

# LogiSwitch LS-KW10 Series NoBounce Mini Limit Switch



## Description

Every LogiSwitch Digital Switch uses LogiSwitch's NoBounce™ technology and comes with three separate clean, debounced outputs, including two momentary selections: Normally high (low when pressed) or Handshake (see [User Guide](#)) and a latched Toggle (push on/push off) selection.





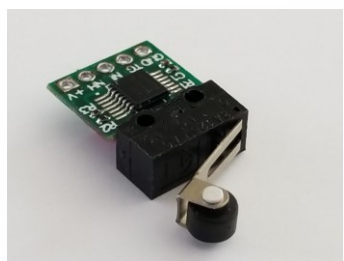
The LS-KW10 series and the LS-8xxx series of Mini Limit Switch products are digital limit switches for optimal use in industrial automation and robotics applications, or any application where clean, fully debounced, high-speed switch poll-free processing is desired.

## LS-KW10 Technical Details

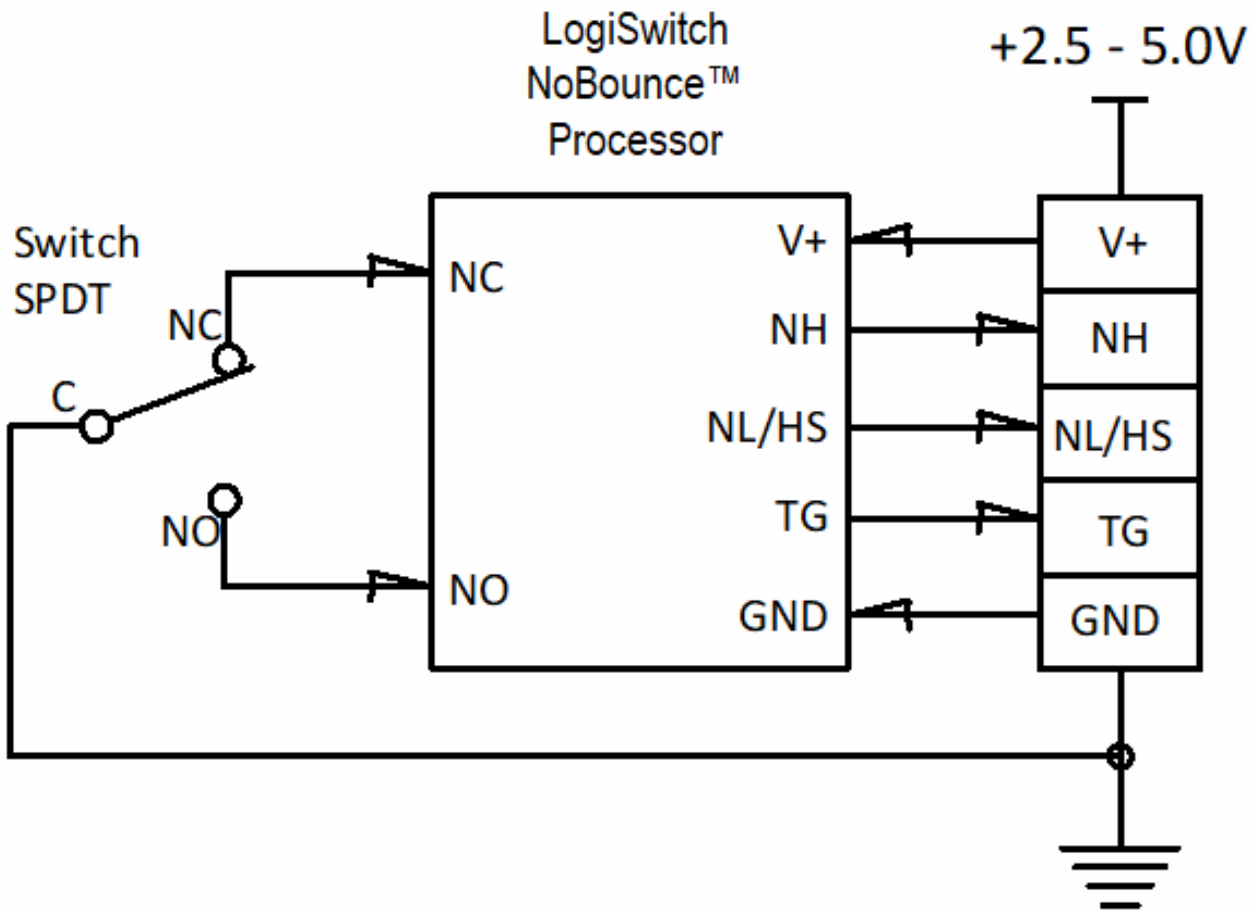
- Mounting: Two 2.2 mm (.087 inch) holes spaced at 6.5 mm (0.256 inch) apart.
- Mounts with two M2 screws
- Absolute Maximum Voltage 5.5 VDC
- Recommended Voltage 2.7 VDC – 5 VDC
- Digital contacts: NH (normally high, HS (handshake - normally low) and TG (toggle)
- Temperature: -20 °C to +55 °C
- Mechanical life: > 500,000 activations

