



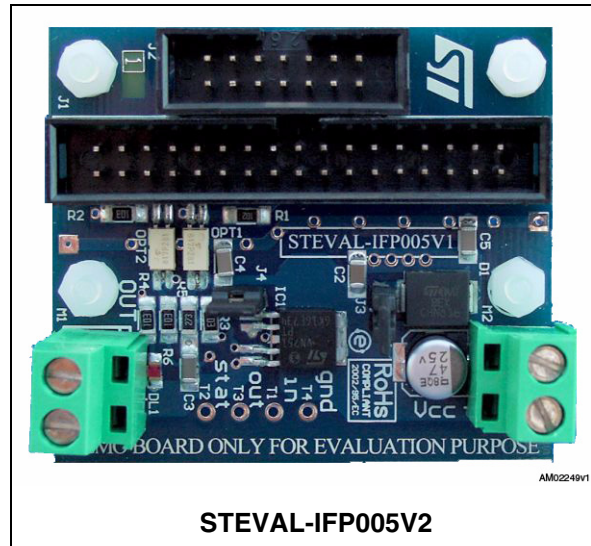
# STEVAL-IFP005V2

## High side driver demonstration board based on the VN751PT

Data brief

### Features

- 3 independent application programs
  - Hand dryer with infrared sensor and T1235H-6T switch
  - Bathroom fan with humidity sensor and ACS108 switch
  - Multi-entrance room controller with push button and BTB08-600SW switch
- Two potentiometers for setting sensor sensitivity and TRIAC turn-off delay
- Capacitive power supply (680 nF capacitor EPCOS B32923C3684
  - 5 V  $\pm$ 10%
  - Average output current: 16 mA
  - Standby power losses < 0.3 W @ 230 V
- Program selector (U2)
- ICC connector for software adjustment
- Free development area with hole matrix available for application breadboard adaptation
- Overvoltage protection is not implemented on the board but some solder pads are available to implement it in two different ways:
- Varistor addition between mains voltage
- Transil addition between TRIAC A2-G terminals
- RoHS compliant



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### Description

The purpose of this design is to demonstrate the features of the VN751PT high-side driver.

The application offers robustness and complies with EMC industrial standards.

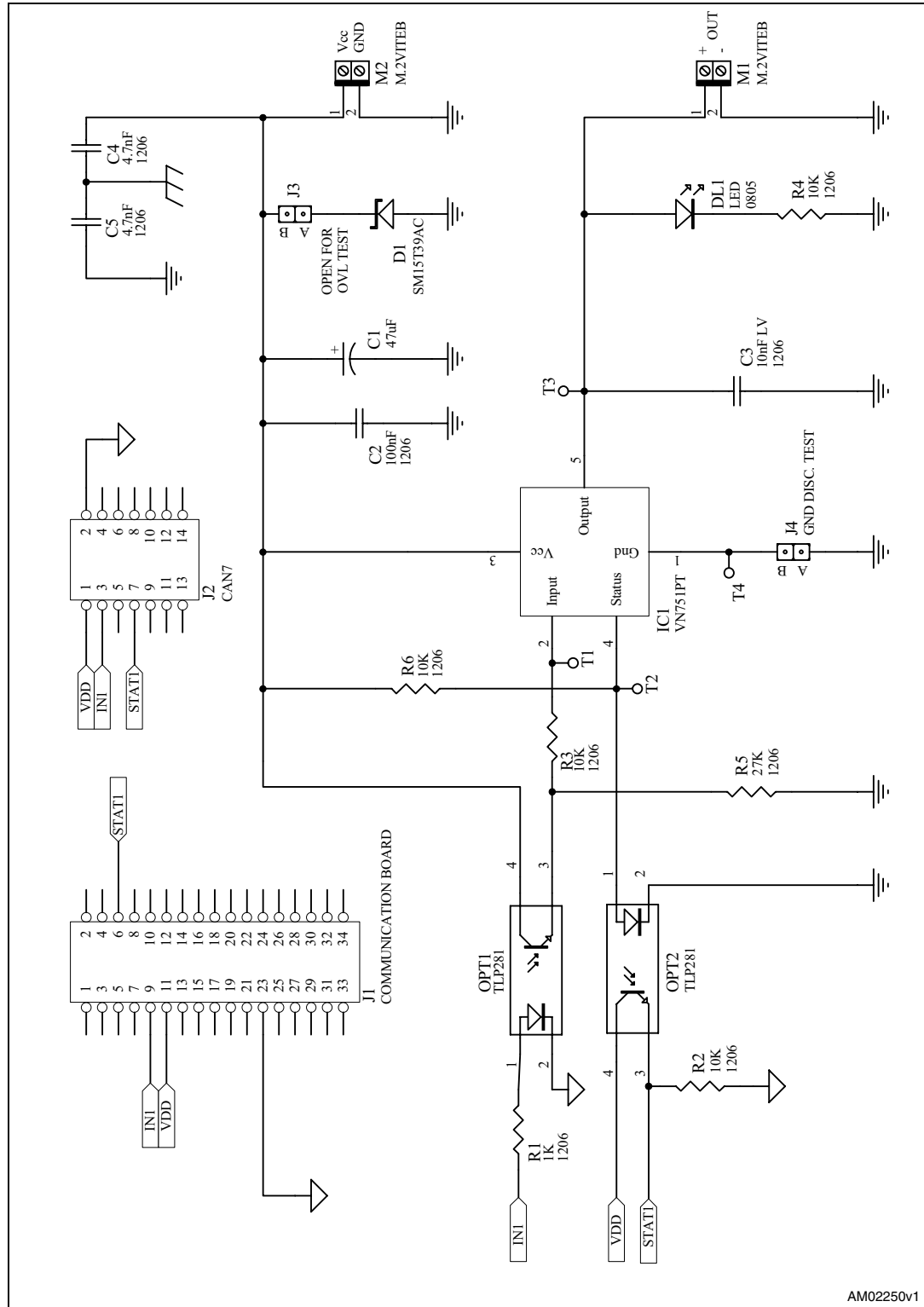
It implements short-circuit/overload protection and thermal management as well, achieving best in class MTBF values.

The reference design is suitable for use in programmable logic controllers (PLCs) as well as to drive generic loads which require up to 2.5 A of nominal current (the typical current limitation is 4.5 - 5 A).

Thanks to the very low  $R_{DSon}$  (only 60 m $\Omega$  Typ. @ 25 °C) the device allows very low power consumption during the operation and for this reason it represent an ideal solution for IP65 / IP67 requirements. The device is compliant with IEC 61131-2 (programmable controllers international standard).

# 1 Circuit schematic

Figure 1. Schematic diagram



AM02250v1

## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
16-Jul-2009	1	Initial release.

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