

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.





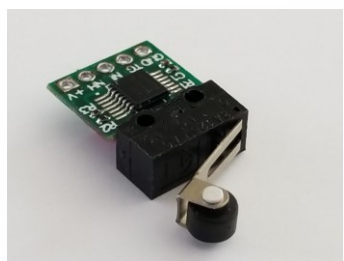
The LS-KW10 series and the LS-8xxx series of Mini Limit Switch products are digital limit switches for optimal use in industrial automation and robotics applications, or any application where clean, fully debounced, high-speed switch poll-free processing is desired.

LS-KW10 Technical Details

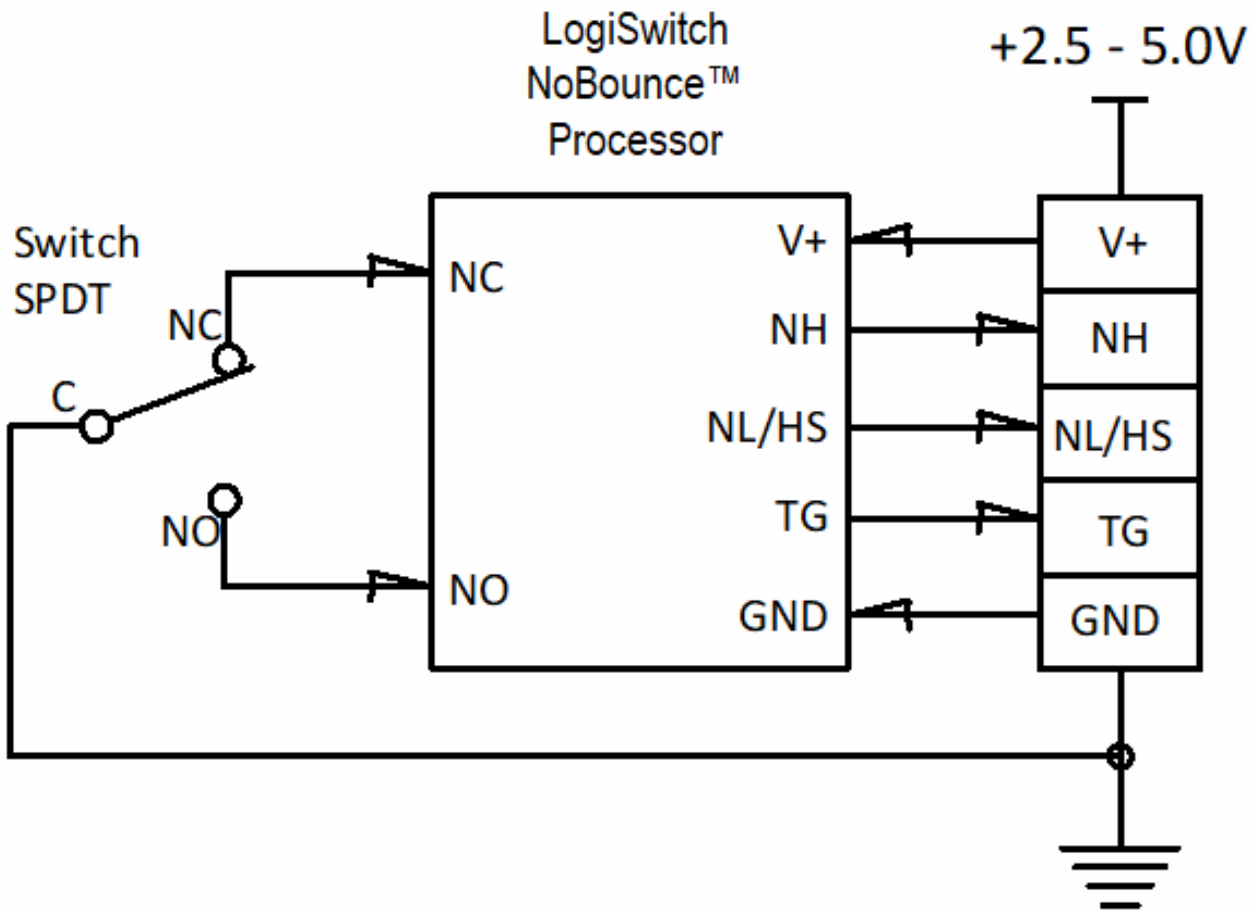
- Mounting: Two 2.2 mm (.087 inch) holes spaced at 6.5 mm (0.256 inch) apart.
- Mounts with two M2 screws
- Absolute Maximum Voltage 5.5 VDC
- Recommended Voltage 2.7 VDC – 5 VDC
- Digital contacts: NH (normally high, HS (handshake - normally low) and TG (toggle)
- Temperature: -20 °C to +55 °C
- Mechanical 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 short, straight metal lever attached to the side of the black housing. |
| LS-KW10 - LL | Long Lever |  A photograph of the LS-KW10 - LL limit switch, which has a long, thin metal lever extending from the side of the black housing. |
| LS-KW10 - AL | Arc Lever |  A photograph of the LS-KW10 - AL limit switch, showing a metal lever with a curved, arc-shaped end attached to the side of the black housing. |
| LS-KW10 - RL | Roller Lever |  A photograph of the LS-KW10 - RL limit switch, which includes a metal lever with a small black roller wheel at its end, attached to the side of the black housing. |

