



HR17 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.

HR17 Series Fuse Disconnecting Switch

I. Scope of Application

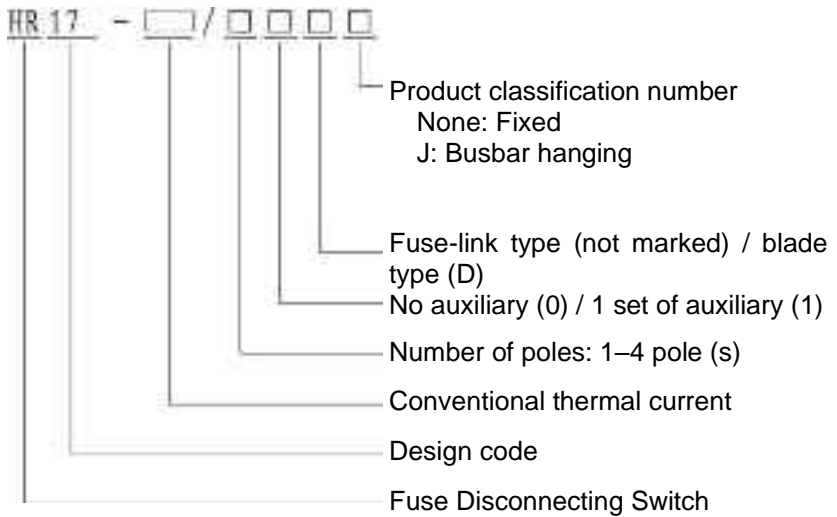
The HR17 Series Fuse Disconnecting Switch (hereinafter referred to as “switch”) is suitable for the distribution circuits and motor circuits with high short-circuit current with AC 50 Hz, rated voltage of 400 V and conventional thermal current up to 800 A. This product is used as the power switch, disconnecting 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 beautiful in shape, novel and concise, simple in structure and easy to operate. It complies with IEC60947-3 and GB/T14048.3 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 air 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 cover. The stationary contact is 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 fulcrum of the base, 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 cover 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 cover, which enhances the arc extinguishing ability of the switch, eliminates the harm of arcing and prolongs the service life of the contact.

V. Main Technical Parameters

1. Main technical parameters of the switch (see the Table)

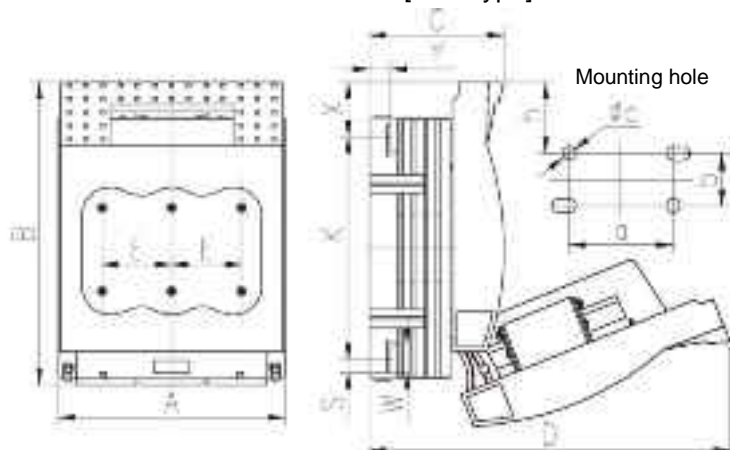
HR17-	40	63	160	250	400	630	800
Rated impulse withstand voltage Uimp	12kV						
Rated insulation voltage Ui	1000V						
Rated working voltage Ue	AC400V						
Rated frequency	50Hz						
Use category	AC-23B		AC-22B			AC-23B	
Conventional thermal current Ith	40A	63A	160A	250A	400A	630A	800A
Rated working current Ie (A)	10-40	10-63	16-160	80-250	125-400	200-630	800
Rated limited short-circuit current (r.m.s)	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Mechanical life (times)	4250		3500		2000	1250	
Electrical life (times)	750		500		500	250	
Operating force F (N)	≤100	≤150	≤250	≤300	≤350	≤400	≤450
Fuse loss power P	4W	6W	12W	23W	34W	48W	60W
Weight (fixed 3 poles) kg	0.36	0.65	1.2	3.5	5.1	6.85	6.85
Main parameters of the auxiliary microswitch	50Hz, AC-15, 220V, 3A						

