

## ► Sensorless position control of DC-motors, with drivers

### FEATURES

- 6 Half Bridges configurable to drive 3, 4, or 5 DC Motors
- Half Bridges not needed for Motor Control may drive other kinds of loads
- Output Current max. 400 mA per Half Bridge
- Three independent Pulse Detectors and Counters
- Servo Control Positioning of Actuators
- Excellent Positioning Performance
- SPI for communication with  $\mu\text{C}$
- Short Circuit Protection
- Over Temperature Protection
- Battery Supply and 5V Monitor
- Diagnostic Data via SPI
- QFN 7  $\times$  7 32 package

### APPLICATION

- Positioning of HVAC Flaps (according to US patent 5,203,499 owned by BHTC)

### DESCRIPTION

The IC features 6 configurable half bridges to drives up to 3 DC motors simultaneously or up to 5 motors sequentially. 3 independent pulse detection circuits convert the commutation current of the motors into countable digital signals for positioning especially of HVAC flap actuators.

Via an SPI a  $\mu\text{C}$  sends motor address, direction, and pulse count command to the device. The corresponding motor will then be driven to the desired position, and the actual number of counts is sent back to the  $\mu\text{C}$ .

Diagnostic data such as over current, over temperature, and motor stall is also transmitted via the SPI.

An open drain low side output indicates when a required motor position is reached or diagnostic data is available.

ICs can be connected in a daisy chain.

### BLOCK DIAGRAM

