



## 产品介绍

CH3系列模数化终端电器是常熟开关制造有限公司在推出自主研发的CM3/CM5型壳断路器及CW3万能式断路器之后,全新推出的系列化产品,是原有CH1/CH2终端电器的升级换代产品。其与原有产品相比有如下特点:

- CH3N、CH3LN中的1N产品尺寸不变,但额定电流提升至40A,分断能力提升至6kA;
- CH3N、CH3LN中的1N产品也可选配各类附件,以满足工业应用多功能要求;
- CH3N、CH3H小型断路器均可倒进线连接;
- CH3N-63额定电流向下覆盖至1A,并具有1N形式和D特性;
- 63A壳架带剩余电流保护小型断路器额定剩余动作电流30mA、100mA、300mA可选,丰富了漏电保护特性;
- 全系列产品标准化设计,附件通用化;
- 全系列人机界面优化一致,外形人性化。

具有以下系列产品

——符合GB/T 10963.1的CH3N-40、63, CH3H-63小型断路器,额定电压AC50/60Hz 400V,额定电流 1A-63A;符合GB/T 14048.2的CH3H-125小型断路器,额定电压AC50/60Hz 400V,额定电流63A~125A;

——符合GB/T 16917.1的CH3LNN-32、CH3LN-40、CH3LN-63、CH3LH-63带剩余电流保护小型断路器,额定电压AC50/60Hz 400V,额定电流6A-63A,额定剩余动作电流30mA-300mA;符合GB/T 14048.2的CH3LH-125带剩余电流保护小型断路器,额定电压AC50/60Hz 400V,额定电流63A~125A,额定剩余电流动作电流30mA~300mA;

——符合GB/T 14048.2的CH3Z-63小型直流断路器,额定电压至DC500V,额定电流1A-63A;

——符合GB/T 14048.3的CH3G-125模数化隔离开关,额定电压至AC50/60Hz 400V,额定电流32A-125A。

——符合GB/T 16917.1的LDC3H电磁式剩余电流附件,额定电压AC50/60Hz 400V,额定剩余电流30mA,300mA。

——符合GB/T 14048.2的CH3M单磁式小型断路器,额定电压AC50/60 400V,额定电流1-63A。

上述各系列断路器均具有隔离功能,其相应符号为: 。

CH3 series modular terminal electric appliance is a new series of products introduced by Changshu Switchgear Manufacturing Co., Ltd. after the introduction of self-developed CM3/CM5 molded case circuit breaker and CW3 universal circuit breaker. It is the upgrade of the original CH1/CH2 terminal electric appliance. Replacement products. Compared with the original products, it has the following characteristics:

- The 1N product size in CH3N and CH3LN is unchanged, but the rated current is increased to 40A, and the breaking capacity is increased to 6kA;
- 1N products in CH3N and CH3LN can also be equipped with various accessories to meet the multi-functional requirements of industrial applications;
- CH3N, CH3H miniature circuit breakers can be connected to the line;
- CH3N-63 rated current covers up to 1A, and has 1N form and D characteristics;
- 63A shell with residual current protection miniature circuit breaker 30mA, 100mA, 300mA optional, enriching the leakage protection characteristics;
- Standardized design of all series of products, generalization of accessories;
- The whole series of human-machine interfaces are optimized and humanized.

There are following family products:

——CH3N-40、63, CH3H-63 miniature circuit breaker in accordance with GB/T 10963.1, rated voltage AC50/60Hz 400V, rated current 1A-63A; CH3H-125 miniature circuit breaker in accordance with GB/T 14048.2, rated voltage AC50/60Hz 400V, rated current 63A~125A;

——CH3LNN-32、CH3LN-40、CH3LN-63、CH3LH-63 with residual current protection miniature circuit breaker complying with GB/T 16917.1, rated voltage AC50/60Hz 400V, rated current 6A-63A, rated residual operating current 30mA-300mA; CH3LH-125 with residual current protection miniature circuit breaker complying with GB/T 14048.2, rated voltage AC50/60Hz 400V, rated current 63~125A, rated residual operating current 30mA-300mA;

——CH3Z-63 miniature DC circuit breaker according to GB/T 14048.2, rated voltage to DC500V, rated current 1A-63A;

——According to GB/T 14048.3 CH3G-125 modular switch disconnector, rated voltage to AC50/60Hz 400V, rated current 32A-125A。

——LDC3H electromagnetic residual current accessory compliance with GB/T 16917.1, rated voltage AC50/60Hz 400V, rated residual current 30mA, 300mA。

——CH3M electromagnetic miniature circuit breaker compliance with GB/T 14048.2, rated voltage AC50/60Hz 400V, rated current 1-63A。

All series circuit breakers above are suitable for isolation, the symbol are shown as 。

- 周围空气温度为-5℃~+40℃。
- 安装地点的海拔不超过2000m。
- 安装地点的空气相对湿度在最高温度为+40℃时不超过50%,在较低温度下可以有较高的相对湿度,例如20℃时达90%。对由于温度变化偶尔产生的凝露应采取特殊措施。
- 污染等级为2级。
- 安装类别为II、III类。
- 可运行条件:周围空气温度可低至-25℃,高至+70℃(详见环境温度-电流对照表)。

- The ambient air temperature is -5℃~+40℃.
- The altitude of the installation site should not exceed 2000m.
- The relative humidity of the air at the installation site should not exceed 50% at a maximum temperature of +40℃, and it can have a high relative humidity at a lower temperature, for example, 90% at 20℃. Special measures should be taken for condensation that occasionally occurs due to temperature changes.
- The pollution degree is 2.
- Installation categories are II and III.
- Service conditions: ambient air temperature can be as low as -25℃, up to +70℃ (see the ambient temperature - current comparison table).