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

Conventional thermal current Ith	Size of fuse link matched	Rated current of fuse link (A)
40A	RT14	2. 4. 6. 8.10.12.16. 20. 25. 32. 40
63A	RT14	10. 12. 16. 20. 25. 32. 40. 50. 63
160A	RT16-00	10. 16. 25. 32. 40. 50. 63. 80. 100. 125. 160
250A	RT16-1	80. 100. 125. 160. 200. 225. 250
400A	RT16-2	125. 160. 200. 225. 250. 300. 315. 355. 400
630/800A	RT16-3	315. 355. 400. 425. 500. 630. 800

VI. Outline and Installation Dimensions of Switch

1. Outline and dimensions of HR17 series [fixed type]



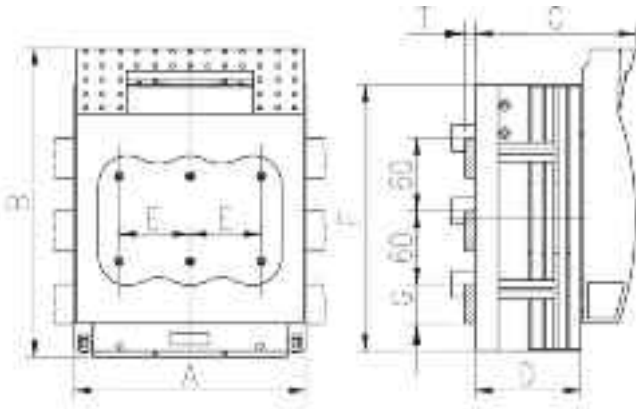
HR17	Outline dimension					Installation dimension				Copper busbar dimension							
	A	B	C	D	E	a	b	φc	h	K	k	Y	S	N	Copper cross-section	M	
-40	/2	55				25		φ6	58	75	23	10	/	15	1*7	/	
	/3	76	116	74	151	21											
-63	/2	74				35		φ6	63	75	26	11	/	15	1.5*9	/	
	/3	105	121	79	151	31											
-160	/2	75				43											
	/3	105	200	83	205	55	66	25	φ7	88	115	42	17	10	30	2*20	φ8
	/4	134					100										
	/3X	112				36	66				115	76	16				
-250	/2	138				72											
	/3	185	247	110	255	57	114	50	φ11	110	185	42	22	11.5	33	2*30	φ10
	/4	242					172										
	/3X	185				57	114				185	42	22				
-400	/2	145				80											
	/3	210	290	135	340	65	130	50	φ11	130	210	55	26	15	40	2.5*33	φ10
	/4	276					195										
	/3X	215				68	130				208	55	26				
-630 -800	/2	175				90											
	/3	256	300	145	350	81	162	50	φ11	140	211	55.5	31	18.5	44	3.5*40 4*40	φ12
	/4	341					243										
	/3X	256				81	162				209	63	32				

2. Outline and dimensions of HR17 series [busbar hanging]

The HR17 Series (busbar hanging) is directly hung on the user's three-phase incoming busbar by three groups of wiring boards at the bottom of the switch, and then is led out from the upper terminal (upper outgoing type) or the lower terminal (lower outgoing type) of the switch.

The center distance of the user's three-phase incoming busbar is 60 mm, and the busbar can be 3–12 mm in thickness and 10–30 mm in width when matching the carrying current.

The switch adopts the built-in spring hanging method, which is simple, convenient and reliable to contact. After hanging, tighten the screws.



HR17	A	B	C	D	E	F	G	T
-160/3J	106	200	110	58	33	152	10 to 30	3 to 12
-250/3J	185	247	138	76	57	212		
-400/3J	210	290	153	88	65	255		
-630.800/3J	256	300	169	103	81	265		

Note: The order must be marked with "upper outgoing type" or "lower outgoing type".

VII. Use and Maintenance

1. The switch shall be installed vertically, with the upper incoming and lower outgoing mode. During the installation, the upper cover, the arc-extinguishing cover and the protective cover shall be removed in turn, the switch base shall be fixed on the mounting plate (fixed mounting type) or hung on the busway (busbar hanging type), and then the protective cover, the arc-extinguishing cover and the upper cover shall be installed in turn.
2. The switch shall be equipped with RT14 (40, 63 A) and NT (160, 250, 400, 630 A) 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, and the rated currents of the switch and the fuse link shall be selected according to the capacity of the electrical equipment.
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 buckle at the fuse link in the upper cover, and the new fuse link can be pushed directly along the notch of the plate in the upper cover.
4. Although the upper cover, arc-extinguishing cover, and protective cover can be easily removed or installed from the base, unnecessary disassembly and assembly shall be avoided as far as possible to avoid damage caused by improper assembly.
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 (i.e. conventional thermal current, number of poles, with or without auxiliary, product category), rated current of the fuse link and order quantity in detail. 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.

Example of ordering: HR17-160/30, with 100 A fuse link, 5 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



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