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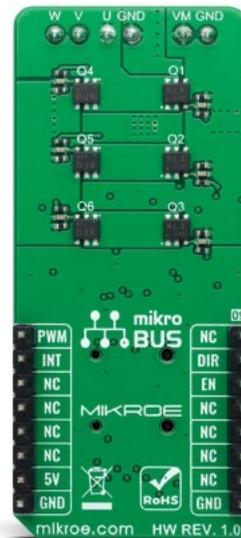www.mikroe.com

Brushless 15 Click

PID: MIKROE-4885

Brushless 15 Click is a compact add-on board suitable for controlling BLDC motors with any MCU. This board features the TB9061AFNG, an automotive pre-driver that incorporates a sensorless controller for driving a 3-phase full-wave brushless DC motor from Toshiba Semiconductor. The TB9061AFNG achieves 120° rectangular wave motor control by using an input signal line that measures the induced voltage of the motors and three-phase motor output without using Hall sensors, rated for an operating voltage range of 6 to 18V. Motor rotation can be controlled by either the DC or the PWM input signal. Besides, it features several diagnostic circuits and drive-control functions such as motor lock detection, step-out detection, over-current/over-temperature detection, and many more. This Click board™ can control motors without using heat-sensitive hole sensors, securing control of pumps in a hot environment providing optimum operating efficiency in automotive applications.

Brushless 15 Click is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

Specifications

Type	Brushless
Applications	Can control motors without using heat-sensitive hole sensors, securing control of pumps in a hot environment providing optimum operating efficiency in automotive applications
On-board modules	TB9061AFNG - automotive pre-driver that incorporates a sensorless controller for driving a 3-phase full-wave brushless DC motor from Toshiba Semiconductor
Key Features	3-phase full-wave sensorless drive, compatible with both external PWM duty input and DC input control, lead angle control, rotation-speed and lock detection, protection features, and more.
Interface	GPIO,PWM
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)
Input Voltage	5V,External
Silicon Vendor	Toshiba Semi.

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click boards™

Downloads

Brushless 15 click 2D and 3D files

TB9061AFNG datasheet

SSM6J808R datasheet

Brushless 15 click schematic

Brushless 15 click example on Libstock

SSM6K809R datasheet