



● **Electro-magnetic Contactor**

Application : Main circuit of EMU
Pole configuration : Single-pole
Main circuit voltage : 1500V DC
Main circuit current : 1000A
Control circuit voltage : 100, 110V DC
Breaking capacity : 1500V DC, 20mh, 2000A



● **Master Controller**

Application : Electric Multiple Units (EMU)
Function: Speed control
Powering and braking control
Forwarding and reversing control
Composition : Main handle, Reversing handle



● **Auxiliary Relay**

Application : DC control circuit of EMU
Contact resistance : 50mΩ or less
Operating voltage : 70~110% of rated voltage
Withstand voltage : 1200V AC, 60Hz for 1min.
Breaking capacity : 100V DC, 5A



● **Magnetic Switch**

Application : Main circuit of diesel electric locomotive
Pole Configuration : Double-pole
Main Circuit Voltage: 1000V DC
Main Circuit Current: 1000A
Control Circuit Voltage: 74V DC



● **Magnetic Power Contractor**

Application : Main circuit of diesel electric locomotives
Pole Configuration : Single-pole
Main Circuit Voltage: 1000V DC
Main Circuit Current: 1000A
Control Circuit Voltage: 74V DC

DC High Speed Circuit Breaker

Type WHB-1512



Guide of Other Products

- ELETRO-magnetic Contactor
- DC Electro-Magnetic Contactor
- AC Vacuum Contator
- Magnetic Valve
- Protective Relay
- Power Relay
- Aux. Switch
- Wire Wound Resistor

DC High Speed Circuit Breaker Type WHB-1512

Description

WHB-1512 is the DC High Speed Circuit Breaker(HSCB) which can be used for DC circuit in Electric Rail Cars and General Industry.

If the over current or short-circuit occurred, HSCB detects rapidly the fault current and suppresses the current-rise and then breaks the circuit. Thereby, WHB-1512 HSCB has the ability that suppresses minimally the thermal damage of equipments or the unnecessary operation of substation safety devices.

Feature and Functions

WHB-1512 has Features and Functions as follows.

1. The rating is DC 1500V, 1200A.
2. The using voltage is DC 750~DC 1800V.
3. Operating is Electro-magnetic type and the Self-holding is mechanical type by using of latch mechanism. (Operating circuit and economic resistor are needed.(Option))
4. WHB-1512 has the Trip-free mechanism and the current sensing can be done at both polarities. (Positive (+) and Negative (-)).
5. Over-current trip(OCR Trip) uses direct trip method. If the ultra tripping mechanism(Option) is attached, the current trip can be done more rapidly. (Current sensing and charging/ discharging circuits are needed.)
6. The Maximum Breaking Capacity is 30 kA (the estimated short current) at T=15ms(1mH)
7. The malfunction and the fluctuation of setting value by shock can not be occurred, because it has Shock resistant structure and the Reliability including Mechanical Life is superior.
8. This also can be used in the small current breaking circuit, because of using Special Blow Out Coil.

External View



9. This is the advanced type that the External shoot of Arc is suppressed by Arc chute and Grid.
10. Insulation materials as a Main body, Arc chute and Arc cover(Option) used the Anti-flammable materials which are equal or superior to UL-94V0.
11. Major parts requiring Arc resistance was reinforced by NONASBESTOS.
12. In case the Grid was damaged, its Maintenance is more easy due to the Reasonable structure design.
13. If Arc cover(Option) is used, it is possible to install in a limited space because the Insulation of arc is possible.
14. The Auxiliary Switch has no any influence from dust or harmful gas because our "hermetically sealed BESTACT" was used.

Technical Details Main Circuit

Division	Specification
Number of Pole	1-Normally Open Contact
Rated Voltage & Current	1,500VDC, 1200A
Using Voltage	750VDC~1800VDC
Maximum Breaking Capacity	300kA at T=15ms
Distance of Contact	30 1mm (Main Tip)
Contant Pressure	20 1kgf (Main Tip)
Voltage Withstanding	AC 5,750V 60Hz 1min
Option	Ultra tripping mechanism & Arc Cover

Technical Details General

Division	Performance
Ambient Temperature	-25 to 60C (40C Continuous)
Switching Rate	2 Operations /sec (max.)
Mechanical Life	0.2 Million Operations
According to	IEC 77 (1968)
Weight	50Kg (With Arc Cover)

NOTE : Please contact us, if your requirement has any deviation from this specification.

