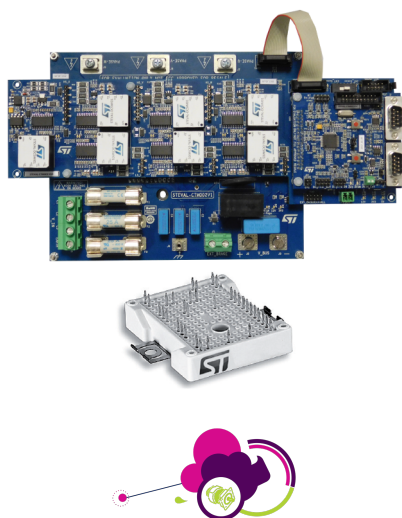


Industrial drive system kit based on ACEPACK™ 2 power module



Features

- **A2C35S12M3-F** ACEPACK™ 2 power module in converter inverter brake (CIB) topology
- Control stage based on **STM32F303** ARM® Cortex®-M3 MCU and compatible with ST MC library with ST-FOC algorithm (sensored and sensorless mode)
- In-rush current, thermal and overcurrent protection
- Brake function with external resistor
- On-board isolated current sensing of 2.1 kV_{RMS}
- Galvanically isolated driving stage with **STGAP1AS**
- Additional gate driving for dissipative brake section (external power resistor)
- Protections and sensing (overvoltage, overcurrent, overtemperature, current reading input)
- Input/output interface (analog/digital)

Description

The **STEVAL-HKI001V1** is an industrial drive evaluation system designed to demonstrate the capabilities of the **A2C35S12M3-F** IGBT power module for motor control applications.

It offers a solution for single- or three-phase main input with a converter inverter brake (CIB) topology able to handle a motor current up to 35 A (power module maximum current rating).

The hardware platform is a stackable solution consists of the power stage (STEVAL-CTM002V1), which contains the power module and current sensing circuitry, and the driving kit (STEVAL-CTM001V1) connected via external connectors.

The STEVAL-CTM001V1 driving kit consists of a STEVAL-CTM001V1C control board based on the **STM32F303RBT7** microcontroller able to execute the field oriented control (FOC) algorithm to obtain the best performance in all motor control applications, and the STEVAL-CTM001V1D driving board based on the new galvanically isolated **STGAP1AS** gapDRIVE™, with suitable circuitry to drive the embedded IGBTs in the power module.

The control board has RS232 and CAN external interfaces to let you monitor and control your application on the evaluation system via PC.

Product summary	
Industrial drive system kit based on ACEPACK™ 2 power module	STEVAL-HKI001V1
35 A 1200 V converter inverter brake ACEPACK™ 2 IGBT power module	A2C35S12M3-F
Mainstream mixed signal MCUs ARM® Cortex®-M4 core with DSP and FPU	STM32F303RBT7
Automotive galvanically isolated single gate driver	STGAP1AS

Revision history

Table 1. Document revision history

Date	Version	Changes
06-Mar-2018	1	Initial release.

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