Schematic



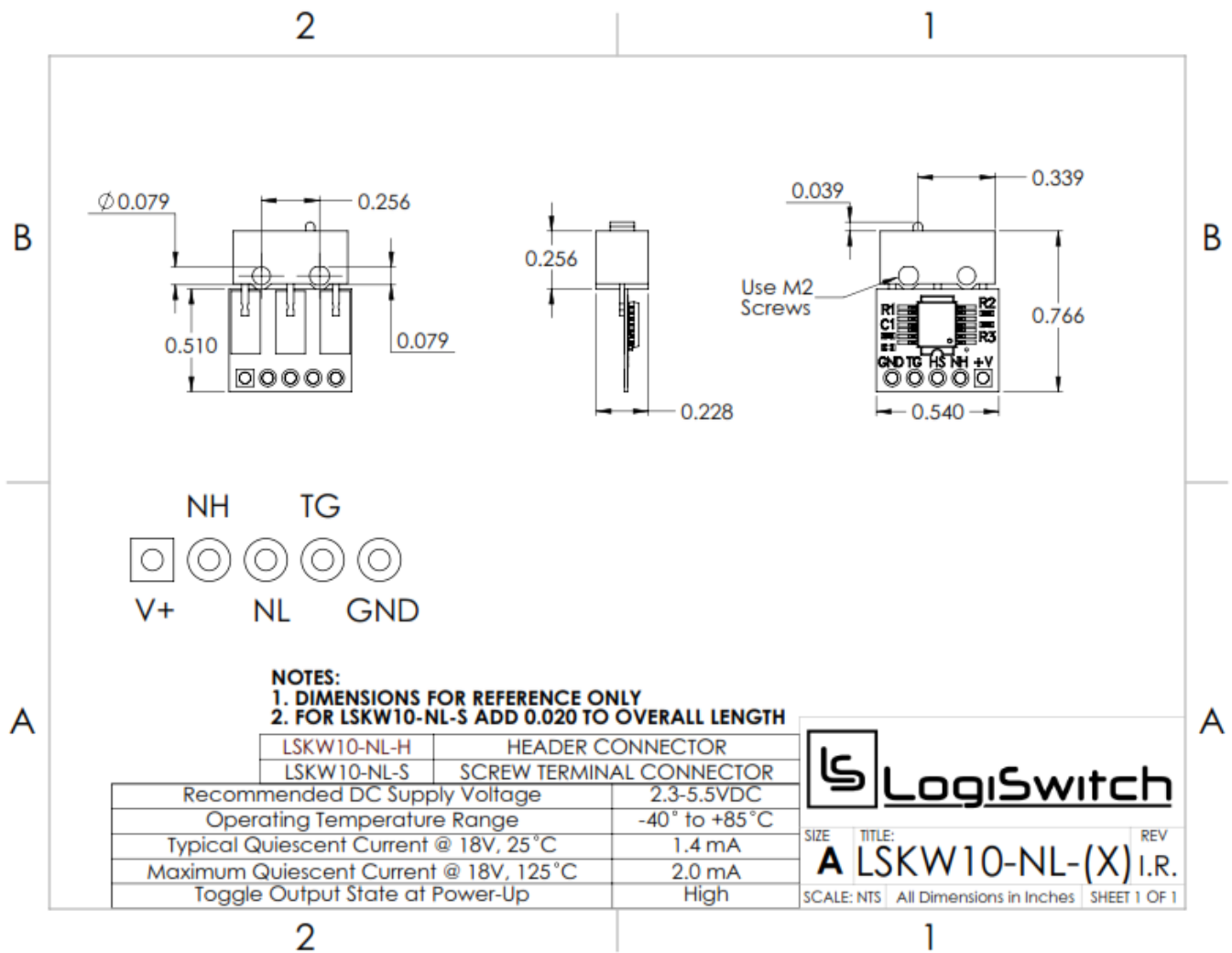
LS-6 mm NoBounce Pushbutton Switch Internal Schematic

