VISHAY INTERTECHNOLOGY, INC.

www.vishay.com

The DNA of tech.™

Reference Design

White Paper

MessWEB Controller for eFuse Designs

By Mustafa Dinc, Eckard Eikelmann, Manfred Kopp, and Leonard von Hagen

1. WEB-INTERFACE

1.1. Overview of the MessWEB Hardware

The housing of the MessWEB measures 60 mm × 70 mm and weighs 80 g. Using the MessWEB for external control of the eFuse results in an increase of the current draw from the external power supply to 210 mA.

The MessWEB can be used to control other Vishay reference designs as well. It reads the design's version number from its EEPROM and then provides the corresponding web interface.

The MessWEB is connected to the eFuse using the 14-pin shrouded connector, and the RJ45 connector is used to make the connection to the computer. The SD card, which is accessible from the side, contains the MessWEB's firmware and is used for any necessary updates.

The MessWEB can also be equipped with a CAN bus compatible chip and programmed according to the customer's specifications. The connection to the CAN bus is made using the D-Sub-9 socket.

To use the web interface the eFuse must be connected to an external power supply as described in section 1, the MessWEB connected to the 14-pin connector of the eFuse, and a LAN cable connected between the MessWEB and a computer.

Fig. 1 - Top View of the MessWEB

Fig. 2 - Shrouded Connector and Slot for the SD Card

Fig. 3 - CAN Bus and RJ45

WHITE PAPER

MessWEB Controller for eFuse Designs

1.2. Overview of the MessWEB Software

The web browser interface of the external controller “Vishay MessWEB” can be used to control the eFuse with a computer and initialized using the address “http://192.168.0.1”.

With the “MessWEB”, the current status of the eFuse can be displayed on a computer, and all the parameters can be set:

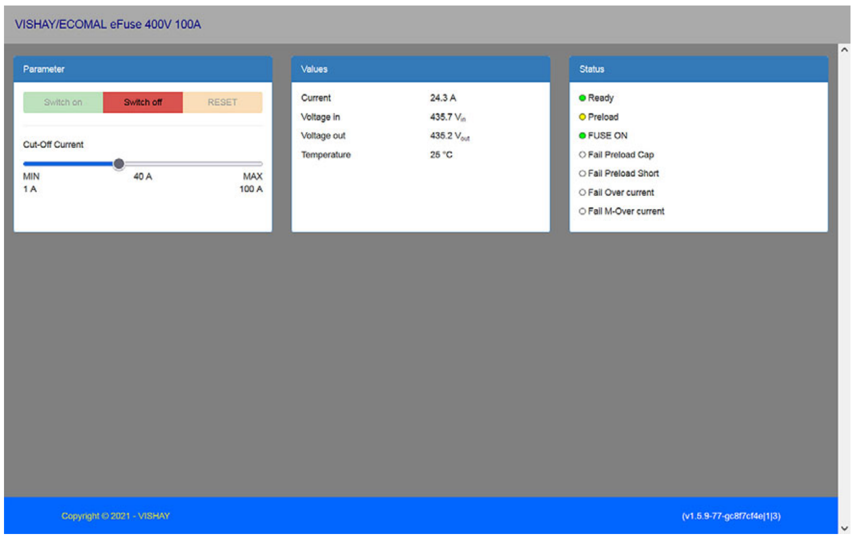

Fig. 4 - Overview of the Web Interface of the Vishay MessWEB

The web interface is divided into three sections. In the left column the eFuse can be switched on and off, errors can be acknowledged, and the maximum current can be set. In the middle column the currently measured values of the eFuse are displayed: input voltage, output voltage, load current, and ambient temperature. The right column displays the same status indicators as the LEDs on the PCB.

Even with the web interface in use, the eFuse can still be turned on or off at any time using the <ON / OFF> buttons on the PCB.

If an error occurs during operation and causes the eFuse to turn off, it must first be acknowledged using the <RESET> button on the web interface before it can be turned on again:

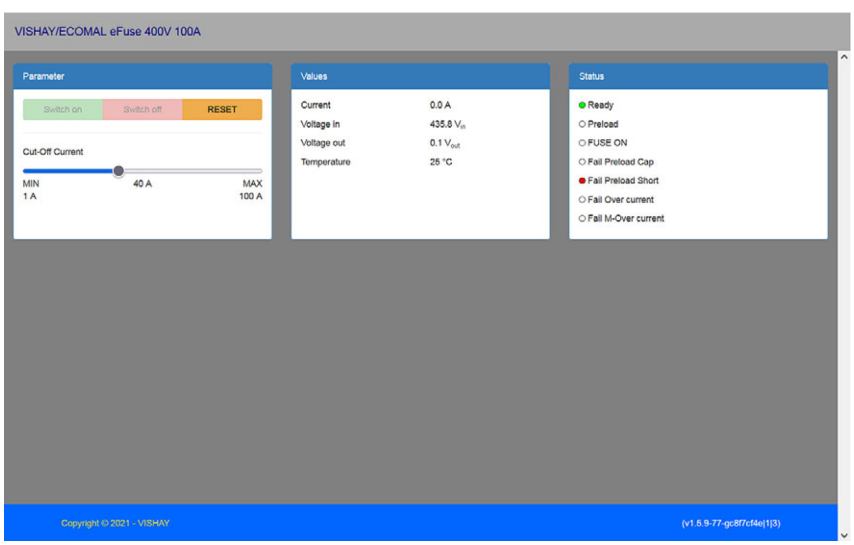

Fig. 5 - Web Interface After an Error Occurred