



HR6 Series Fuse Disconnecting Switch

Installation and Operation Instruction

**Before installing and using the product,
please read the instruction carefully and well keep it for future
reference.**

Product Certificate

This product has passed the inspection and meets the requirements of GB/T14048.3, and therefore is allowed to leave the factory.

Inspector:



Date of inspection: See the product or packaging.

HUANYU HIGH-TECH CO., LTD.

HR6 Series Fuse Disconnecting Switch

I. Scope of Application

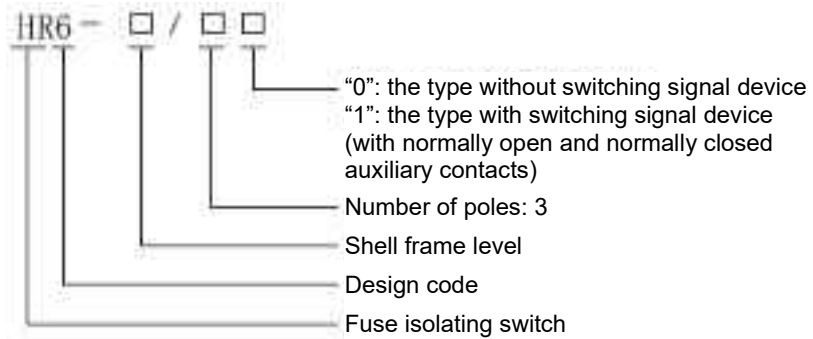
The HR6 Series Fuse Disconnecting Switch (hereinafter referred to as “switch”) is designed by our company with reference to the products of AEG, Germany, which is suitable for the distribution circuits and motor circuits with high short-circuit current with AC 50 Hz, rated voltage of 400 V and 690 V and conventional thermal current up to 1,000 A. This product is used as the power switch, disconnecting switch and emergency switch that are not frequently operated manually, and for the short-circuit protection, but generally not used to directly switch on and off a single motor.

The switch is simple in structure and easy to operate. It complies with GB/T14048.3 and IEC60947-3 and is the best choice among similar products!

II. Normal Working Conditions

1. Ambient air temperature: The temperature shall not be higher than +40°C or lower than -5°C, and the average value within 24 hours shall not exceed +35°C.
2. Altitude: The altitude of the installation location shall not exceed 2,000 meters.
3. Relative humidity: The relative atmospheric humidity shall not exceed 50% when the maximum ambient temperature is +40°C, and a higher relative humidity is allowed at a lower temperature (for example: 90% humidity at +20°C), but the occasional condensation on the switch surface due to temperature changes shall be considered.
4. Contamination grade of the surrounding environment: Grade 3.
5. Installation category: III.
6. Installation conditions: The switch shall be installed vertically in a place without significant shaking, impact or vibration and in a medium without explosion risks, or enough gas or dust to corrode metals or destroy the insulation.
7. Please consult with our company for the use occasions under abnormal working conditions.

III. Model Description



IV. Structural Features of Switch

The switch is mainly composed of a base, an upper cover, and an arc-extinguishing chamber. Three pairs of clamp contacts are directly installed on the base, and the fuse link is installed in the upper cover and directly used as a moving contact blade. The upper cover can be opened in a fan shape along the holder, so that the fuse link can be completely pulled out from the socket with a large isolation distance. The upper cover can also be conveniently removed from the base, which is convenient for the installation and safe removal and replacement of the fuse link.

The base, upper cover and arc-extinguishing chamber of the switch are all made of arc-resistant plastic, which are of fully plastic structure with good mechanical strength, flame-retardant performance and dielectric performance, as well as simple structure, convenient disassembly and assembly, safety and reliability. Many metal arc-extinguishing grids are installed in the arc-extinguishing chamber, which enhances the arc extinguishing ability of the switch, eliminates the harm of arcing and prolongs the service life of the contact.

There are two groups of mounting holes on the base of the switch, which can meet the installation requirements in various switchgears and on the panels of switchgears. The two sides of the switch can be equipped with auxiliary contacts, which can signal the on-off state of the switch.

