



# CH 系列终端电器

CH SERIES MODULUS TERMINAL ELECTRICAL APPLIANCE

CV系列

CW系列

CM系列

CB系列 CK系列 CR系列 CA系列

CJR系列 CJD系列 CD系列 CH系列 CE系列

CHR-125

- 小型断路器
- LEAKAGE CIRCUIT BREAKER
- 漏电断路器
- 小型空气断路器
- LEAKATURE DC CIRCUIT BREAKER
- 隔离开关
- SWITCH-DISCONNECTOR
- 附件
- ACCESSORIES

2015年版

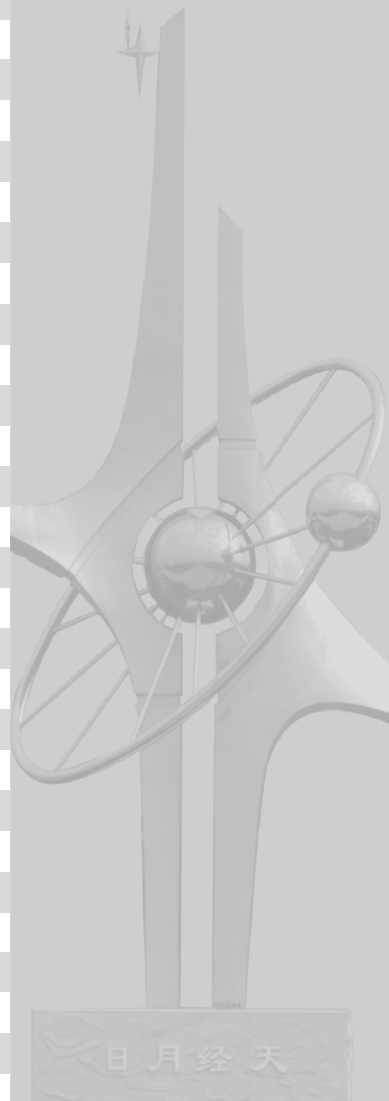
常熟开关制造有限公司  
(原常熟开关厂)

CHANGSHU SWITCHGEAR MFG. CO.,LTD.  
(FORMER CHANGSHU SWITCHGEAR PLANT)



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CH系列模数化终端电器主要包括：CH1、CH2系列小型断路器，CH2Z系列小型直流断路器，CH1L、CH2L系列漏电断路器，CH1G系列隔离开关及各系列产品附件。它们广泛用于工业、商业及民用等各个领域。

- **线路过流保护装置**

CH1、CH2系列小型断路器符合GB10963.1 IEC60898-1，具有单极+中性极、单极、二极、三极和四极，电流范围为1A-63A，最大短路分断能力10kA，适用于配电电路的短路、过载保护及线路的不频繁合分。

CH2Z系列小型直流断路器符合GB14048.2、IEC60947-2，具有单极和二极，额定电流范围为1A-63A，最大短路分断能力10kA，适用于直流配电电路的短路、过载保护及线路的不频繁合分。

- **线路过流和漏电保护装置**

CH1L、CH2L系列漏电断路器符合GB16917.1、IEC61009-1，具有单极+中性极、二极、三极、三极+中性极和四极，额定电流范围为1A-63A，最大短路分断能力10kA，适用于配电电路的短路、过载保护，同时可对人体直接或间接接触、线路或负载对地漏电等故障进行保护。

- **隔离开关**

CH1G系列隔离开关符合GB14048.3、IEC60947-3具有单极、二极、三极、四极，额定电流范围为32A-100A，用来对建筑物和类似场所的线路设施、工业配电系统和电动机电路作隔离之用。

- **汇流排**

汇流排是CH1-63小型断路器的一种模数化附件，具有单极、二极、三极、四极，适用于多台断路器同相位进线端之间的联接，也可以作为一种通用化的标准附件用于同相位终端电器间的联接。

CH series modulus terminal electrical appliance contains: CH1 & CH2 series MCB, CH2Z series DC MCB, CH1L & CH2L series leakage circuit-breaker, CH1G series switch-disconnector, and their accessories. They are widely used in industry, business and civil fields etc.

- **Overcurrent protective device**

CH1 & CH2 series MCBs comply with GB 10963.1 and IEC 60898-1. The MCBs which have several kinds of pole numbers of single pole + neutral pole, single pole, two poles, three poles and four poles, with a rated current range from 1A to 63A and a max short-circuit breaking capacity of 10kA, take the role of short-current, overload protection and infrequent circuit turn-on and turn-off.

