

## Universal motor driver with speed control based on the STM8 and Triac (US version)

Databrief

### Features

- Input voltage 120 V/60 Hz
- Motor current: 7 A RMS
- Phase control for universal motor drive
- Open loop or closed loop speed regulation
- Voltage and current sensing, for sensorless operation (optional)
- Debug outputs
- AC tach, Hall sensor or opto-sensor for speed feedback
- RoHS compliant



### Description

The STEVAL-IHM041V1 demonstration board is a Triac-based phase angle control for universal motor speed control using an STM8S103F3P6, 8-bit microcontroller, to set the conduction angle of the Triac.

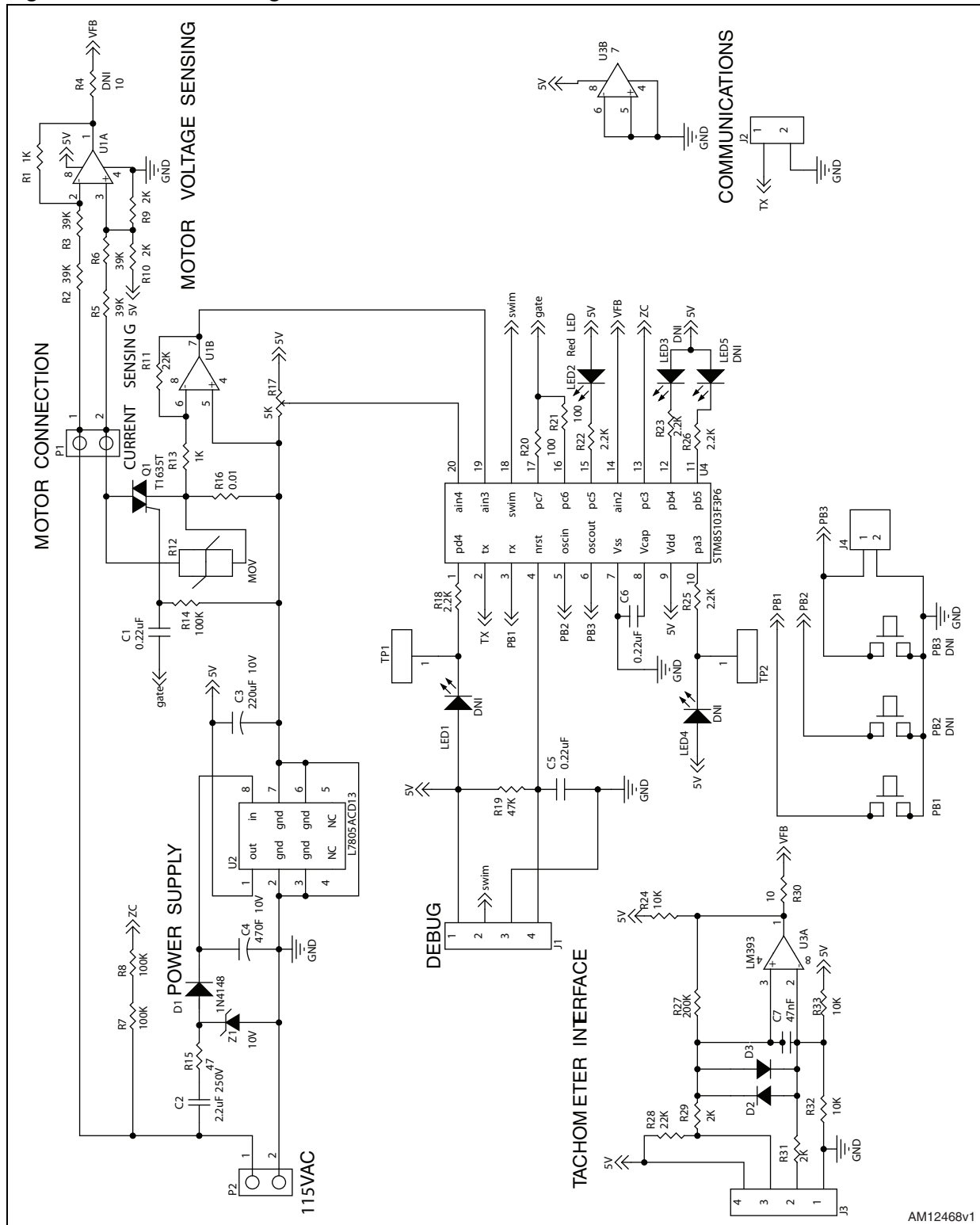
The STEVAL-IHM041V1 demonstration board may be operated in either open loop mode or in closed loop speed control mode, with an AC tach, Hall sensor or opto-sensor feedback.

The open loop mode may also be used as a lamp dimmer.

The STEVAL-IHM041V1 demonstration board is designed to operate from a 120 V/60 Hz mains, but may be easily modified to operate on other mains voltages by changing components in the power supply and motor voltage sensing circuits. Suggested component values for 230 V/50 Hz mains voltages are shown in the relevant bill of materials.

# 1 Schematic diagram

Figure 1. Schematic diagram



AM12468v1



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
06-Jul-2012	1	Initial release.

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