

HR5

Series Fuse Disconnecting Switch

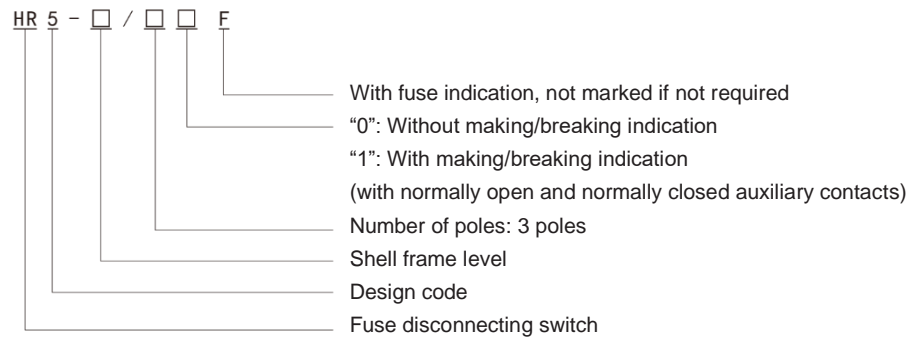


I. Scope of Application

The HR5 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 380 V and conventional thermal current up to 630 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 IEC60947-3 and GB/T14048.3 and is the best choice among similar products.

II. Model Description



III. Normal Operating Conditions

1. Ambient air temperature: The ambient air temperature shall not be higher than +40°C or be 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.

IV. Structural Features

The switch is mainly composed of a resin base and an upper cover. Three pairs of clamp contacts are directly installed on the base with the arc-extinguish chamber, and the fuse link is installed in the upper cover and directly used as a moving contact blade. The upper cover can be rotated to a fan shape along the hinge pin, so that the fuse link can be completely pulled out from the socket. 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 arc-extinguishing chamber of the switch is made of arc-resistant plastic, which is simple in structure, convenient to disassemble and assemble, as well as safe and reliable. 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.

Auxiliary contacts can be installed on the left and right sides of the switch base to indicate the making/breaking state of the switch. A fuse indicator can be installed in the switch cover. The indicator light will be on when the fuse link is blown, which can be used for phase loss detection and protection.

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V. Main Technical Parameters

1. Main technical parameters of the switch

Switch model	HR5-160	HR5-250	HR5-400	HR5-630
Rated impulse withstand voltage Uimp	12kV			
Rated insulation voltage Ui	1000V		1140V	
Rated working voltage Ue	AC380V			
Rated frequency	50Hz			
Use category	AC-22B		AC-23B	
Conventional thermal current Ith	160A	250A	400A	630A
Rated working current Ie	160A	250A	400A	630A
Rated limited short-circuit current Iq	50kA	50kA	50kA	50kA
Mechanical life (number of operation cycles)	3500	3500	2000	1250
Electrical life (number of making/breaking cycles)	500	500	500	250
Operating force F	≤250N	≤300N	≤350N	≤400N
Weight	2.9kg	6.4kg	8.1kg	9.9kg

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

- Rated working voltage: AC 380 V
- Conventional thermal current: 5 A
- Use category: AC-15
- Contact type: 1 NO + 1 NC
- The standard followed: GB/T14048.5

