

BRCM01

Residual Current Monitoring Device for Charging Equipment of Electric Vehicles

- DC 6mA (IEC 62955)
- DC 6mA (IEC 62955) + type A 30mA (IEC 61008-1)



- Trip alarm signal with smooth DC 6mA residual current (IEC 62955)
- Trip alarm signal with smooth DC 6mA (IEC 62955) or type A 30mA (IEC 61008-1) residual current
- Economic solution of residual current detection for charging system of Electric Vehicles
- 12-24VDC wide power supply. Integrated TVS for over-voltage protection
- Direct coupling to relay or contactor
- Less than 20ms response time at certain residual current
- Remote test available for regular function checking before charging action
- Compact design with 16.4mm trough-hole for charging cable up to 3P+N 32A
- Usable test button to check the residual current protection function easily in a manual way
- Visible Green-Red LED to show the working status continuously

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#	Technical Specification	BRCM01-ADC-S1	BRCM01-DC6-S1
101	Rated operating voltage in monitoring circuit	230/400VAC	230/400VAC
102	Rated current in monitoring circuit	≤ 32A	≤ 32A
103	Poles in monitoring circuit	1P+N / 3P+N	1P+N / 3P+N
104	Frequency in monitoring circuit	50Hz	50Hz
105	Rated conditional short-circuit current	10kA	10kA
106	Rated impulse withstand voltage in monitoring circuit	4kV	4kV
107	Over-voltage category in monitoring circuit	III	III
201	Rated operating voltage in control circuit, Vcc	12-24VDC	12-24VDC
202	Power consumption	<500mW	<500mW
203	Pin 1 – V-	Vcc -	Vcc -
204	Pin 2 – V+	Vcc +	Vcc +
205	Pin 3 – T	test signal input ¹⁾	test signal input ¹⁾
206	Pin 4 – S	trip signal output ²⁾	trip signal output ²⁾
301	Rated DC residual operating current $I_{\Delta dc}$	6mA	6mA
302	Rated DC residual non-operating current $I_{\Delta ndc}$	3mA	3mA
303	Rated AC residual operating current $I_{\Delta n}$	30mA	-
304	Rated AC residual non-operating current $I_{\Delta nc}$	15mA	-
305	Electrical endurance	20,000	20,000
306	Rated operating temperature	-25~85 °C	-25~85 °C
307	Pollution degree	2	2

1) Test process is triggered with high voltage.(Higher than 1VDC)

2) A Mosfet is built in to switch the connection to signal V- as normal using.

Maximum switching current is 500mA.

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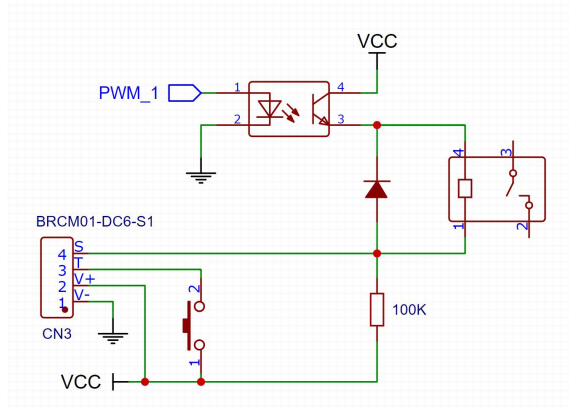
#	Description	BRCM01-ADC-S1	BRCM01-DC6-S1
401	Operating current for smooth DC	3.0~6.0 mA	3.0~6.0 mA
402	Operating current for DC rectified from 2 phases	3.5~7.0 mA	3.5~7.0 mA
403	Operating current for DC rectified from 3 phases	3.1~6.2 mA	3.1~6.2 mA
404	Operating current for sinewave AC	22.0~28.0 mA	-
405	Operating current for A0 pulsating DC	10.5~42.0 mA	-
406	Operating current for A90 pulsating DC	7.5~42.0 mA	-
407	Operating current for A135 pulsating DC	3.3~42.0 mA	-
501	Response time for 6mA smooth DC residual current	≤ 220 ms	≤ 220 ms
502	Response time for 60mA smooth DC residual current	≤ 100 ms	≤ 100 ms
503	Response time for 200mA smooth DC residual current	≤ 70 ms	≤ 70 ms
504	Response time for 300mA smooth DC residual current	≤ 20 ms	-
505	Response time for 60mA DC rectified from 2 phases	≤ 100 ms	≤ 100 ms
506	Response time for 60mA DC rectified from 3 phases	≤ 100 ms	≤ 100 ms
507	Response time for 120mA DC rectified from 2 phases	≤ 70 ms	-
508	Response time for 120mA DC rectified from 3 phases	≤ 70 ms	-
509	Response time for 200mA DC rectified from 2 phases	≤ 70 ms	≤ 70 ms
510	Response time for 200mA DC rectified from 3 phases	≤ 70 ms	≤ 70 ms
511	Response time for 300mA DC rectified from 2 phases	≤ 20 ms	-
512	Response time for 300mA DC rectified from 3 phases	≤ 20 ms	-
513	Response time for 30mA AC residual current	≤ 80 ms	> 10000 ms
514	Response time for 60mA AC residual current	≤ 60 ms	> 300 ms
515	Response time for 150mA AC residual current	≤ 20 ms	> 80 ms
516	Response time for 5A AC residual current	≤ 20 ms	> 80 ms