## Switch Versions

There are 5 versions of the NoBounce limit switch that are differentiated by the switch arm.

Part Number	Switch Arm Description	Photo
LS-KW10 - NL	No Lever	 A photograph of the LS-KW10 - NL limit switch, which has a black plastic housing and a green PCB with a microcontroller chip, but no lever is attached.
LS-KW10 - SL	Short Lever	 A photograph of the LS-KW10 - SL limit switch, featuring a black plastic housing, a green PCB, and a short, straight metal lever.
LS-KW10 - LL	Long Lever	 A photograph of the LS-KW10 - LL limit switch, showing a black plastic housing, a green PCB, and a long, straight metal lever.
LS-KW10 - AL	Arc Lever	 A photograph of the LS-KW10 - AL limit switch, with a black plastic housing, a green PCB, and a metal lever that is curved into an arc.
LS-KW10 - RL	Roller Lever	 A photograph of the LS-KW10 - RL limit switch, consisting of a black plastic housing, a green PCB, and a metal lever with a small black roller wheel at its end.

# Schematic



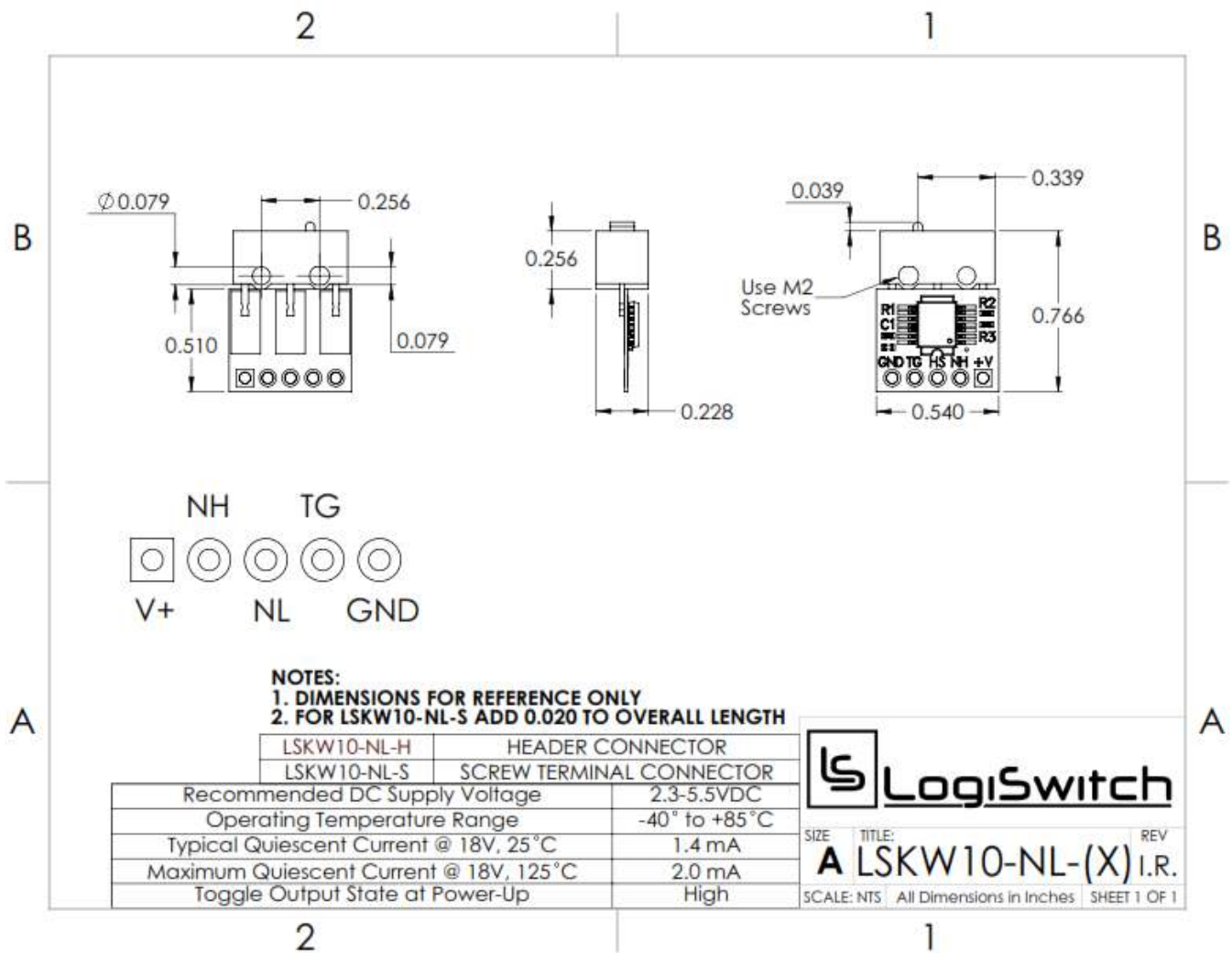
LS-6 mm NoBounce Pushbutton Switch Internal Schematic

