

Terminal Distribution

HUM18LY-63

Series Miniature Earth Leakage Circuit Breaker



I. Scope of Application

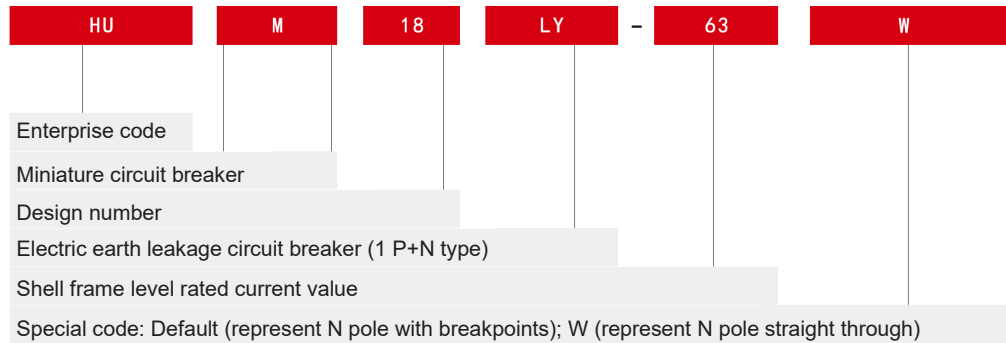
The HUM18LY-63 Series Earth Leakage Circuit Breaker is suitable for circuits with AC 50 Hz, rated voltage up to 230 V, rated current less than 63 A and the neutral point of the power supply grounded. The circuit breaker is mainly used for electric shock protection and over-current protection on buildings and line equipment for similar purposes, and can also provide protection against fire hazards caused by earth fault current generated by insulation damage of electric equipment.

The HUM18LY-63 Series Earth Leakage Circuit Breaker has two types including the type AC and the type A. Among them, the type AC only protects the AC leakage current, while the type A protects the leakage current from pulsed DC (PDC) besides protecting the AC leakage current. In terms of leakage current protection, the type A is more comprehensive and safer than the type AC.

The HUM18LY-63 Series Earth Leakage Circuit Breaker is complete in accessory, which can be equipped with auxiliary contacts, alarm contacts, shunt trip, under-voltage release, over-voltage release, and over-voltage & under-voltage release, providing great convenience for intelligent application.

The HUM18LY-63 Series Earth Leakage Circuit Breaker complies with GB/T16917.1 *Residual current operated circuit breakers with integral over-current protection for household and similar uses (RCBO) Part 1: General rules.*

II. Model Description



III. Normal Operating Conditions

1. The upper limit of ambient air temperature shall not exceed +40°C, the lower limit shall not be lower than -5°C, and the average value within 24 hours shall not exceed +35°C.
2. The altitude of the installation location shall not exceed 2,000 meters.
3. The relative atmospheric humidity at the installation location shall not exceed 50% when the maximum temperature is 40°C, and a higher relative humidity is allowed at a lower temperature. The average maximum relative humidity of the wettest month shall not exceed 90%, and the average monthly temperature of that month shall not exceed 25°C. Measures must be taken for condensation generated on the product surface due to temperature changes.
4. The contamination grade: Grade 2.
5. The installation category: II and III.
6. The earth leakage circuit breaker is installed with TH35-7.5 standard guide rails.
7. The external magnetic field of the installation site shall not exceed 5 times of the geomagnetic field in any direction.
8. The earth leakage circuit breaker shall generally be installed vertically, and the power supply is connected when the handle is upward.
9. The installation location shall be free of significant impact and vibration.

