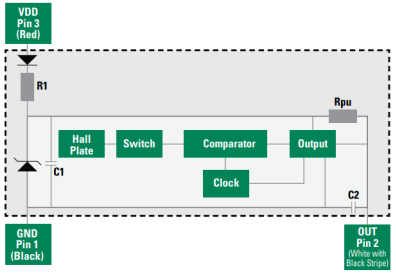
HALL EFFECT SENSOR



Electrical Ratings

Hall Type			Digital Switch 3-Wire (Voltage Output)
Supply Voltage [1]	Operate Overvoltage Protection Reverse Voltage Protection	Vdc Vdc - max. Vdc - max.	4.75 to 24 27 -25
Output High Voltage		Vdc - min.	VDD -2 (-2 sinking output with internal pull-up)
Output Low Voltage		Vdc - max.	0.6 @ 20mA
Output Current (continuously on) Current Consumption Current Consumption		mA - max. mA - max. mA - max.	20 1 10.5
Current Consumption		mA - min. mA - max.	1 10.5
Switching Speed		KHz-max.	15
Temperature	Operating	°C	-40 to +125

EXTERNAL WIRE CONNECTIONS

J1
Ampseal_23_VT

1	1 HALL_EFFECT_+	
2	2 12V	
3	3 GND	
4	4 CAN_P	
5	5 CAN_N	
6	6 12V	
7	7 GND	
8	8 LINEAR_POT_+	
9	9 HALL_EFFECT_SENSE	
10	10 CAN_P	
11	11 CAN_N	
12	12 GND	(CAN CABLE SHIELD)
13	13 CAN_P	
14	14 CAN_N	
15	15 LINEAR_POT_SENSE	
16	16 HALL_EFFECT_–	
17	17 12V	
18	18 GND	
19	19 CAN_P	(TIRE TEMP BRANCH)
20	20 CAN_N	(TIRE TEMP BRANCH)
21	21 12V	(TIRE TEMP BRANCH)
22	22 GND	(TIRE TEMP BRANCH)
23	23 LINEAR_POT_–	

LAYOUT NOTE: Place on the bottom of the PCB.

LAYOUT NOTE: Make sure positive locking feature is not facing the ground.

NOTE: Datasheet calls out max panel thickness of 5mm.

⚠ ACCEPTS SCREW SIZE (Ø0.99 (2.50mm)) SELF TAPPING THREAD FORMING SCREW TO BE DRIVEN AT 0.6-0.8 N-m

EXTERNAL CONNECTIONS
TO STRAIN GAUGES

J2 MicroFit_V_2	1	1 STRAIN_GAUGE_1_+
	2	2 STRAIN_GAUGE_1_–
J3 MicroFit_V_2	1	1 STRAIN_GAUGE_2_+
	2	2 STRAIN_GAUGE_2_–
J4 MicroFit_V_2	1	1 STRAIN_GAUGE_3_+
	2	2 STRAIN_GAUGE_3_–
J5 MicroFit_V_2	1	1 STRAIN_GAUGE_4_+
	2	2 STRAIN_GAUGE_4_–
J6 MicroFit_V_2	1	1 STRAIN_GAUGE_5_+
	2	2 STRAIN_GAUGE_5_–
J7 MicroFit_V_2	1	1 STRAIN_GAUGE_6_+
	2	2 STRAIN_GAUGE_6_–
J8 MicroFit_V_2	1	1 STRAIN_GAUGE_7_+
	2	2 STRAIN_GAUGE_7_–
J9 MicroFit_V_2	1	1 STRAIN_GAUGE_8_+
	2	2 STRAIN_GAUGE_8_–
J10 MicroFit_V_2	1	1 STRAIN_GAUGE_9_+
	2	2 STRAIN_GAUGE_9_–
J11 MicroFit_V_2	1	1 STRAIN_GAUGE_10_+
	2	2 STRAIN_GAUGE_10_–
J12 MicroFit_V_2	1	1 STRAIN_GAUGE_11_+
	2	2 STRAIN_GAUGE_11_–
J13 MicroFit_V_2	1	1 STRAIN_GAUGE_12_+
	2	2 STRAIN_GAUGE_12_–

LAYOUT NOTE: Place on the bottom of the PCB.

LAYOUT NOTE: Ensure room for mating and unmating including space for locking feature.

NOTE: Waterproofing considerations for these connectors.

TO WHEEL SPEED SENSING

J14
MM_M_VT_08

1	1	12V
2	2	GND
3	3	CAN_P
4	4	CAN_N
5	5	HALL_EFFECT_+
6	6	HALL_EFFECT_SENSE
7	7	HALL_EFFECT_–
8	8	GND

TO SUSPENSION TRAVEL SENSING

J15
MM_M_VT_08

1	1	12V
2	2	GND
3	3	CAN_P
4	4	CAN_N
5	5	LINEAR_POT_+
6	6	LINEAR_POT_SENSE
7	7	LINEAR_POT_–
8	8	GND

LAYOUT NOTE: Consider board heights for Micro-MaTch spacing.

TO SUSPENSION STRAIN SENSING

J16
MM_M_VT_20

1	1	12V
2	2	GND
3	3	CAN_P
4	4	CAN_N
5	5	STRAIN_GAUGE_1_+
6	6	STRAIN_GAUGE_1_–
7	7	STRAIN_GAUGE_2_+
8	8	STRAIN_GAUGE_2_–
9	9	STRAIN_GAUGE_3_+
10	10	STRAIN_GAUGE_3_–
11	11	STRAIN_GAUGE_4_+
12	12	STRAIN_GAUGE_4_–
13	13	STRAIN_GAUGE_5_+
14	14	STRAIN_GAUGE_5_–
15	15	STRAIN_GAUGE_6_+
16	16	STRAIN_GAUGE_6_–
17	17	STRAIN_GAUGE_7_+
18	18	STRAIN_GAUGE_7_–
19	19	STRAIN_GAUGE_8_+
20	20	STRAIN_GAUGE_8_–

J17
MM_M_VT_08

1	1	STRAIN_GAUGE_9_+
2	2	STRAIN_GAUGE_9_–
3	3	STRAIN_GAUGE_10_+
4	4	STRAIN_GAUGE_10_–
5	5	STRAIN_GAUGE_11_+
6	6	STRAIN_GAUGE_11_–
7	7	STRAIN_GAUGE_12_+
8	8	STRAIN_GAUGE_12_–

Generic Micro-MaTch male header.

Lucky Jordan
Olin Electric Motorsports
Sheet: /
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Title: Sensing Module Interface

Size: A4	Date: 2019-11-13	**Rev: 1**
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