V. Main Technical Parameters

1. Main technical parameters of the switch (See Table 1):

Table 1

HR6	-160	-250	-400	-630	-800	-1000
Rated impulse withstand voltage U_{imp}	12kV					
Rated insulation voltage U_i	1140V					
Rated frequency	50Hz					
Rated working voltage U_e	AC400V			AC400V/690V		AC400V
Conventional thermal current I_{th}	160A	250A	400A	630A	800A	1000A
Rated working current I_e	160A	250A	400A	630A	800A	1000A
Use category	AC-22B, AC-23B			AC-22B		
Rated limited short-circuit current (r.m.s)	50kA	50kA	50kA	50kA	50kA	50kA
Mechanical life (Number of operation cycles)	3500	3500	2000	1250	1250	1250
Electrical endurance (Number of making/breaking cycles)	500	500	500	250	250	250
Operating force F	$\leq 250N$	$\leq 300N$	$\leq 350N$	$\leq 400N$	$\leq 400N$	$\leq 500N$
Weight	2.3kg	4.7kg	6.8kg	7.8kg	7.8kg	12.5kg

2. Main parameters of the auxiliary contact (auxiliary switch)

- a. Rated working voltage: AC 400 V
- b. Conventional thermal current: 5 A
- c. Use category: AC-15
- d. Contact type: 1 NO + 1 NC
- e. The standard followed: GB/T14048.5

3. Matching between the switch and the fuse link (see Table 2)

Table 2

Specification and model	Model of fuse link matched	Size of fuse link matched	Rated current of fuse link (A)
HR6-160	RT16-160	00	16.25.32.40.50.63.80.125.160
HR6-250	RT16-250	1	80.100.125.160.200.225.250A
HR6-400	RT16-2/400	2	125.160.200.225.300.315.355.400
HR6-630	RT16-3/630	3	315.355.400.425.500.630
HR6-800	RT16-3B	3	800
HR6-1000	RT16-4/1000	3B	800.1000

Note: When the switch is used in the motor circuit, the rated current of the fuse link is allowed to be greater than the rated working current of the switch.

VI. Outline and Installation Dimensions

Outline and installation dimensions of the switch (see Table 3 and Figure 1)

