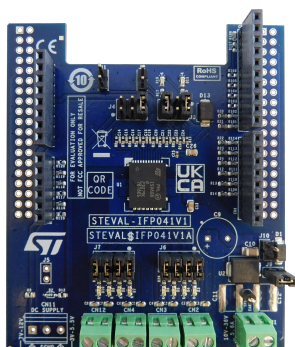


Industrial digital output expansion board based on ISO808 in TFQFPN32 package



Features

- Based on the **ISO808** octal high-side switch, which features:
 - Operating range 9.2 to 36 V
 - Low power dissipation ($R_{ON(MAX)} = 260\text{ m}\Omega$)
 - Process side operating current: up to 0.7 A per channel
 - Embedded 2.5k V_{RMS} galvanic isolation
 - Direct (jitter < 20us) and synchronous (jitter < 6us) control modes
 - Fast decay for inductive loads
 - Undervoltage lock-out
 - Overload and overtemperature protections
 - Loss of ground protection
 - TFQFPN32 package
- Application board process side operating range: 10 (J10 open) to 33 V (J9 closed)
- Extended operating range of process side from 9.2 (J10 closed) up to 36 V (J9 open)
- Application board logic side operating voltage 3.3 to 5 V
- Green LEDs for outputs on/off status (J6 and J7 close 1-2, 3-4, 5-6, 7-8)
- Red LED for common overheating and communication error diagnostic (J3 close 1-2)
- Yellow LED for output enable status signalization (J3 close 5-6)
- Direct control mode (J1, J2 closed)
- Synchronous control mode (J1, J2 open)
- Process and logic supply rails reverse polarity protections
- Compatible with **STM32 Nucleo** development boards
- Equipped with Arduino® UNO R3 connectors
- RoHS and China RoHS compliant
- CE certified

Product summary	
Industrial digital output expansion board based on ISO808 in TFQFPN32 package	STEVAL-IFP041V1
Software expansion for STM32Cube driving industrial digital output based on IPS	X-CUBE-IPS
Galvanic isolated octal high-side power solid state relay for high inductive loads	ISO808QTR
Applications	Programmable Logic Controllers

Description

The **STEVAL-IFP041V1** is an industrial digital output expansion board based on **ISO808** and compatible with STM32 Nucleo.

It provides a powerful and flexible environment for the evaluation of the driving and diagnostic capabilities of the **ISO808** octal high-side smart power solid state relay, with embedded galvanic isolation, in a digital output module connected to 0.7 A industrial loads.

The **STEVAL-IFP041V1** directly interfaces with the microcontroller on the STM32 Nucleo driven by GPIO pins and Arduino® R3 connectors, ensuring connectivity with either a **NUCLEO-F401RE** or a **NUCLEO-G431RB** development board.

The galvanic isolation between the microcontroller and the process stage is guaranteed by the **ISO808**.

It is also possible to evaluate a system composed of a **STEVAL-IFP041V1** stacked on other expansion boards.



Figure 1. STEVAL-IFP041V1 circuit schematic (1 of 2)