CH2Z series DC MCBs accord with GB 14048.2 and IEC 60947-2. The DC MCBs which have two kinds pole numbers of single pole and two poles, with a rated current range from 1A to 63A and a max short-circuit breaking capacity of 10kA, take the role of short-current, overload protection and infrequent circuit turn-on and turn-off in DC circuit.

- **Overcurrent and leakage protective device**

CH1L & CH2L series leakage circuit-breakers accord with GB 16917.1 and IEC 61009-1. The breakers which have several kinds of pole numbers of single pole + neutral pole, two poles, three poles, three poles + neutral pole and four poles, with a rated current range from 1A to 63A and a max short-circuit breaking capacity of 10kA, take the role of short-current and overload protection. Contemporarily, the breakers provide direct or indirect contact protection for man and protect the leakage failure which is caused by line to earth or load to earth.

- **Switch-disconnector**

CH1G series switch-disconnectors accord with GB 14048.3 and IEC 60947-3. The disconnectors which have several kinds of pole numbers of single pole, two poles, three poles and four poles, with a rated current range from 32A to 100A, take the role of isolating electric apparatus of building, industrial distribution system and electromotor circuit.

- **Collecting bar**

Collecting bars are the modulus accessory of CH1-63 MCBs. The bars which have several kinds of pole numbers of single pole, two poles, three poles and four poles take the role of connecting the same-phase incoming terminals among breakers and connecting among the same-phase terminal electrical appliance.



## 正常工作条件和安装条件

## REGULAR WORKING CONDITIONS AND MOUNTING CONDITIONS

- 环境温度  
上限为+40℃，下限为-5℃，日平均温度不超过+35℃；
- 相对湿度  
安装地点的大气相对湿度在周围最高温度+40℃时不超过50%，在较低温度下可以有较高的相对湿度，最湿月的平均最大相对湿度不超过90%，同时该月的月平均最低气温不超过+25℃，并考虑到温度变化发生在产品表面上的凝露；
- 污染等级  
环境污染等级2；
- 安装类别  
安装类别为Ⅱ、Ⅲ类；
- 海拔  
安装地点的海拔不超过2000m。
- Ambient temperature  
-5℃ ~ + 40℃ and the daily average value below + 35℃
- Relative humidity  
The relative humidity of the air must not be above 50% at the max temperature of + 40℃ but it may be higher at a lower temperature. The max average relative humidity must not be above 90% in the most humidity month in which the minimum average temperature isn't above 25℃. Dew on the protectors due to temperature alteration should be removed;
- Pollution degree  
degree 2;
- Installing categories  
Ⅱ or Ⅲ;
- Elevation  
The elevation must not be above 2000m.



## 产品特点 CHARACTERISTICS OF CH SERIES MCB

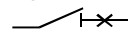
### CH系列小型断路器特点

- 外观新颖，人性化设计
- 具有新颖的限流结构 - 额定短路能力高达10kA
- 具有过载及短路保护装置 - 保护功能齐全
- 采用“框式”接线结构 - 接线安全可靠
- 可配多种附件：辅助触头、报警触头、分励脱扣器、过欠压脱扣器、汇流排 - 功能扩展方便
- 模块化、模数化 - 任意组合，系列配套
- TH35mm标准安装轨安装 - 安装便捷方便
- CH系列小型断路器均带隔离功能，其符号为



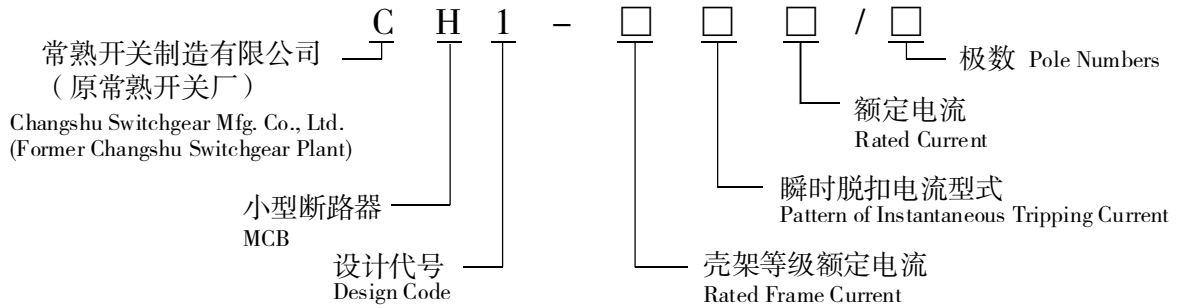
### Characteristics of CH series MCB

- Novel appearance, humanizational design
- With novel current limiting construction — rated short-circuit capacity reaches 10kA
- With over-load and short-circuit protector — protected functions are perfect
- Adopt “frame type” wire connection — wire connection is safe and reliable
- Can install accessories: auxiliary contact、alarm contact、shunt release and collecting bar— expediently expand functions
- Modularity、modulus — arbitrary combination, series support
- Installed by TH35mm standard guideway — portable and convenient installation
- CH series MCB have disconnecting function, its corresponding symbol is shown as





