HUM18-63 series mini circuit breaker

Application

This circuit breaker is applied to protect the over-current of electrical apparatus and circuit device of construction and similar buildings in the circuit of AC 50Hz, rated voltage 230V/ 400V and max rated current 63A. It can also applied as the unfrequent making-breaking operation.

Model No. and signification

HU M 18- □ / □ - □ □

- Rated working current
- Instantaneous release type (B, C, D)
- Poles number (1P+N)
- Frame rated current
- Design code
- Moulded case circuit breaker
- Huanyu Group Co., Ltd.

Main technical parameter

- Frame size rated current Inm: 63A
- Rated voltage Ue: 50Hz, 230V/400V.
- Rated current In: 1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63A.
- Rated limit short circuit breaking capacity Icu: 10000A.
- Rated limit operation breaking capacity Ics: 7500A.
- Pole number: 1P, 1P+N, 2P, 3P+N, 4P.
- Mechanical lifetime: 20000 times.
- Electric lifetime: 8000 times.
- Type of instantaneous release and releasing current range:

B type 3In~5In;
C type 5In~10In;
D type 10In~50In.

More reliable structure design

The mini circuit breaker use high accuracy bimetal for inverse time lag thermal protection element, accurate protection characteristic. The operating mechanism is four link mechanism, small operating physical force , reliable tripping, high sensitivity;

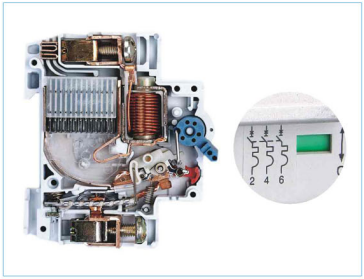
Instantaneous trip, electromagnet, light moving iron core, small interval, quick response, high sensitivity, inner store structure, absolutely no lock phenomena, enhance the reliability much;

Changed the moving contact from crossbeam type to erect type, added rigidity, which ensures the contact's switch in on at a thermal state. Small bulk of moving contact, small operating interval, which ensures the speed of moving contact after break off,in favor of arc distract quickly;

The mini circuit breaker uses big arc chute, arc's track connected by iron acr runner, decreased the arc resistance, it can avoid intercept, 13 pieces grill, the arc can be cut, cooling, extinguish, sprying arc lip use multilayer grill can cooling, extinguish arc more, mostly ensured zero arcing. It can avoid the arc short circuit between poles;

Arc chute protected by special organic material, it will bring a lot of insulating material smoke at high temperature, enhance of the pressure. Controlling the cascade direction of metal smoke in effect, the insulating material smoke can cooling the arc fan and enhance the arc resistance and voltage, it ensured arc extinguish quickly. The insulation material also avoid the case's burning loss, ensured the product's high insulation performance.

The mini circuit breaker is well current limiting, very short of arcing time, long life, reliable performance; has obvious position state indicate; reasonable of structure design, so power supply input wire can random choose; connecting terminal adopt frame construction, no matter soft, rigidity leads are can hard connect; complete accessories, the mini circuit breaker can with auxiliary contact, alarm contact, shunt release, undervoltage release and residual current operating protector module etc. They are facility for intelligentize apply.



Normal working condition

1.Normal working condition

1.1 The maximum ambient temperature should be -5℃ ⩽T ⩽ +40℃, average temperature should be ⩽ 35℃ at 24h.

1.2 The altitude of installation place should not exceed 2000m.

The relative humidity should not exceed 50% at 40℃, it permits higher relative humidity when at a higher temperature, the average maximum relative humidity should not exceed 90% at maximum humidity month, and this month's average minimum temperature does not exceed +25℃, and it should take consideration of the condensation on the product's surface for temperature change.

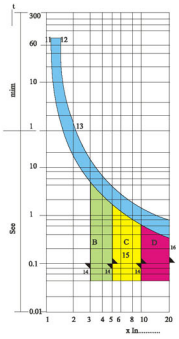
2. Insullation condition

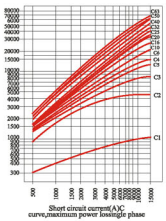
2.1 Installation type: II ,III

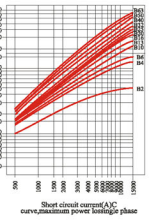
2.2 The mini circuit breaker is installed by standard mounting rail.

2.3 The mini circuit breaker is uprightn installation, knob upwards is switch on position.

2.4 The installation place is not of obviously impact and librate.







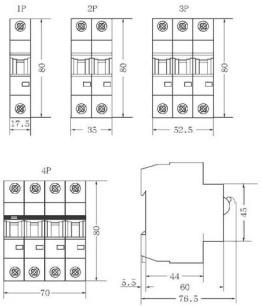
Tripping characteristic type and application range of breaker

Tripping characteristic	Tripping characteristic	Application range
B	Characteristic B is used in a case where needs shorter tripping time and lower short-circuit current. The allowed short time overload current is <3 In.	Protection against transformer's second circuit
C	Characteristic C is applied in most electric circuit where permit higher short-time load current (Max is 5In) and miniature breaker has no action.	Protection against general electric circuit
D	Characteristic D is introduced in switch equipment that allows very high short-time load current (<10In), such as protection against transformers first circuit and electromagnetic valve etc	Protection against Transformer's first circuit

Tripping characteristic

		B	C	D	Tripping time
Thermal tripping	I1	1.13 × In	1.13 × In	1.13 × In	⩾ 1h
	I2	1.45 × In	1.45 × In	1.45 × In	< 1h
Magnetic tipping	I3	3 × In	5 × In	10 × In	⩾0.1s
	I4	5 × In	10 × In	50 × In	< 0.1s

Contour and installation dimension



Range

The accessories of HUM18-63 mini circuit breaker are HUM18-F auxiliary contact,HUM18-FB alarming contact,HUM18-FL shunt release, HUM18-QY undervoltage release.

They enlarge the mini circuit breaker's appllication functions. They facilitote intelligent controlling of intelligent building.