IV. Main Technical Parameters

See Table 1 for specifications

Model		HUM18LY-63	HUM18LY-63W
Number of poles		1P+N, N pole with breakpoints	1P+N, N pole straight through
Rated current I _n (A)		6, 10, 16, 20, 25, 32, 40, 50, 63	
Rated residual operating current I _{Δn} (mA)		30mA, 50mA	
Leakage type		Type AC and type A	
Rated short-circuit capacity	Voltage (V)	230	
	Short-circuit capacity(A)	10000	
Rated residual circuit making/breaking capacity (A)		3000	
Overcurrent instantaneous release type		B, C, D	
Notes		With isolation function	Without isolation function

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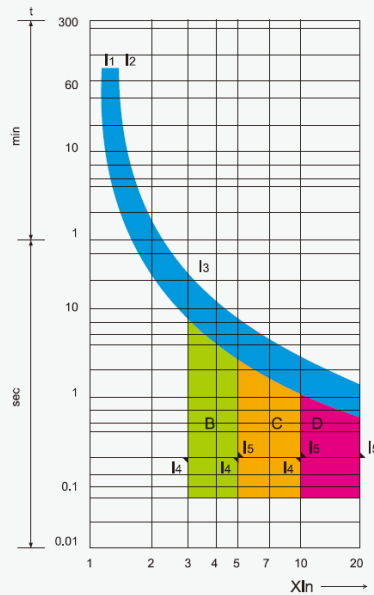
2. See Table 2 for the residual current breaking time of the earth leakage circuit breaker

Residual current type	$I \Delta n$ (mA)	I_n (A)	Maximum breaking time (s)			
			$I \Delta n$	$2 I \Delta n$	$5 I \Delta n$	250mA
Type A and type AC When the AC residual current (RMS value) is equal to the following values	>30	Any value	0.1	0.1	0.1	-
	≤30		0.1	0.1	0.1	0.04
Type A When the residual current from PDC (produced by a half-wave rectifier) is equal to the following values	$I \Delta n$ (mA)	I_n (A)	Maximum breaking time (s)			
	>30	Any value	$1.4 I \Delta n$	$2.8 I \Delta n$	$7 I \Delta n$	0.35A
	≤30		0.1	0.1	-	0.04

3. See Table 3 for protection characteristics of the overcurrent release (See Figure 1 for the characteristic curve)

Release type		Test current (A)			Tripping time (t)	Expected result	Notes
		B	C	D			
Thermal tripping	I_1	$1.13I_n$			≤1h	No tripping	Cold state Thermal state (immediately following the above test)
	I_2	$1.45I_n$			<1h	Tripping	
Magnetic tripping	I_4	$3I_n$	$5I_n$	$10I_n$	≤0.1s	No tripping	Room temperature
	I_5	$5I_n$	$10I_n$	$20I_n$	<0.1s	Tripping	

Note: In the table, the operating characteristic of thermal tripping is the expected result obtained within the specified time at 30°C–35°C according to the corresponding wire connection in Table 4. The product is commissioned according to this condition when leaving the factory. If the working condition is different, the rated current shall be compensated accordingly. It is recommended that the user adopts the corresponding wire connection in Table 4.

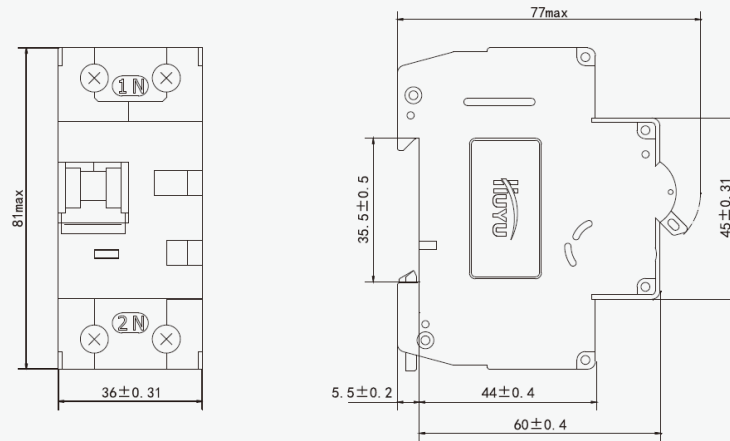


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V. Outline and Installation Dimensions



VI. Ordering Information

When ordering, please specify the model, rated current value, rated residual operating current, tripping type, quantity, etc. of the earth leakage circuit breaker.

For example: HUM18LY-63 Earth Leakage Circuit Breaker, with rated current of 40 A, tripping type of C, rated residual operating current of 30 mA, leakage type of A, and 100 sets. Represented by HUM18LY-63, C40, type A, 30 mA, 100 sets.