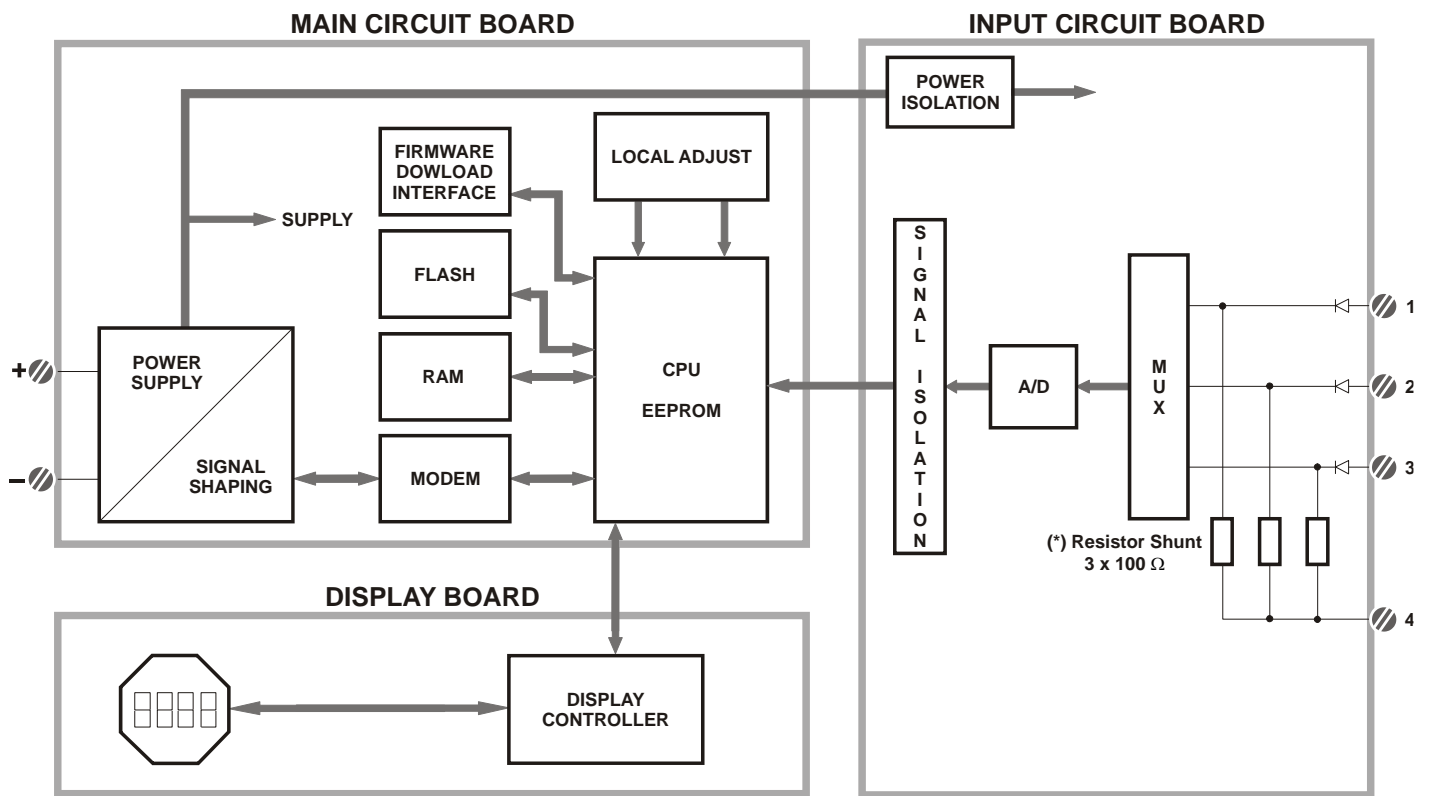


Figure 2.1 - IF302 Block Diagram

*** WARNING**

Apply in the inputs of the converter only current levels. **Don't apply tension levels**, because the shunt resistors are of 100R 1W and **tension above 10 Vdc** it can damage them.