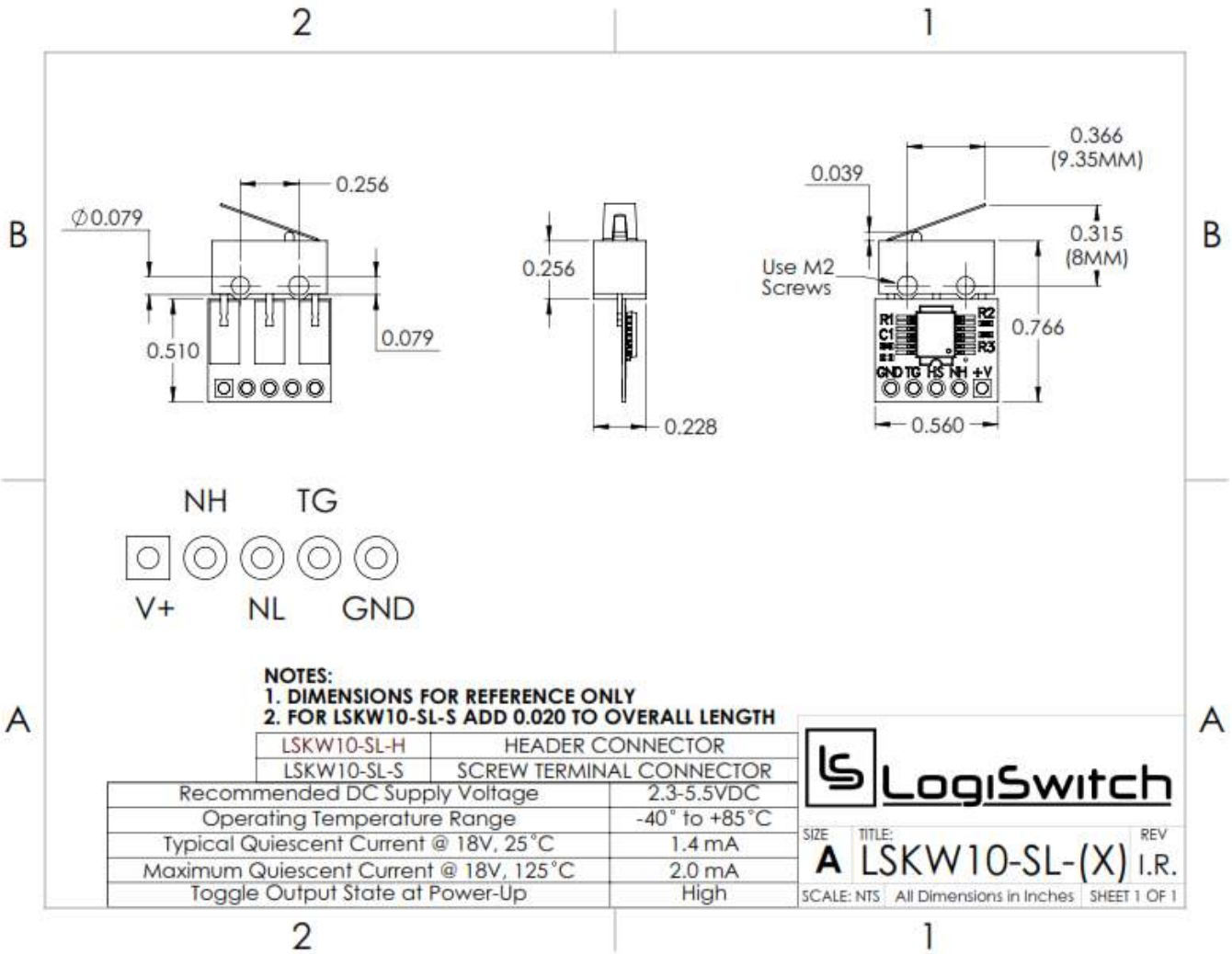
## Output Pin Definitions

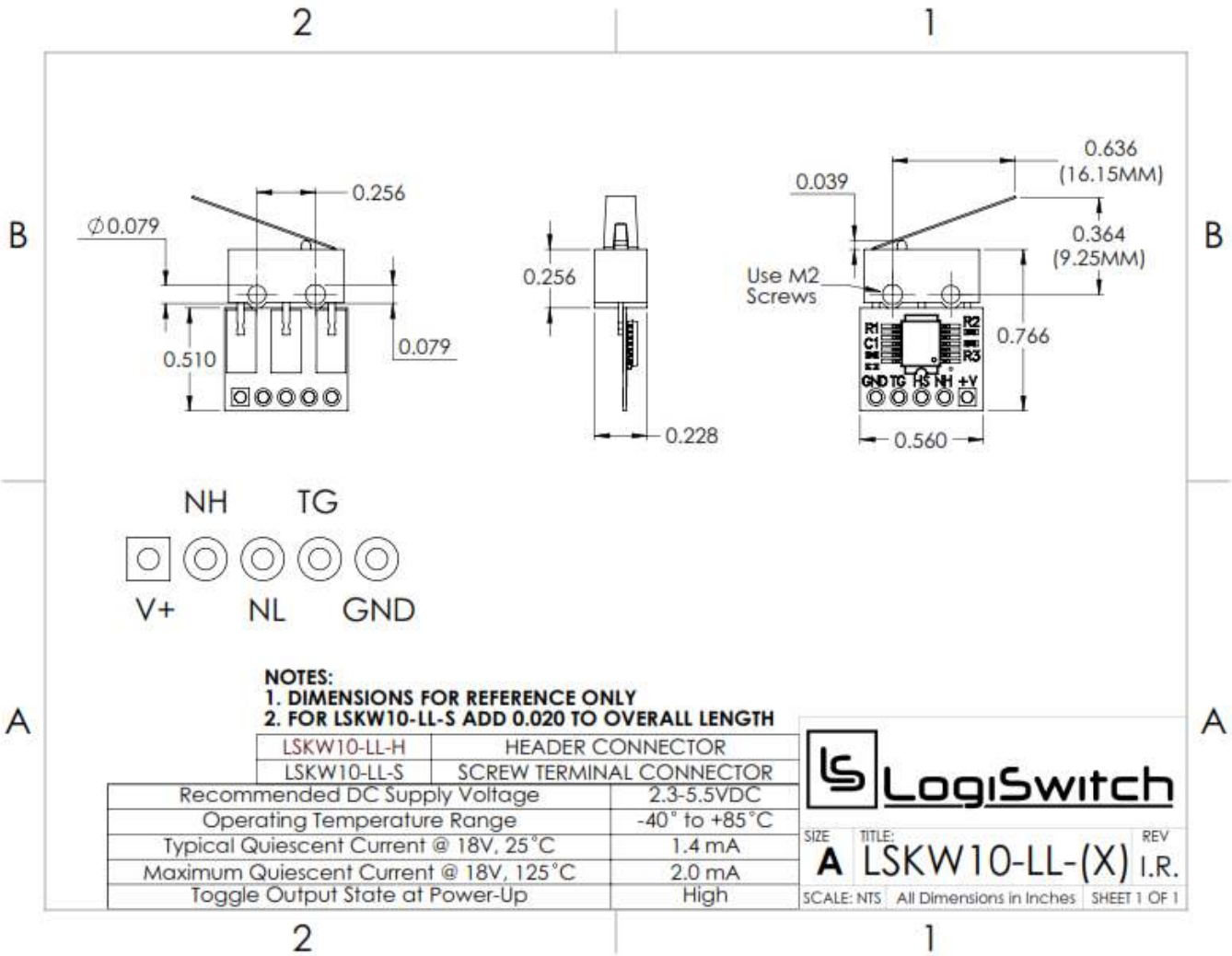
As you can see the 5-pin header contains Power and Ground pins plus three outputs: TG, NL/HS, and NH. The function of these pins is given in the table below.

