IPS160H/IPS161H
Ready for tomorrow's factory automation

Single high-side switch with embedded protections and extended diagnostics for safety integrity level (SIL2 and SIL3) compliant systems

We are on the threshold of the fourth industrial revolution: digitalization of production, efficient and flexible manufacturing, maximum quality and enhanced safety are driving the future of manufacturing. With an operation supply voltage range up to 60V, the IPS160H and IPS161H intelligent power switches (IPS) are specifically designed to match the application requirements of the Safety Integrity Level systems. Further, these devices feature protection for self and load safe operation and provide extended diagnostic signals for exhaustive application control.

KEY FEATURES

- Wide supply voltage range: 8 to 60 V
- Current limitation > 2.6 A (IPS160H), > 0.7 A (IPS161H) with programmable cut-off delay time
- Detection of open load or short to Vcc in OFF state
- Max. on-state resistance of 120 mΩ (60 mΩ typ.) for very low conduction losses
- Fast demagnetization of inductive loads

KEY BENEFITS

- Voltage range
- Low power dissipation
- Enhanced robustness with extensive protections and diagnostics
- Enabling SIL2 and SIL3 compliant systems
- Tiny PowerSSO12 (5x4mm) package

KEY APPLICATIONS

- Programmable logic controllers (PLC)
- Factory automation I/O peripherals
- Computer numerical control (CNC) machines
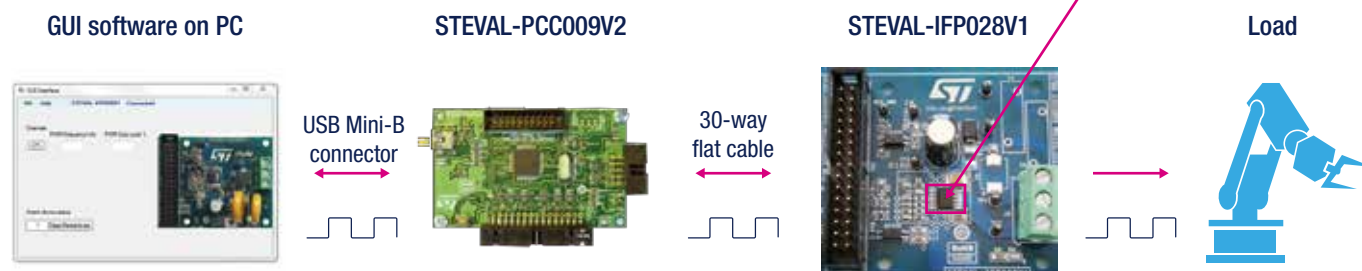- Suitable for all types of resistive, inductive and capacitive loads

HANDS-ON DEVELOPMENT

You can easily explore the IPS160H/IPS161H's features and gauge their benefits for your application using the STEVAL IFP028V1 and STEVAL-IFP034V1 evaluation boards. With their thermally-optimized layout, a galvanically-isolated connection for both the command and diagnostic lines, the boards comply with IEC 61000- 4-2, IEC61000-4-4, and IEC 61000-4-5 requirements to enable a comprehensive system level evaluation.

The STEVAL-IFP028V1 and STEVAL-IFP034V1 can be connected through the STEVAL-PCC009V2 to a PC where the STSW-IFP001 dedicated graphic user interface (GUI) will provide full access to IPS160H/IPS161H functions.

GUI software on PC   STEVAL-PCC009V2   STEVAL-IFP028V1   Load

USB Mini-B connector

30-way flat cable

Order code	Current Limitation (A)	Package	Packing
IPS160H/IPS160HTR	> 2.6	PowerSSO 12	Tube/Tape & Reel
IPS161H/IPS161HTR	> 0.7		

Order code	Description	Related documents
STEVAL-IFP028V1	IPS160H single high-side driver evaluation board	Application note AN4781: STEVAL-IFP028V1 evaluation board for single high-side driver IPS160H
STEVAL-IFP034V1	IPS161H single high-side driver evaluation board	
STSW-IFP001	Graphical user interface for intelligent power switches in industrial applications	Application Note AN4998: STEVAL-IFP034V1 evaluation board for single high-side driver IPS161H
STEVAL-PCC009V2	Motor control and intelligent power switch (IPS) universal interface	

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