Motorized Capacitor
Step/Direction – CW/CCW-Interface

Document Information

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Document history

Doc. Rev.	Date	Author(s)	Change(s)	Status
1.0	2007-03-30	O. Lehmann	Initial document	released
1.1	2010-06-25	A. Renggli	Various additions	internal
02	2014-01-29	W. Bigler / T. Fenske	Reviewed with minor modifications / configuration section added	released

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DATA SHEETS are available for each Integrated Drive

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1 Step/Direction CW/CCW Interface

1.1 Stepping driver signals for step/direction and clockwise/ counter clockwise interfaces

If a stepping motor driver is used, there are typically two alternatives for the input signals: "pulse & direction" and "Clockwise/Counterclockwise". The respective signals are shown in figures 1 and 2 respectively. Each full signal cycle results in one step of the stepping motor.

For "pulse & direction" the "pulse signal" is the trigger for each pulse and the "direction signal" provides the rotating direction for the motor.
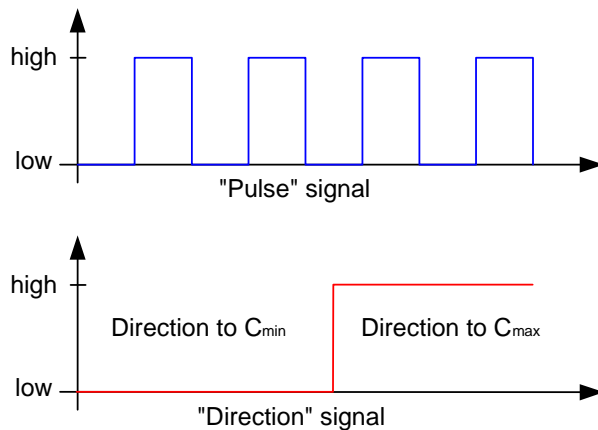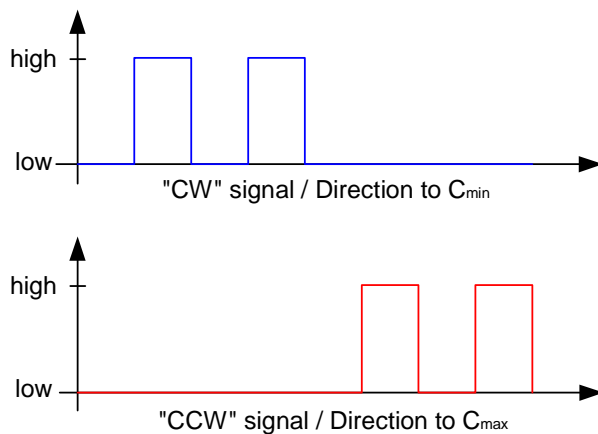
Fig. 1: Definition of the "pulse & direction" signals

Fig. 2: Definition of the "Clockwise/Counterclockwise" signals

1.2 Stepping Driver Timing Diagram

When stepping motor control signals are used to control the motion of the stepping motor, the following are the required timing diagram conditions:
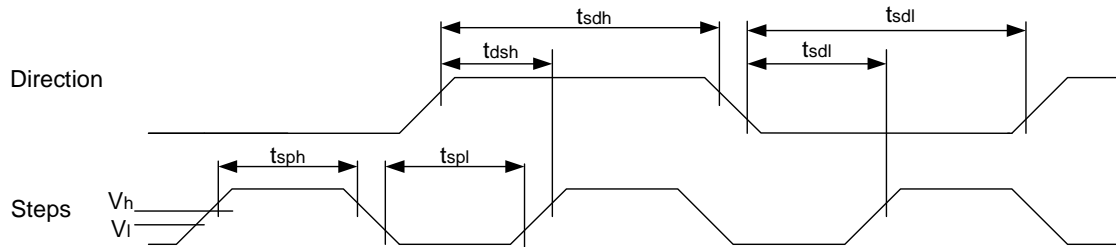

Fig. 3: Definition of the timing diagram at the stepper driver inputs

Symbol	Parameter	Min	Typ	Max	Units
t_{sph}	Minimum pulse width, step high	250			nS
t_{spl}	Minimum pulse width, step low	250			nS
t_{sdh}	Minimum pulse width, direction high	250			nS
t_{sdl}	Minimum pulse width, direction low	250			nS
t_{dsh}	Direction - high Steps	125			nS
t_{dsl}	Direction - low Steps	125			nS
V_l	Input Low Voltage	-0.5		1.5	V
V_h	Input High Voltage	3.5		5.5	V

Fig. 4: Definition of the timing diagram at the stepper driver input

2 Reference drive

By connecting pin 7, X2 (see SB-63) to a high voltage state (3.5 – 5.5Volts) the ID will do a reference drive. This feature is available from driver software version V.1.1.0.

3 Revision history

Changes from document SB-67 V.1.1 to SB-67 Rev. 02:

Section	Description of change
General	Updated layout

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