



The Future of Analog IC Technology®

MagAlpha MA850

8-Bit Contactless Angle Encoder with PWM Output and Push Button Function

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MA850 is an easy-to-use, magnetic, angle encoder with a digital output designed to replace analogic potentiometers or rotary switches. The sensor detects the absolute angular position of a permanent magnet attached to a rotating shaft and outputs a PWM waveform with 8-bit resolution.

The magnet shapes and configurations are very flexible. Typically, the MA850 is used with a diametrically magnetized cylinder of 2 to 8mm in diameter.

The MA850 features programmable magnetic field strength thresholds, which allow for the implementation of a push or pull button function. These are output as two logic signals.

On-chip non-volatile memory provides storage for configuration parameters, including the reference zero angle position and magnetic field detection threshold settings.

FEATURES

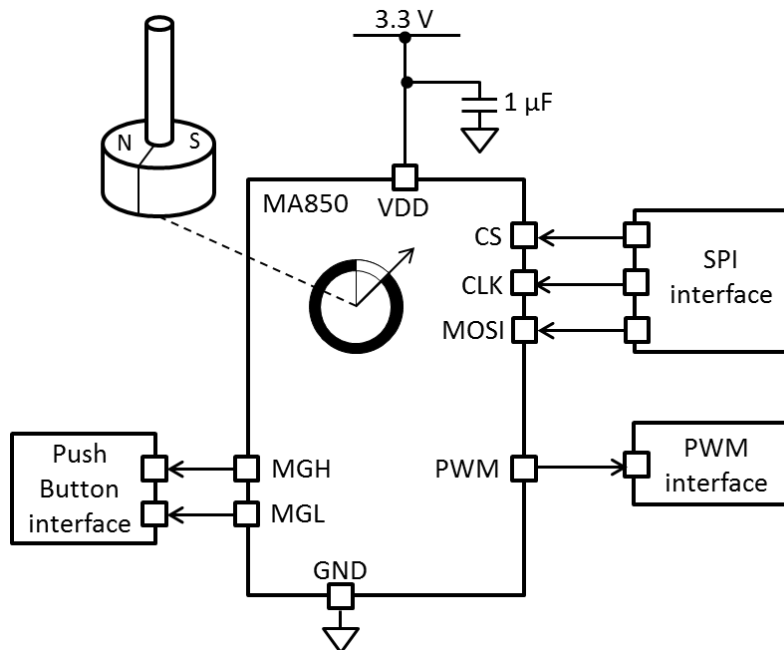
- 8-Bit Resolution Absolute Angle Encoder
- Contactless Sensing for Long Life with No Wear
- SPI Serial Interface for Chip Configuration
- Programmable Magnetic Field Strength Detection for Push/Pull Button Detection
- 3.3V, 12mA Supply
- -40 to +125°C Operating Temperature
- Available in a QFN-16 (3mmx3mm) Package

APPLICATIONS

- Rotary Knob Control Interfaces
- Encoders
- Automotive
- White Goods

All MPS parts are lead-free, halogen-free, and adhere to the RoHS directive. For MPS green status, please visit the MPS website under Quality Assurance. "MPS" and "The Future of Analog IC Technology" are registered trademarks of Monolithic Power Systems, Inc.

TYPICAL APPLICATION

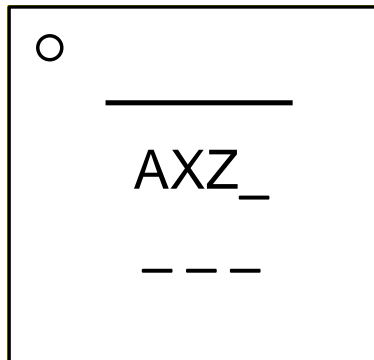


ORDERING INFORMATION

Part Number*	Package	Top Marking
MA850GQ	QFN-16 (3mmx3mm)	See Below

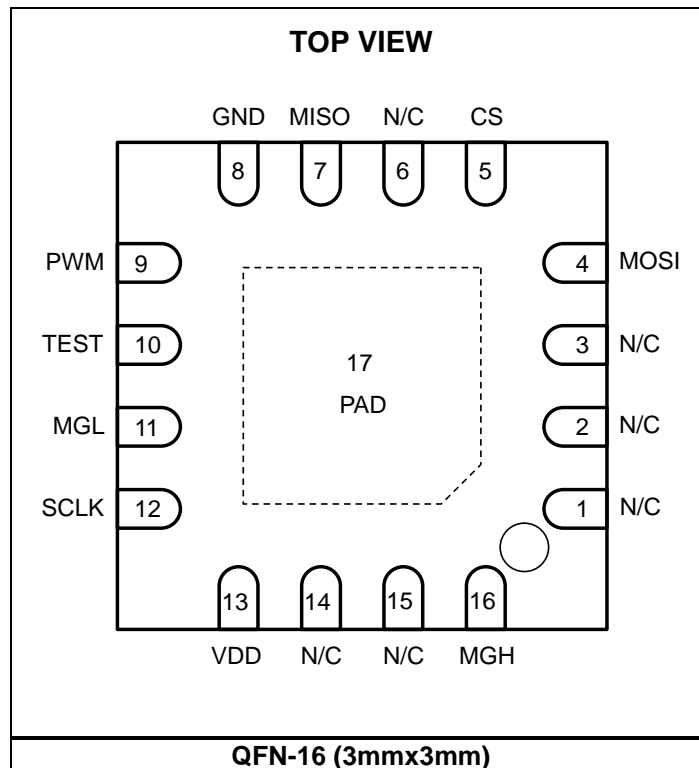
* For Tape & Reel, add suffix -Z (e.g. MA850GQ-Z)

TOP MARKING



Underscore sign (_): Internal identifiers

PACKAGE REFERENCE



NOTICE: The information in this document is subject to change without notice. Users should warrant and guarantee that third party Intellectual Property rights are not infringed upon when integrating MPS products into any application. MPS will not assume any legal responsibility for any said applications.