● 型号和含义 Type and Meaning



● 技术参数 Technical Parameters

壳架等级额定电流 $I_{nm}$ (A) Rated Frame Current $I_{nm}$ (A)	32	63			
型号 Type	CH1-32	CH1-63			
符合标准 Reference Standard	GB 10963.1 IEC 60898-1				
外形 Outline					
极数 Poles	1N	1	2	3	4
频率(Hz) Frequency(Hz)	50				
额定工作电压 $U_e$ (V) Rated Working Voltage $U_e$ (V)	230	230	400		
额定绝缘电压 $U_i$ (V) Rated Insulation Voltage $U_i$ (V)	230	400			
额定冲击耐受电压 $U_{imp}$ (kV) Rated Impulse Withstand Voltage $U_{imp}$ (kV)	4				
瞬时脱扣电流型式 Instantaneous Tripping Current Pattern	C	C、D			
额定电流 $I_n$ (A) Rated Current $I_n$ (A)	6、10、16、 20、25、32	C型: 6、10、16、20、25、32、40、50、63 D型: 6、10、16、20、25、32、40 C type: 6、10、16、20、25、32、40、50、63 D type: 6、10、16、20、25、32、40			
运行短路分断能力 $I_{cs}$ (kA) Operating Short-circuit Breaking Capacity $I_{cs}$ (kA)	4.5	C40及以下 $I_{cs} = 6$ , C40以上及D型 $I_{cs} = 4.5$ C40 and below: $I_{cs} = 6$ ; C40 above and D: $I_{cs} = 4.5$			
额定短路分断能力 $I_{cn}$ (kA) Rated Short-circuit Breaking Capacity $I_{cn}$ (kA)	4.5	C40及以下 $I_{cn} = 6$ , C40以上及D型 $I_{cn} = 4.5$ C40 and below: $I_{cn} = 6$ ; C40 above and D: $I_{cn} = 4.5$			
机械和电气寿命 (次) Mechanical and Electrical Life (times)	20000				
接线能力 Wiring Capacity	10mm <sup>2</sup> 及以下导线 Conducting wire of 10mm <sup>2</sup> and below	25mm <sup>2</sup> 及以下导线 Conducting wire of 25 mm <sup>2</sup> and below			



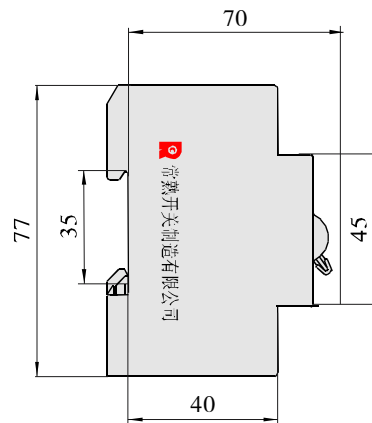
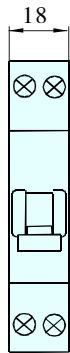
● 瞬时脱扣电流的型式和脱扣电流范围

Patterns of Instantaneous Tripping Current and Ranges of Tripping Current

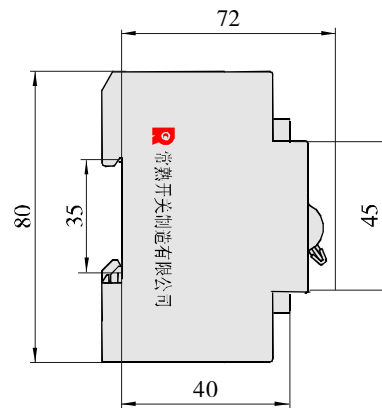
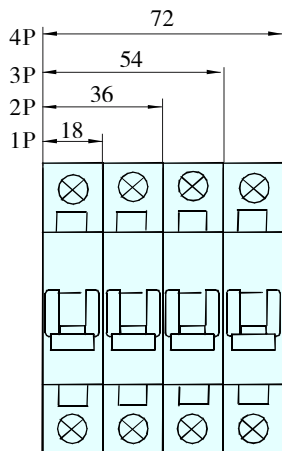
瞬时脱扣电流的型式 Pattern of Instantaneous Tripping Current	脱扣电流范围 Ranges of Tripping Current
C	5In~10 In
D	10In~14In