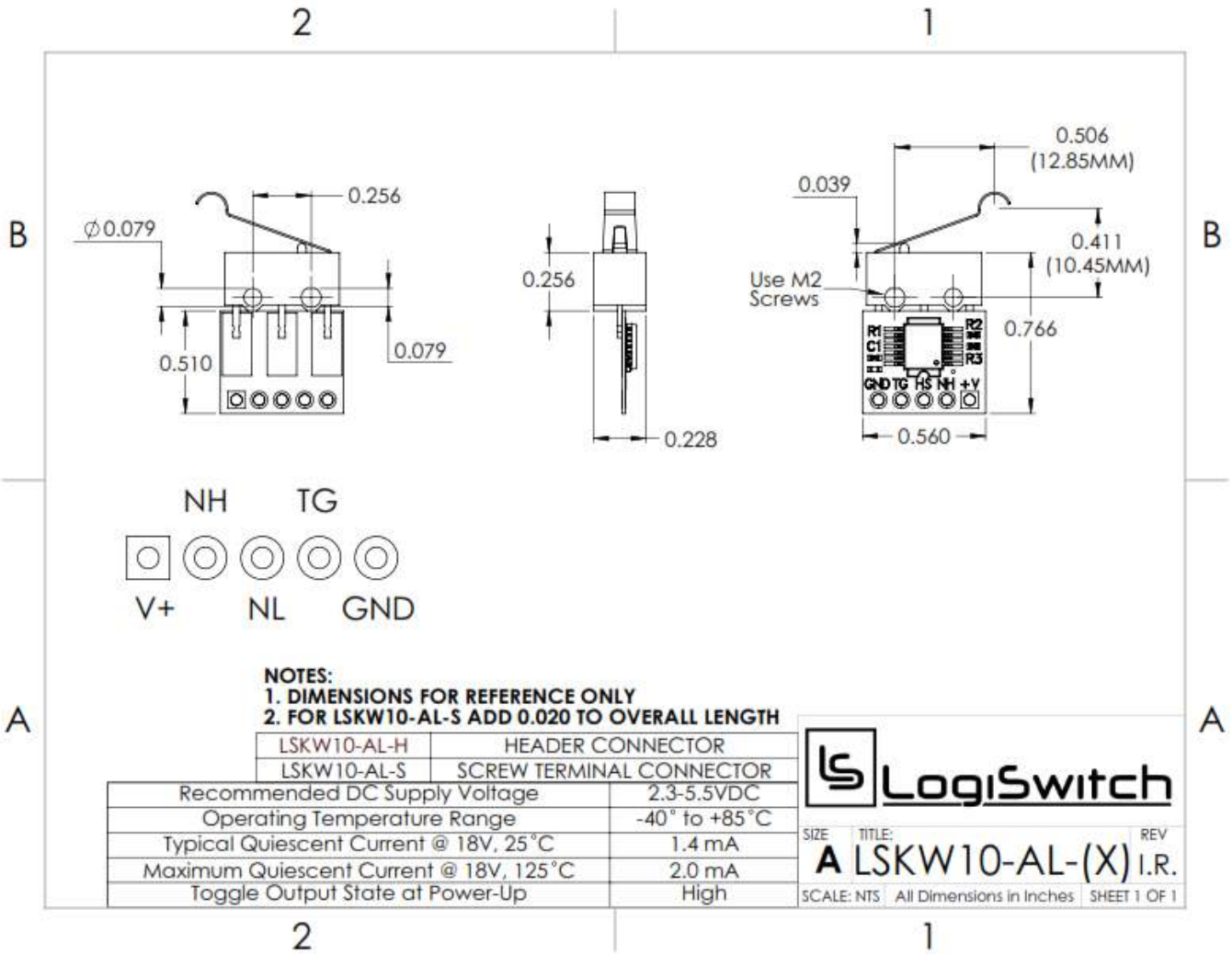
Pin	Function
NH	This debounced output is high when the switch is idle and goes low when the switch is activated (pressed). This is a totem pole output that provides up to 25 ma sourcing or sinking.
NL/HS	<p>This debounced output is low when the switch is not pressed and goes high when it is activated. It is a wired-OR line with a weak pull-up resistor internal to the processor. Low level outputs can sink up to 25ma. The NL/HS I/O may be used by the user's program to terminate the switch service cycle by issuing a 5 ms low pulse, called a handshake.</p> <p>The NL/HS line is configured as an open collector wired-OR line so both the LogiSwitch device and the host computer can drive the line low simultaneously to accomplish the handshake as needed.</p>
TG	The TG output powers up in the high state and changes state each time the switch is activated. It may be used in applications where a push on-push off type switch would be used.