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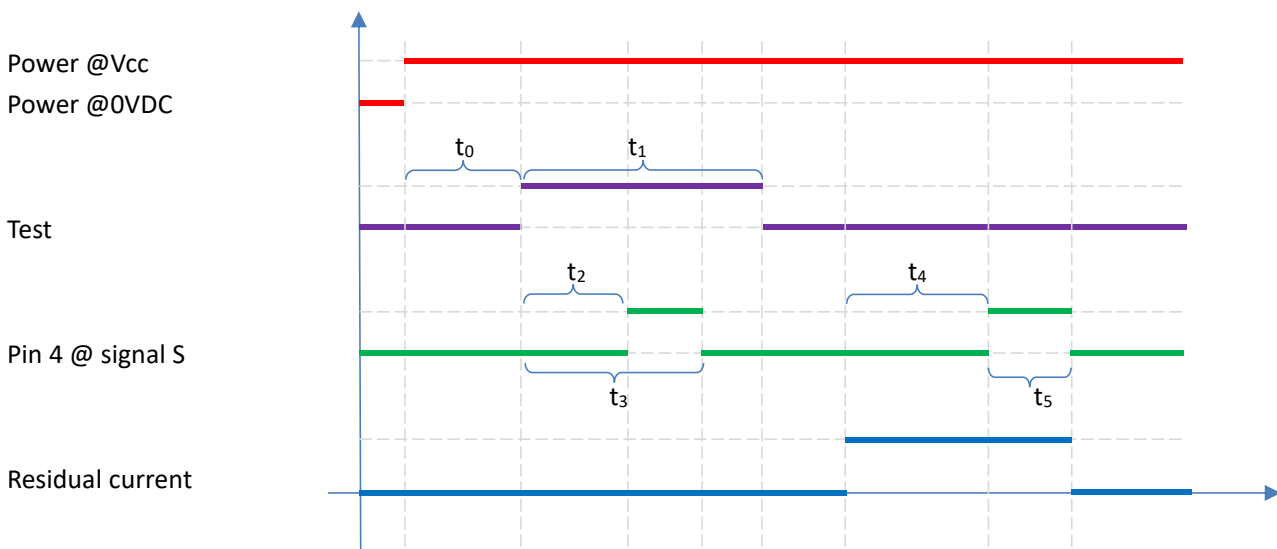
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Typical application



#	Description	
t ₀	Self-checking and warm-up time	< 20 ms
t ₁	Time slot for test signal generation	>120 ms
t ₂	Response time for test signal	< 120 ms
t ₃	Complete pulse time for test process	200±10 ms
t ₄	Response time of residual current	Refer to Page 3
t ₅	Close to Open operation time for relay or contactor in charging circuit	



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#	Order Number	Description
1	BRCM01-ADC-S1	BRCM01 Serials Residual Currnet Monitoring device, A30+DC6mA, 32A, 1P+N / 3P+N Standard cable length of 300 ± 10 mm
2	BRCM01-DC6-S1	BRCM01 Serials Residual Currnet Monitoring device, DC6mA, 32A, 1P+N / 3P+N Standard cable length of 300 ± 10 mm

* JST B4B-PH-SM4-TB or S4B-PH-SM4-TB can be used at charging controllers

Dimension:

