



The Future of Analog IC Technology®

MagAlpha MA820

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

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MA820 is an easy-to-use, magnetic, angle encoder 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 incremental ABZ encoder data. The number of pulses per channel for each A or B output is programmable from 1 to 64 via an SPI interface.

Magnet shapes and configurations are very flexible. Typically, the MA820 is used with a diametrically magnetized cylinder of 2 to 8mm in diameter.

The MA820 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, ABZ pulses per channel, and magnetic field detection threshold settings.

FEATURES

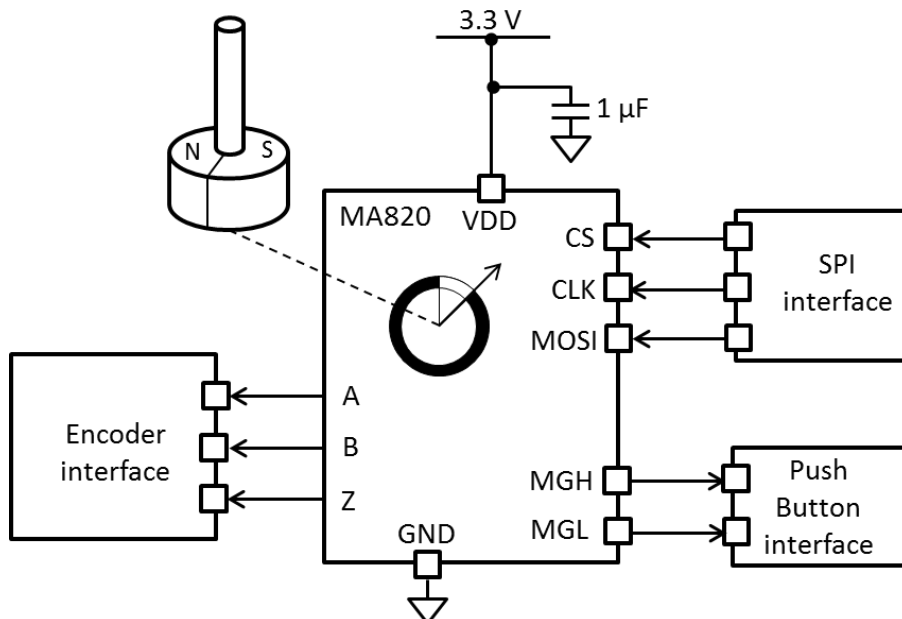
- 8-Bit Resolution Absolute Angle Encoder
- Contactless Sensing for Long Life with No Wear
- SPI Serial Interface for Chip Configuration
- Incremental ABZ Encoder Interface with 1 - 64 Programmable Pulses Per Channel
- Programmable Magnetic Field Strength Detection for Push/Pull Button Detection
- 3.3V, 12mA Supply
- -40 to +125°C Operating Temperature
- Available in a QFN-16 (3mmx3mm) Package

APPLICATIONS

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

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TYPICAL APPLICATION

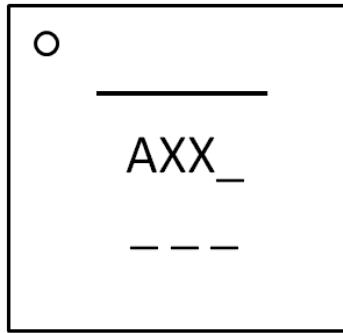


ORDERING INFORMATION

| Part Number* | Package | Top Marking |
|--------------|------------------|-------------|
| MA820GQ | QFN-16 (3mmx3mm) | See Below |

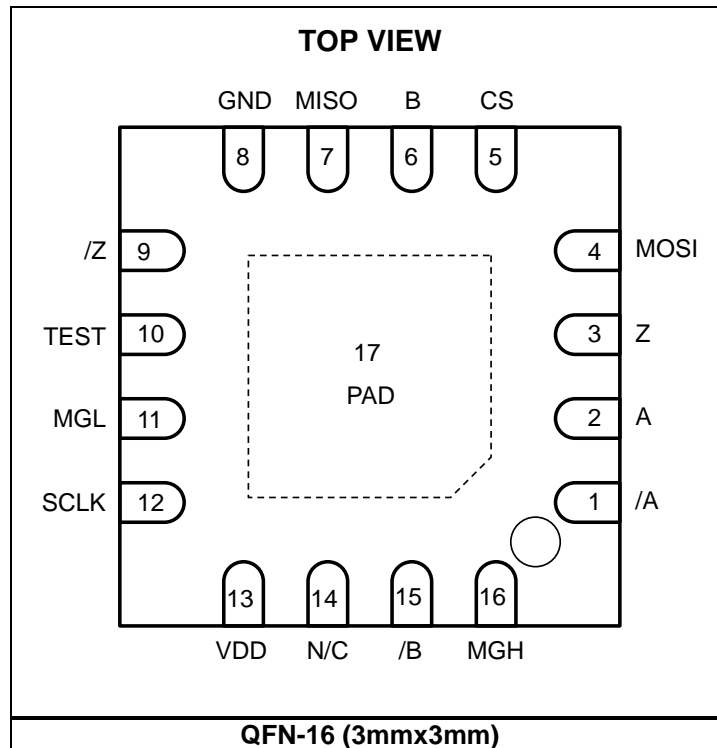
* For Tape & Reel, add suffix -Z (e.g. MA820GQ-Z)

TOP MARKING



Underscore sign (_): Internal identifiers

PACKAGE REFERENCE



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