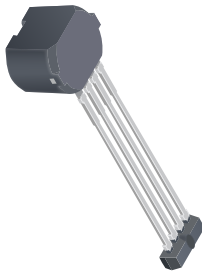# ATS693LSG (RSNYPH)

Three-Wire, Differential, Vibration Resistant Sensor IC with Speed and Direction Output

Datasheet Addendum

FEATURES AND BENEFITS

▪ P option (pulses allowed)

PACKAGE: 4-pin SIP (suffix SG)

DESCRIPTION

This addendum adds the P option (an output protocol) to the main datasheet (ATS693LSG) for this device.

For parameters not listed in this addendum, refer to the main datasheet. In the event of a conflict between this addendum and the main datasheet, this addendum takes precedence.

SELECTION GUIDE

Part Number	Pb-Free	Packing*	Running mode t_w(ND) Pulses
ATS693LSGTN-RSNYPH-T	Yes	Tape and Reel, 800 pieces per 13-in. reel	P – Pulses Allowed

*Contact Allegro™ for additional packing options.

Direction Validation

Following a direction change in Running mode, output pulses have a width of $t_w(ND)$ until direction information is validated. An example of the waveforms is shown in Figure 1.
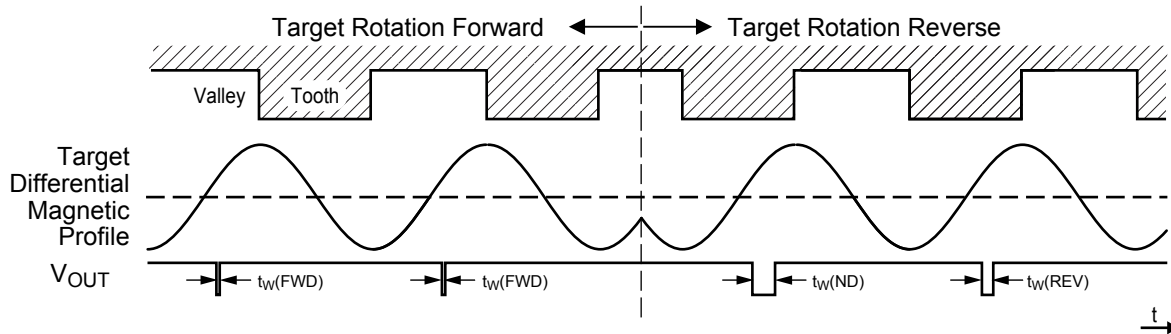

Figure 1: Example of Direction Change in Running Mode

Vibration Detection

Algorithms embedded in the IC digital controller detect the presence of target vibration through analysis of the two magnetic input channels.

In the presence of vibration, output pulses of $t_w(ND)$ may occur or no pulses may occur, depending on the amplitude and phase of the vibration (Figure 2). Output pulses have a width of $t_w(ND)$ until direction information is validated on constant target rotation.
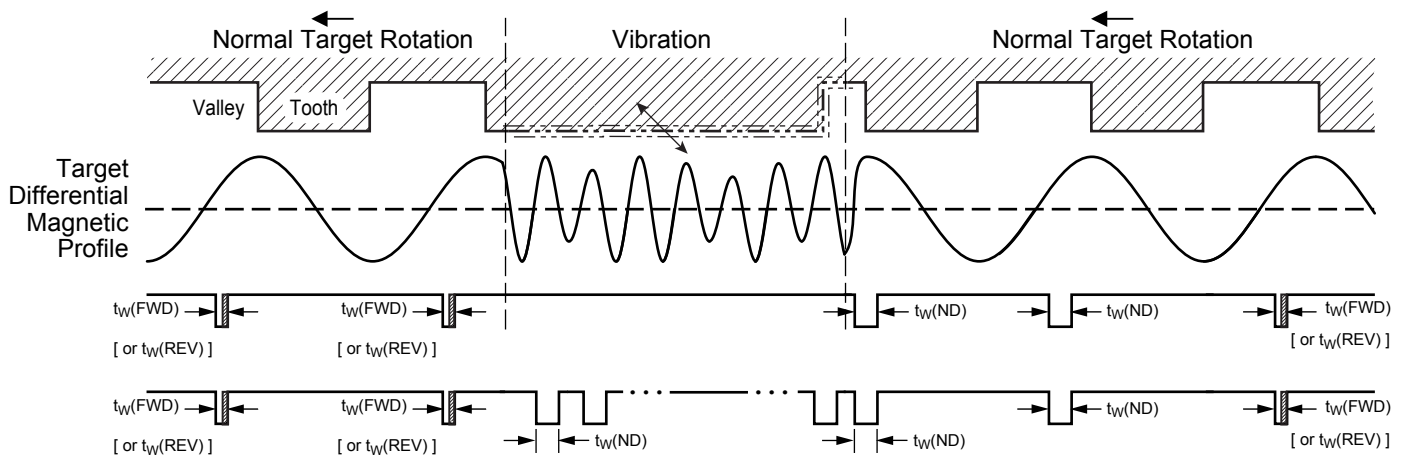

Figure 2: Output Functionality in the Presence of Running Mode Target Vibration

REVISION HISTORY

Number	Date	Description
–	October 7, 2014	Initial Release
1	February 23, 2022	Updated document template

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