## ◎ 技术参数

	CH3LNN-32	CH3LN-40	CH3LN-63				
符合标准 Standards compliant	GB/T 16917.1	GB/T 16917.1	GB/T 16917.1				
外形 Shape							
极数 Number of poles	1N	1N	1N	2	3	3N	4
中性极 Neutral pole	开闭 Switching	开闭 Switching	不开闭 Un-switching			不开闭 Un-switching	
额定频率 (Hz) Rated frequency	50/60	50/60	50/60				
额定工作电压 Ue(V) Rated operational voltage	240	230	230	230	400	400	400
额定绝缘电压 Ui(V) Rated insulation voltage	250	500	500				
额定冲击耐受电压 Uimp(kV) Rated impulse withstand voltage	4	4	4				
瞬时脱扣电流型式 Instantaneous trip current type	C (5In-10In)	C (5In-10In), D (10In-20In)	C (5In-10In), D (10In-20In)				
额定电流 In(A) Rated current	6,10,16,20,25,32	6,10,16,20,25,32,40	6,10,16,20,25,32,40,50,63				
运行短路能力 Ics(kA) Service short circuit capacity	6	6	6				
额定短路能力 Icn(kA) Rated short circuit capacity	6	6	6				
额定剩余动作电流 IΔn(mA) Rated residual operating current	30	30	30 / 100 / 300				
额定剩余接通与分断能力 IΔm(A) Rated residual making and breaking capacity	4500	2000	2000				
剩余电流动作最大断开时间 Max. break time of residual current operation	IΔn、2IΔn时 < 100ms 5IΔn时 < 40ms						
机械寿命 (次) Mechanical life (times)	20000	20000	20000				
电气寿命 (次) Electrical life (times)	10000	10000	10000				
接线能力 Wiring ability	≤16mm <sup>2</sup>	≤16mm <sup>2</sup>	≤25mm <sup>2</sup>				
进线方式 Entry method	上进线 top	上进线 top	上进线 top				

◎ 选型指南

CH3LNN-32 C 10 / 030E

壳架等级电流  
Frame Current

瞬时脱扣电流型式  
Instantaneous trip current type

额定电流  
Rated current

额定剩余动作电流  
030E: 30mA AC型电子式  
Rated residual operating current  
030E: 30mA AC type electronic

CH3LN-40 C 10 / 030E

壳架等级电流  
Frame Current

瞬时脱扣电流型式  
Instantaneous trip current type

额定电流  
Rated current

额定剩余动作电流  
030E: 30mA AC型电子式  
030EA: 30mA A型电子式  
Rated residual operating current  
030E: 30mA AC type electronic  
030EA: 30mA A type electronic

注: 对D型瞬时脱扣电流形式, 仅有030EA  
Note: There only is 030EA for D type instantaneous trip current type

CH3L N -63 C 10 / 3N / 030E

分断能力级别  
N: 6kA  
H: 10kA  
Breaking capacity class

壳架等级电流  
Frame Current

瞬时脱扣电流型式  
Instantaneous trip current type

额定电流  
Rated current

极数  
poles

额定剩余动作电流  
030E: 30mA AC型电子式  
100E: 100mA AC型电子式  
300E: 300mA AC型电子式  
030EA: 30mA A型电子式  
100EA: 100mA A型电子式  
300EA: 300mA A型电子式  
Rated residual operating current  
030E: 30mA AC type electronic  
100E: 100mA AC type electronic  
300E: 300mA AC type electronic  
030EA: 30mA A type electronic  
100EA: 100mA A type electronic  
300EA: 300mA A type electronic

CH3LH-125 C 63 / 4 / 030E

壳架等级电流  
Frame Current

瞬时脱扣电流型式  
Instantaneous trip current type

额定电流  
Rated current

极数  
poles

额定剩余动作电流  
030E: 30mA AC型电子式  
100E: 100mA AC型电子式  
300E: 300mA AC型电子式  
Rated residual operating current  
030E: 30mA AC type electronic  
100E: 100mA AC type electronic  
300E: 300mA AC type electronic