3. Matching between the switch and the fuse link

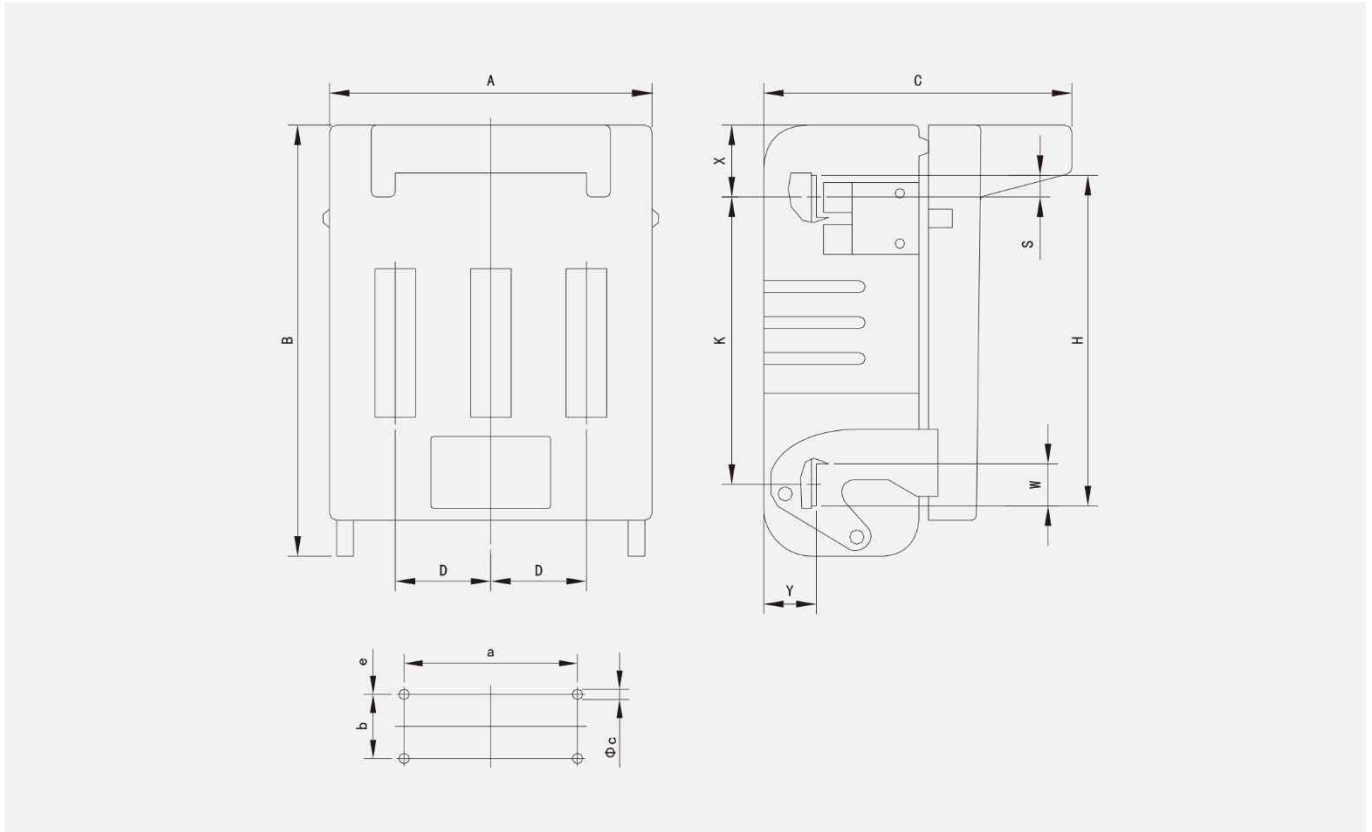
Specification and model	Model of fuse link matched	Size of fuse link matched	Rated current of fuse link (A)
HR5-160	RT16-00	00	16. 25. 32. 40. 50. 63. 80. 100. 125. 160
HR5-250	RT16-1	1	80. 100. 125. 160. 200. 225. 250
HR5-400	RT16-2/400	2	125. 160. 200. 225. 250. 300. 315. 355. 400
HR5-630	RT16-3/630	3	315. 355. 400. 425. 500. 630

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.

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VI. Outline and Installation Dimensions



Product model	Outline dimension (mm)				Installation dimension (mm)				Copper busbar dimension (mm)							
	A	B	C	D	a	b	e	φc	H	K	X	Y	S	W	Cross-section	M
HR5-160/30	141	180	130	40	100	40	70	7	138	118	56	20	10	22	2 x 20	M8
HR5-160/31	149															
HR5-250/30	201	240	164	62	130	60	87.5	9	185	160	37.5	27	12.5	28	2 x 30	M10
HR5-250/31	209															
HR5-400/30	221	260	176	70	130	60	97.5	9	215	187	34	32.5	14	35	2.5 x 35	M10
HR5-400/31	229															
HR5-630/30	266	280	188	85	200	60	107.5	9	232	197	39	33.5	17.5	40	3.5 x 40	M12
HR5-630/31	274															

Note: e refers to the distance from the upper mounting hole to the uppermost edge.