# Mechanical Drawings

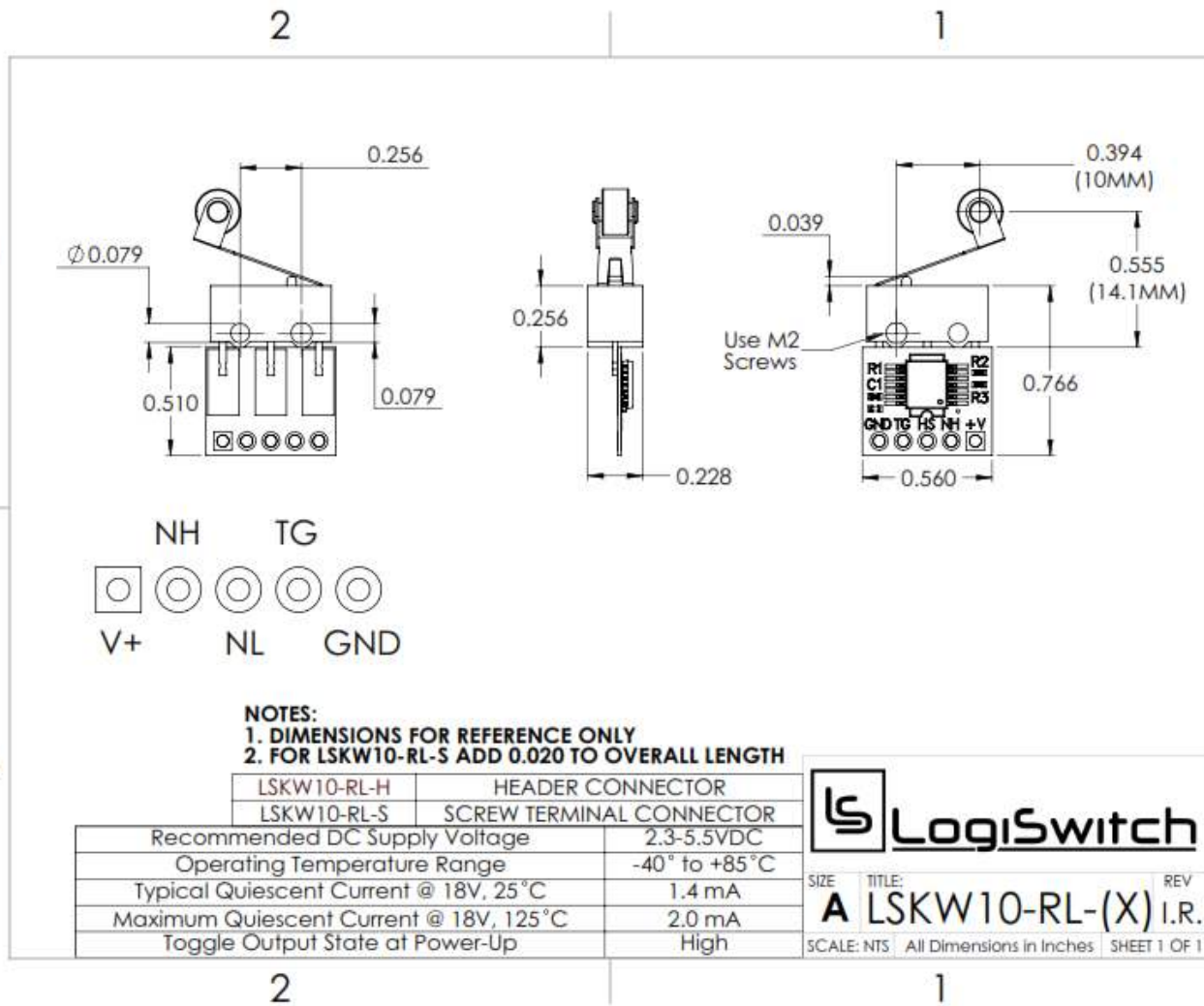












LSKW10-RL-H	HEADER CONNECTOR
LSKW10-RL-S	SCREW TERMINAL CONNECTOR

Recommended DC Supply Voltage	2.3-5.5VDC
Operating Temperature Range	-40° to +85°C
Typical Quiescent Current @ 18V, 25°C	1.4 mA
Maximum Quiescent Current @ 18V, 125°C	2.0 mA
Toggle Output State at Power-Up	High

**LogiSwitch**

SIZE: A TITLE: LSKW10-RL-(X) I.R. REV: 1

SCALE: NTS All Dimensions in Inches SHEET 1 OF 1