

Technical data

Electrical properties

Operating voltage:	8 ... 32 V DC
Current consumption:	150 mA @ 12V

Mechanical properties

Weight:	0.2 kg
Ingress protection:	IP 67
Fitting:	4 x M4

Ambient conditions

Operating temperature range:	-40 ... +85 °C
Storage temperature range:	-40 ... +85 °C

General Features

Inputs:	2x 4 (8) Digital high side / Analog inputs 2x 2 (4) Digital high side / Analog inputs (with pull up)
Outputs:	2x 4 (8) Digital/PWM open loop outputs (2A max.) 2x 2 (4) Digital/PWM open loop outputs (4A max.)
Other:	WDO circuit relay with free relay contact, to use as: 2x Digital Output (7A) or 2x Digital Input
Connector:	36 pin JST 36ZRO-B-1A

Interfaces

CAN:	1x CAN BUS (11/29 bit identifier), ISO 11898-2
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Electronic features

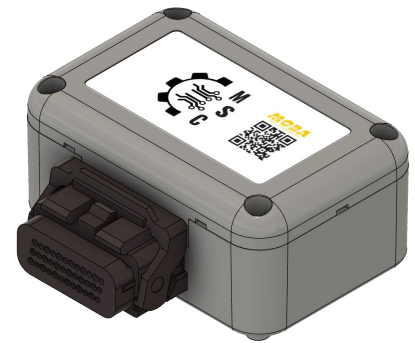
Microprocessor:	2x ARM® Cortex®-M3 series, 32bit core
Clock rate:	72 MHz
Program memory size:	32 KB
RAM memory size:	10 KB

Standards

EMC:	EN 61000-6-2:2005 EN 61000-6-4:2007 + A1:2011
Vibration, Shock and Free Fall:	EN 60068-2-6:2007 / EN 60068-2-27:2009
Temperature:	EN 60068-2-1, N14Nb, -2, -78, -30

Failure Rate, DC and CCF

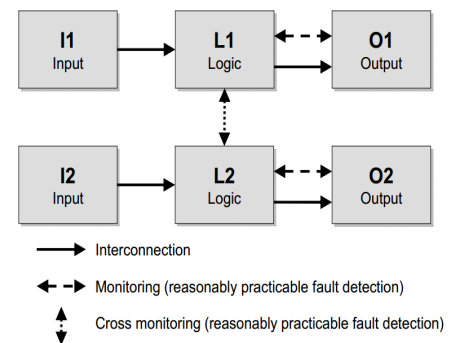
Internal architecture:	Cat 3 as 13849-1
Analysis method:	Parts count method (assuming 50% dangerous failure)
Data collection:	MIL-HDBK-217F-Notice 2 and manufacturer information
Conditions:	Normal operating condition (40°, mobile application)
Operating time:	Round the clock
Note:	MTTFd related to one of the two redundant channels
λ_d :	13119 FIT/10 ¹⁰ hrs
MTTFd:	174 years
DC:	60%
CCF:	Requirements achieved



Features:

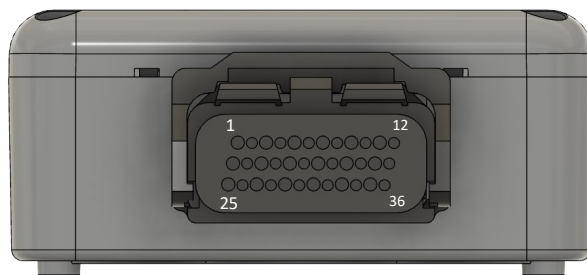
- » Inversion of polarity protection.
- » Over voltage protection.
- » Load Dump Protection.

Architecture block diagram:



Field for notes:

Connections



Connector		
1	DO2_A - PWM2_A	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
2	DO3_A - PWM3_A	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
3	+VP0_A	+ Power supply for outputs (DO0_A - DO3_A)
4	DO4_A - PWM4_A	Digital/PWM high side Output 4A, open loop (with ON-OFF status feedback)
5	DO5_A - PWM5_A	Digital/PWM high side Output 4A, open loop (with ON-OFF status feedback)
6	+VP1_A	+ Power supply for outputs (DO4_A - DO5_A)
7	DO4_B - PWM4_B	Digital/PWM high side Output 4A, open loop (with ON-OFF status feedback)
8	+VP1_B	+ Power supply for outputs (DO4_B - DO5_B)
9	DO5_B - PWM5_B	Digital/PWM high side Output 4A, open loop (with ON-OFF status feedback)
10	+VP0_B	+ Power supply for outputs (DO0_B - DO3_B)
11	DO0_B - PWM0_B	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
12	DO1_B - PWM1_B	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
13	DO1_A - PWM1_A	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
14	DI3_A - ADC3_A	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
15	DI2_A - ADC2_A	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
16	DI1_A - ADC1_A	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
17	CAN-L	CAN-bus low (A-B)
18	CAN-L	CAN-bus low (A-B)
19	CAN-H	CAN-bus high (A-B)
20	CAN-H	CAN-bus high (A-B)
21	DI0_B - ADC0_B	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
22	DI4_B - ADC4_B	Digital/Analog low/high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc (with pull up for PTC)
23	DI5_B - ADC5_B	Digital/Analog low/high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc (with pull up for PTC)
24	DO2_B - PWM2_B	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
25	DO0_A - PWM0_A	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)
26	+ Operating voltage	+ Power supply
27	- Operating voltage	- Power supply
28	DI0_A - ADC0_A	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
29	DI5_A - ADC5_A	Digital/Analog low/high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc (with pull up for PTC)
30	DI4_A - ADC4_A	Digital/Analog low/high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc (with pull up for PTC)
31	DI3_B - ADC3_B	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
32	DI1_B - ADC1_B	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
33	DI2_B - ADC2_B	Digital/Analog high side input 0-25 mA, 0-5 Vdc, 0-32 Vdc
34	WDO Relay contact 1	WDO contact relay 1 - Digital Output 7A / Digital Input high side (AB)
35	WDO Relay contact 2	WDO contact relay 2 - Digital Output 7A / Digital Input high side (AB)
36	DO3_B - PWM3_B	Digital/PWM high side Output 2A, open loop (with ON-OFF status feedback)

Dimensions (mm)

