

ATS650LSH

Two-wire wheel-speed and direction sensor for ABS applications

The new Allegro MicroSystems ATS650LSH is a two-wire sensor module designed for wheel-speed and direction sensing in automotive ABS applications.

The module incorporates an integrated magnet and a single-chip IC containing three highly sensitive Hall-effect sensing elements and a sophisticated digital circuit to provide accurate speed and direction information.

The regulated current output is configured for two-wire operation, and integrates the direction and diagnostic information with the speed signal using a PWM (pulse-width modulated) protocol.

The device is optimised for a 2.5 mm airgap (as used on typical ABS targets), and incorporates built-in diagnostics for both airgap and temperature. The use of triple Hall sensors provides quick calibration within three target edges, with direction change detection on the first edge.

The ATS650LSH features true zero-speed operation, and will operate up to frequencies of more than 8 kHz. The non-contact Hall-sensing technique leads to high reliability, while the 4-lead module package offers operation over the automotive temperature range from -40°C to 150°C.