◎ 产品细节

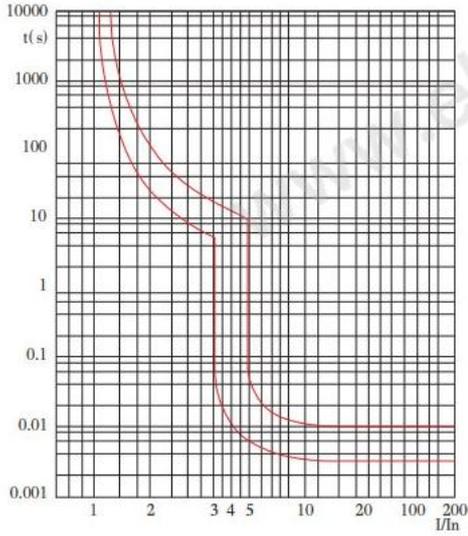


◎ 性能曲线

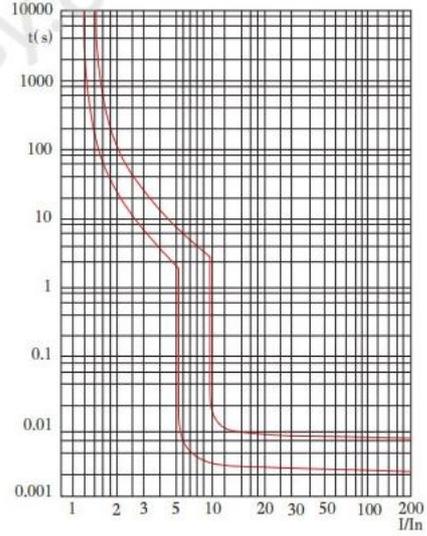
特性曲线 Characteristic curve

CH3N-40, CH3N-63, CH3H-63, CH3LNN-32, CH3LN-40, CH3LN-63, CH3LH-63 特性曲线  
 CH3N-40, CH3N-63, CH3H-63, CH3LNN-32, CH3LN-40, CH3LN-63, CH3LH-63 Characteristic curve

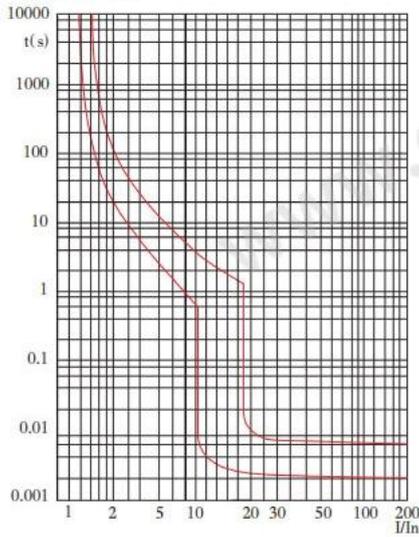
B型 type  
 CH3H-63



C型 type  
 CH3N-40, CH3N-63, CH3H-63,  
 CH3LNN-32, CH3LN-40, CH3LN-63,  
 CH3LH-63

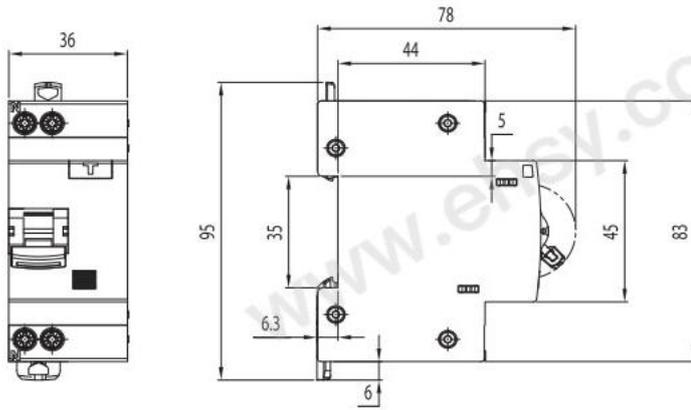


D型 type  
 CH3N-63, CH3H-63, CH3LN-40, CH3LN-63,  
 CH3LH-63



◎ 产品尺寸

外形尺寸和安装尺寸 (单位 unit:mm)



@注意事项

CH3N-40、CH3N-63、CH3H-63、CH3LNN-32、CH3LN-40、CH3LN-63、CH3LH-63 特性表  
CH3N-40、CH3N-63、CH3H-63、CH3LNN-32、CH3LN-40、CH3LN-63、CH3LH-63 Characteristic data

过电流脱扣器类型 Overcurrent release type	额定电流 Rated current In(A)	起始状态 Starting state	试验电流 Test current	规定时间 set time(t)	预期结果 Expected results	试验环境温度 Test ambient temperature
热脱扣器 Thermal release	≤63	冷态 Cold state	1.13In	t≤1h	不脱扣 No trip	30°C~35°C
		热态 Hot state	1.45In	t<1h	脱扣 trip	
	≤32	冷态 Cold state	2.55In	1s<t<60s	脱扣 trip	
	>32	冷态 Cold state		1s<t<120s		
瞬时脱扣器 Instantaneous release	≤63	冷态 Cold state	3In	t≤0.1s	不脱扣 No trip	
		冷态 Cold state	5In			
		冷态 Cold state	10In			
	≥63	冷态 Cold state	5In	t<0.1s	脱扣 trip	
		冷态 Cold state	10In			
		冷态 Cold state	20In			