

A114X Series

Two-wire, chopper-stabilised unipolar Hall-effect switch

The A114X Series from Allegro MicroSystems Europe is a range of two-wire, unipolar, Hall-effect switches with factory programmability for end-of-line optimisation of switch point accuracy.

The devices use a patented high-frequency chopper-stabilisation technique based on Allegro's advanced BiCMOS wafer fabrication process to achieve magnetic stability and to eliminate the offsets inherent in single-element devices and caused by harsh application environments.

The A114X family incorporates on-chip transient protection, with a Zener-diode clamp on the power supply protecting against overvoltage conditions on the supply line. Robust ESD/EMC protection and reverse battery protection are also included. The devices have on-board voltage regulation, and are designed for 8-24 V operation.

There are four devices in the family: A1140, A1142, A1143 and A1145. The output of the A1143 devices will switch 'high' in the presence of a sufficiently large south-pole magnetic field and 'low' with the removal of the field. The A1140/2/5 devices have the opposite polarity to the A1143, switching 'low' in the presence of a sufficiently large south-pole magnetic field.

Two package styles provide a magnetically optimised package for most applications. A miniature low-profile package (Suffix 'LH') is designed for surface-mount applications, while a three-lead ultra-miniature single-inline package (suffix 'UA') is designed for through-hole mounting.
