▶ Contact monitor (4 × GND & 4 × VBAT, parallel interface) E910.36

FEATURES

- ▶ Supply voltage range VS 5.25 to 25V
- ▶ Supply voltage range VDD 4.75 to 5.25V
- ▶ Maximum overvoltage protection up to 40V
- ▶ Low standby current (typical < 10µA)
- ▶ Contact status monitoring by comparison of the switch resistance with internal reference
- ▶ High noise immunity
- ▶ −40°C to + 125 °C operating temperature
- ▶ SO20w package

APPLICATION

- ▶ Automotive electronics
- ▶ Monitor for mechanical switches
- ▶ Monitor for interface levels

DESCRIPTION

The IC is developed for automotive applications. It continuously monitors the status of two groups of switch contacts connected to GND or VBAT.
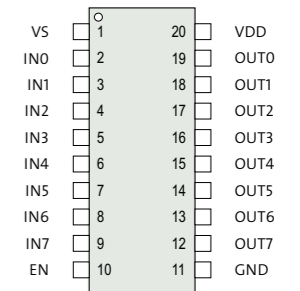
The input currents are compared to internal references. The IC is designed to operate with an external resistor of 1k Ω.

If the switch resistance is less than 1.5kΩ the IC will lead into an active state ('1' for switches to VBAT and '0' for switches to GND). If the resistance will be more than 9kΩ than the IC will switch to the corresponding inactive state. The input current as well as the tristate driver are activated with the enable pin. Due to the tristate outputs the IC can be used in bus configuration.
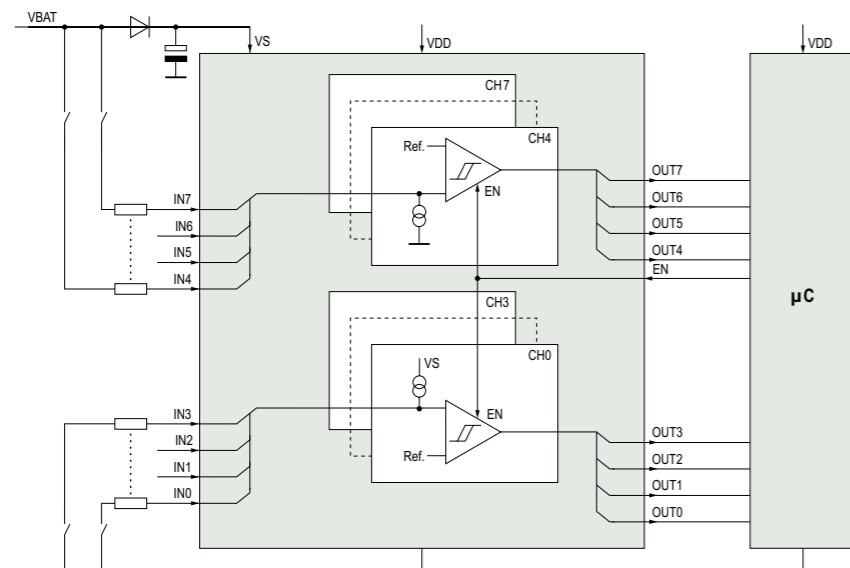
PINNING

Pin	Name	Description
1	VS	Supply voltage
2	IN0	Input for switch to GND
3	IN1	Input for switch to GND
4	IN2	Input for switch to GND
5	IN3	Input for switch to GND
6	IN4	Input for switch to VBAT
7	IN5	Input for switch to VBAT
8	IN6	Input for switch to VBAT
9	IN7	Input for switch to VBAT
10	EN	Chip enable for input current and tristate outputs, active low
11	GND	Ground
12	OUT7	TTL compatible tristate data port
13	OUT6	TTL compatible tristate data port
14	OUT5	TTL compatible tristate data port
15	OUT4	TTL compatible tristate data port
16	OUT3	TTL compatible tristate data port
17	OUT2	TTL compatible tristate data port
18	OUT1	TTL compatible tristate data port
19	OUT0	TTL compatible tristate data port
20	VDD	Logic supply voltage

PACKAGE

VS	1	20	VDD
IN0	2	19	OUT0
IN1	3	18	OUT1
IN2	4	17	OUT2
IN3	5	16	OUT3
IN4	6	15	OUT4
IN5	7	14	OUT5
IN6	8	13	OUT6
IN7	9	12	OUT7
EN	10	11	GND

BLOCK DIAGRAM