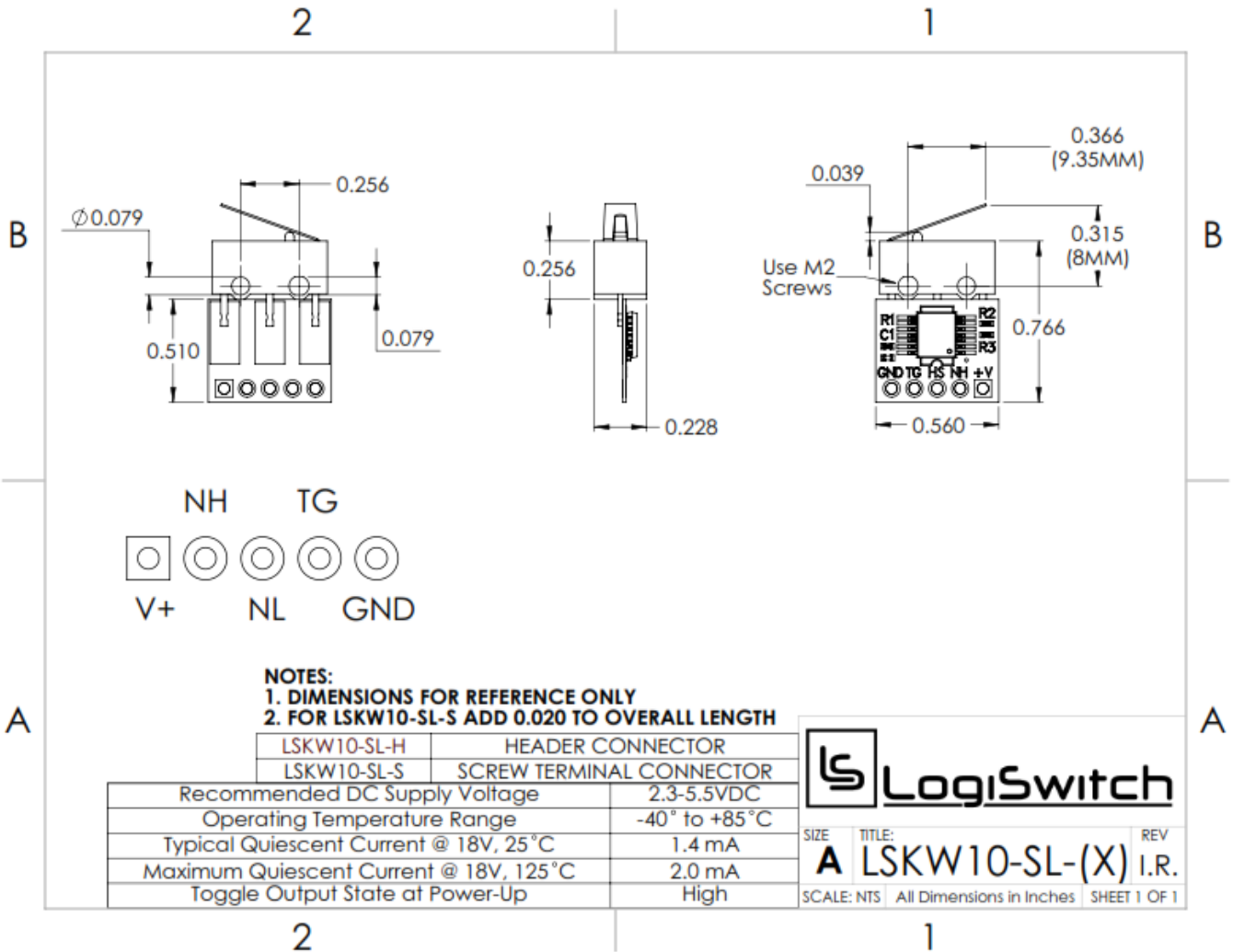
Output Pin Definitions

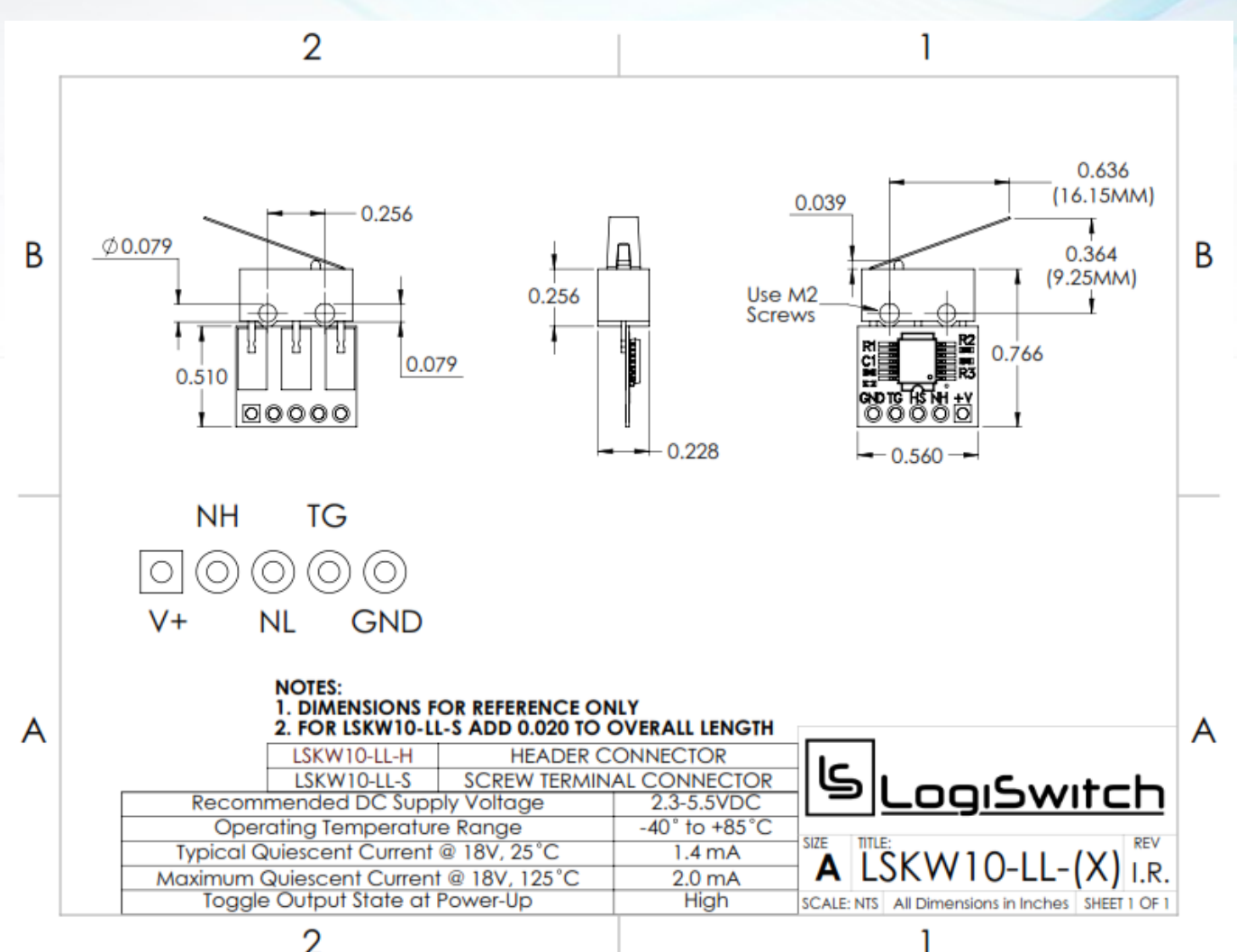
As you can see the 5-pin header contains Power and Ground pins plus three outputs: TG, NL/HS, and NH. The function of these pins is given in the table below.

| 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







NOTES:
 1. DIMENSIONS FOR REFERENCE ONLY
 2. FOR LSKW10-LL-S ADD 0.020 TO OVERALL LENGTH

| | |
|--|--------------------------|
| LSKW10-LL-H | HEADER CONNECTOR |
| LSKW10-LL-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 |

LS **LogiSwitch**

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

SCALE: NTS All Dimensions in Inches SHEET 1 OF 1

