AMP'd MicroSquirt V3.0 Supplement

Optional Jumper Configuration and Functionality

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The latest offering of the MicroSquirt from AMP EFI features 4 user configurable option switches. These switches, located under the back cover, increase the configurability of the ECU without requiring the user to implement certain wiring additions. Typically, these switches can be configured to enable pullup resistors for applications that use hall or optical style crank and cam sensors. They can also be used to easily enable ALED and WLED outputs to become logic level ignition outputs for applications that require 3 or 4 ignition outputs.

Procedure

To access the configuration switches, remove the 4 screws on the bottom of the MicroSquirt using a #2 Phillips screw driver. Do not remove the 4 screws flanking the connector on the top.

The bottom will easily separate from the MicroSquirt revealing the jumper switch carrier PCB.

Functionality

A pullup can be enabled by switching a jumper to the ENABLED position. You will note that the switchblock is labeled “ON” in the ENABLED direction. We recommend using a small plastic tipped tool to slide the switches. A flathead precision screwdriver with tip wrapped in tape or heat shrink may also work well. [Avoid using a pencil, as any residual graphite that is broken from the pencil tip could find its way into the PCB. Graphite is conductive, so doing so could cause long term problems.] Using the plastic tipped tool, slide the switch toward the side labeled "ON" to enable the respective pull-up resistor. To disable the pull-up resistor, move the switch in the opposite direction.

SWITCH	FUNCTION	PULL-UP VALUE	PULL-UP VOLTAGE	CURRENT SINK	CURRENT SOURCE
1	ALED OUT	100 Ohms	5 VDC Vref	3 A	50mA
2	WLED OUT	100 Ohms	5 VDC Vref	3 A	50mA
3	CKP INPUT	1000 Ohms	5 VDC Vref	N/A	5mA
4	CMP INPUT	1000 Ohms	5 VDC Vref	N/A	5mA

General Usage

Switches SW1 and SW2 enable a 100 Ohm pull-up resistor to 5 volts allowing ALED and WLED to be used as logic level ignition outputs. When enabled and the pin is “triggered” by the ECU, the output is capable of sourcing up to 50mA of current at 5 Volts. When disabled, these outputs are used as ground sinking outputs, capable of sinking up to 3 Amps each.

Switches SW3 and SW4 enable a 1000 Ohm pull-up resistor for the CKP and CMP sensor inputs. This allows the user to implement most hall-effect style or optical style sensors without the need to install additional pull-up resistors in the wire harness. When disabled, the CKP and CMP inputs are able to accept most VR style or magnetic style sensors.

Once the switch selection has been completed, replace the bottom cover and re-install the 4 screws. Snug the screws down by hand, being careful to not over tighten.

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