To Order

WHB - 1512

Rated Voltage DC 1500V

Rated Current DC 1200A

A

Operating
A : DC100V
B : DC220V
C : DC72V

21

Auxiliary Switch
21 : 2N01NC
12 : 1N02NC
Standard 21/12

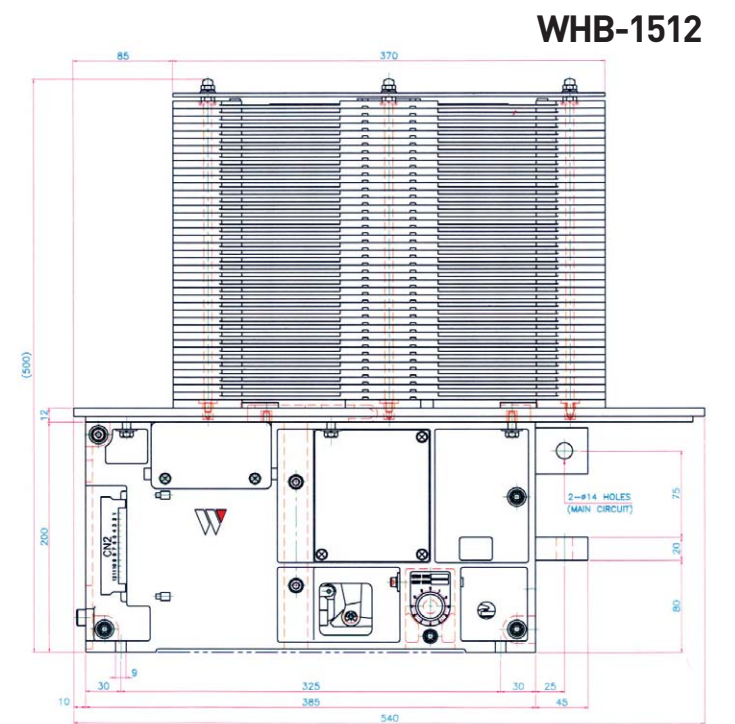
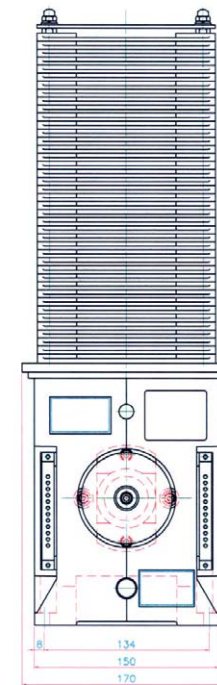
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Right Auxiliary switch

Left Auxiliary switch

Dimension of External View

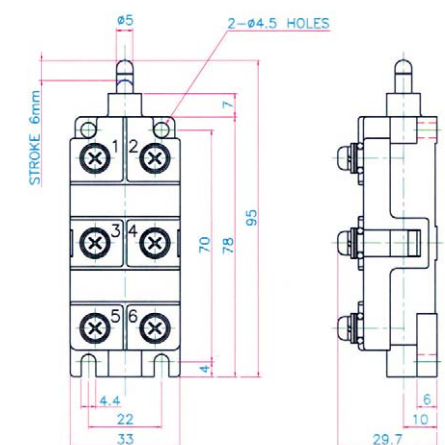
(Including Arc Cover)
(Unit : mm)



Technical Details General (Aux Switch)

Division	Specification
Number of Poles	Customer Options(See "To Order")
Breaking Capacity	DC 100V 0.6A(WIS C-1510 coil load)
	DC 100V 3A(resistance load)
Max. Service Current	DC 100V 10A
	AC 250V 10A
Voltage Withstanding	AC 1500V 60Hz / 1min
Mechanical Life	3 million Operations

Dimension of External View



Aux Switch Option(BESTACT)

※ The control circuit will be protected from excess muck buildup or harmful gas due to our hermetically sealed contact "BESTACT"