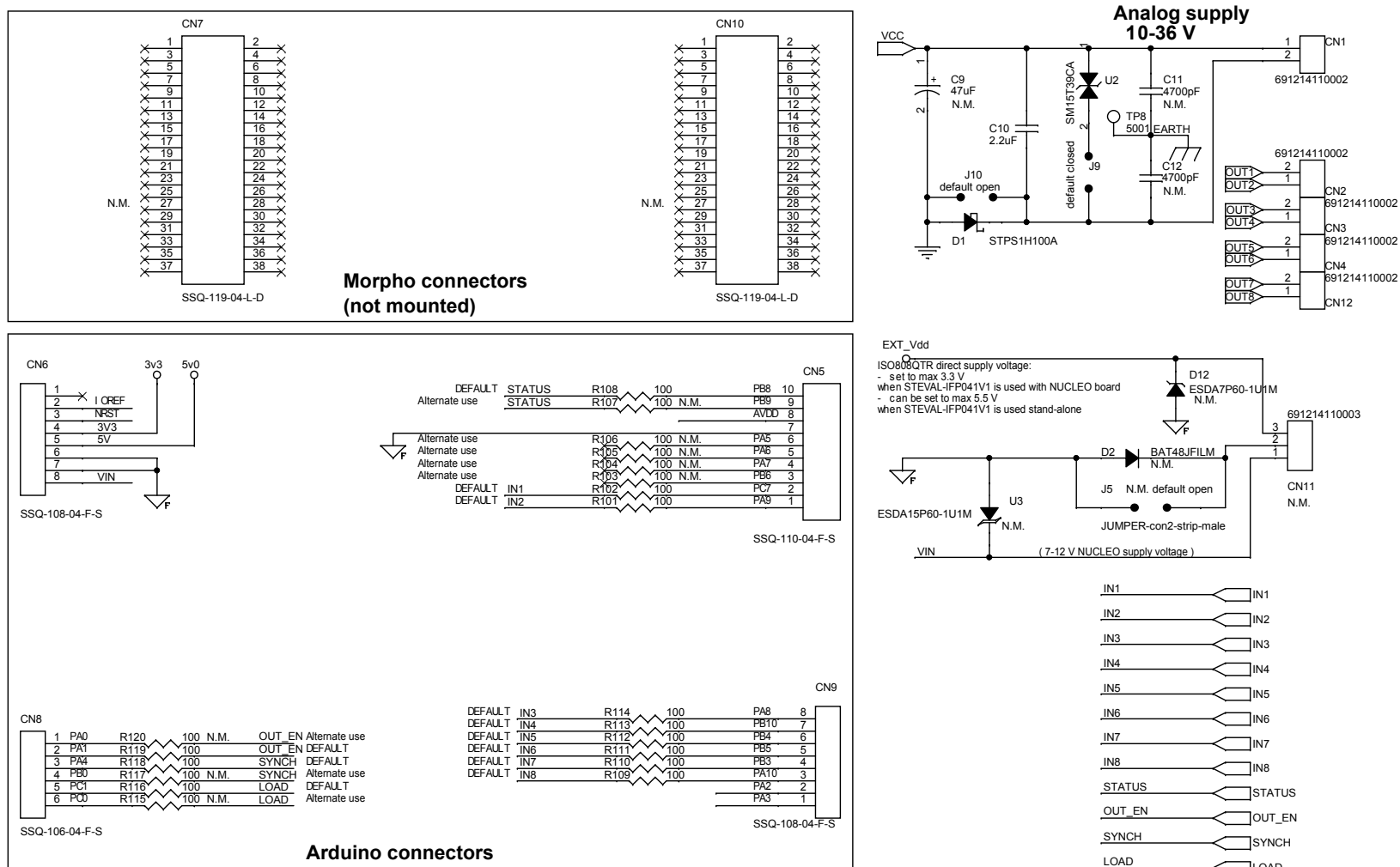
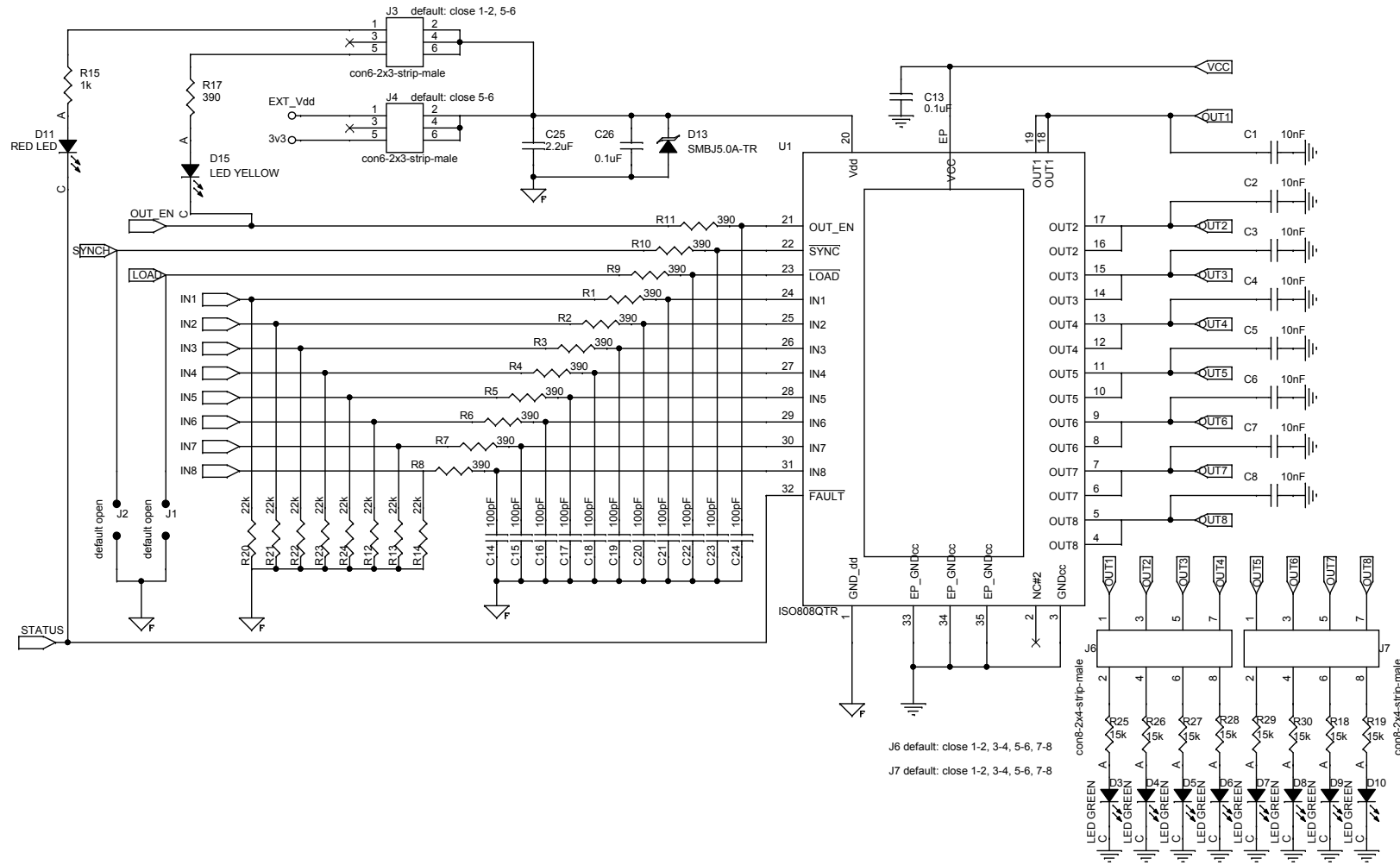


Figure 2. STEVAL-IFP041V1 circuit schematic (2 of 2)



2 Board versions

Table 1. STEVAL-IFP041V1 versions

PCB version	Schematic diagrams	Bill of materials
STEVAL\$IFP041V1A ⁽¹⁾	STEVAL\$IFP041V1A schematic diagrams	STEVAL\$IFP041V1A bill of materials

1. This code identifies the STEVAL-IFP041V1 evaluation board first version. It is printed on the board PCB.

Revision history

Table 2. Document revision history

Date	Revision	Changes
12-Sep-2023	1	Initial release.

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