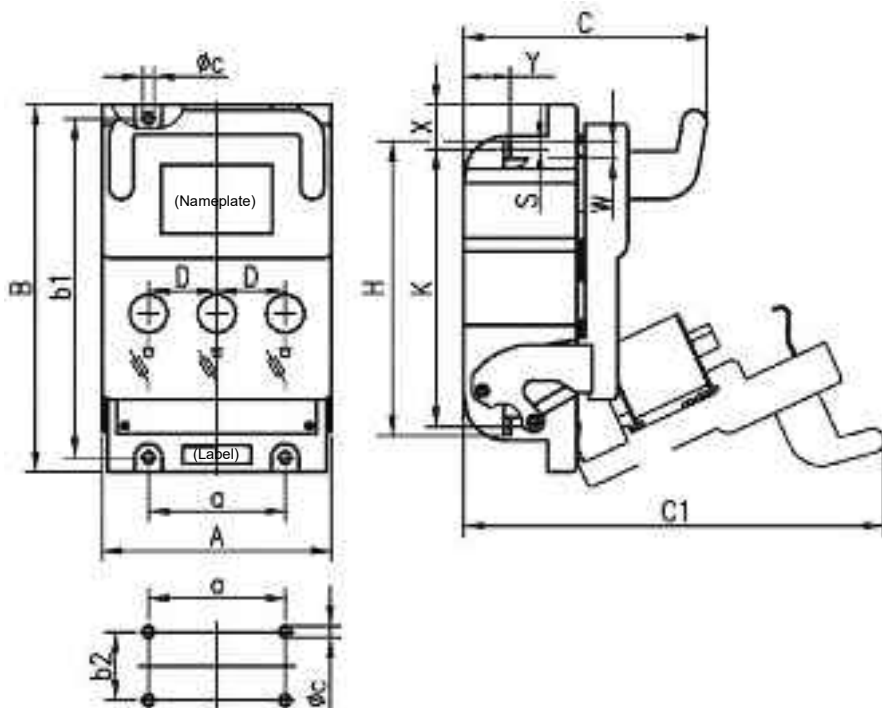


Figure 1: HR6 Series Fuse Disconnecting Switch

Table 3

Specification and model	Outline dimension					Installation dimension				Copper busbar dimension							
	A	B	C	C1	D	a	b1	b2	øc	H	K	X	Y	S	W	Copper cross-section	M
HR6-160/30	134	215	138	245	40	80	198	40	6.5	150	128	44	18	11	24	2.0×20	M8
HR6-250/30	184	280	162	320	60	120	260	60	8.5	185	160	60	22	12.5	28	2.0×30	M10
HR6-400/30	220	300	185	350	72	144	280	60	8.5	215	186	60	31	14.5	35	2.5×35	M10
HR6-630/30	244	300	194	360	80	160	280	60	8.5	232	198	54	26	17.5	40	3.5×40	M12
HR6-800/30	244	300	194	360	80	160	280	60	8.5	232	198	54	26	17.5	40	5.5×40	M12
HR6-1000/30	248	390	175	380	80	160	330	60	11	280	235	97	32	22.5	50	6.5×50	M12

VII. Use and Maintenance

1. The switch shall be installed vertically, with the upper incoming and lower outgoing mode. When installed, the upper cover shall be removed.
2. The switch shall be equipped with NT fuse links or any fuse links that meet the requirements of GB/T13539. 1 and GB/T13539. 2 and have corresponding short-circuit breaking and current limiting capabilities.
3. When replacing the fuse, the load circuit shall be disconnected, and the upper cover of the switch shall be opened or removed. Then, the fuse link can be removed from the upper cover by gently pressing the spring sheet under the fuse link mounting plate, and the new fuse link can be pushed directly along the notch of the plate.
4. Although the arc-extinguishing chamber can be easily pulled out or inserted from the socket, unnecessary disassembly and assembly shall be avoided as far as possible. The arc-extinguishing chamber must be installed carefully, and shall be vertically inserted into the positioning place inside.
5. The contacts of the switch shall be checked regularly, and the dust, oil and other impurities shall be cleaned up in time. The friction part of the operating mechanism shall be oiled regularly to make it move flexibly to prolong its service life.
6. No.3 sodium-based lubricant shall be coated on the contact surface of the contact knife and socket when the fuse link is self-equipped or replaced.

VIII. Ordering Information

When ordering, please specify the model and specification of the switch, rated current of the fuse link and order quantity. If the rated current of the fuse link is not specified, it shall be configured according to the conventional thermal current of the switch. If the fuse link is self-equipped, a remark shall be provided.

Examples of ordering: HR6-160/31, with 100 A fuse link, 5 sets

HR6-250/30, with self-equipped fuse link, 10 sets

Company Commitment

On the premise that users abide by the use and storage conditions and that the product seals are intact, if the product is damaged or cannot be used normally due to manufacturing quality problems within 18 months from the production date of the product, our company will be responsible for the repairing or replacement free of charge. If the warranty period expires, users shall pay for the repair. However, if the damage is caused by the following circumstances, the fees for repair still shall be charged even within the warranty period:

- (1) Misuse, self-modification, improper maintenance, etc.
- (2) Use beyond the standard specification requirements.
- (3) Falling, damage during transportation, etc. after purchase.
- (4) Earthquake, fire, lightning strike, abnormal voltage, other natural disasters and secondary disasters, etc.

In case of any questions, please contact the dealer or our customer service department.

Dear customers

To protect our environment, please recycle the product or its components when the product is scrapped. For materials that cannot be recycled, please handle them properly. Thank you very much for your cooperation and support.

Address: Wenzhou Bridge Industrial Zone,
Yueqing City, Zhejiang Province
Tel.: 0577-62889999
Fax: 0577-62885588
Service hotline: 400-887-5757



<http://www.huyu.com.cn>