● 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions

CH1 - 32

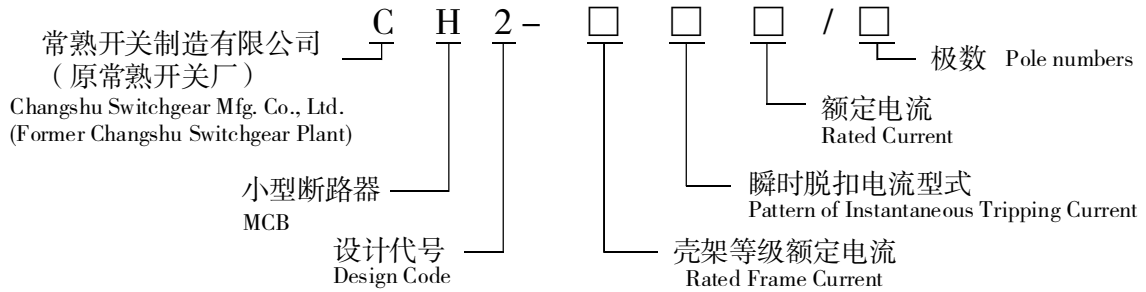


CH1 - 63









● 型号和含义 Type and meaning



● 技术参数 Technical Parameters

壳架等级额定电流 $I_{nm}$ (A) Rated Frame Current $I_{nm}$ (A)	63			
型号 Type	CH2-63			
符合标准 Reference Standard	GB 10963.1 IEC 60898-1			
产品外形 Outline				
极数 Poles	1	2	3	4
频率(Hz) Frequency(Hz)	50			
额定工作电压 $U_e$ (V) Rated Working Voltage $U_e$ (V)	230/400			
额定绝缘电压 $U_i$ (V) Rated Insulation Voltage $U_i$ (V)	400			
额定冲击耐受电压 $U_{imp}$ (kV) Rated Impulse Withstand Voltage $U_{imp}$ (kV)	4			
瞬时脱扣电流型式 Instantaneous Tripping Current Pattern	B、C、D			
额定电流 $I_n$ (A) Rated Current $I_n$ (A)	1、2、4、6、10、16、 20、25、32、40、50、63			
运行短路分断能力 $I_{cs}$ (kA) Operating Short-circuit Breaking Capacity $I_{cs}$ (kA)	7.5			
额定短路分断能力 $I_{cn}$ (kA) Rated Short-circuit Breaking Capacity $I_{cn}$ (kA)	10			
机械和电气寿命 (次) Mechanical and Electrical Life (times)	10000			
接线能力 Wiring Capacity	35 mm <sup>2</sup> 及以下导线 Conducting wire of 35 mm <sup>2</sup> and below			

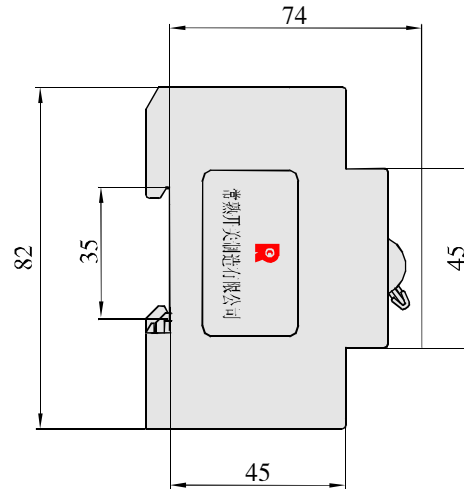
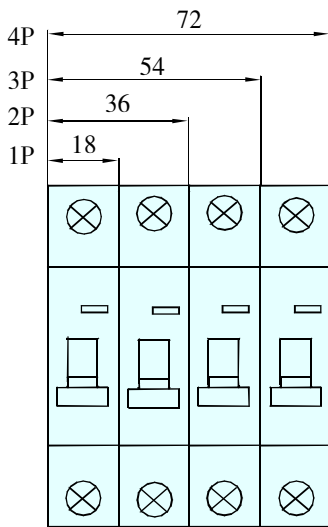


● 瞬时脱扣电流的型式和脱扣电流范围

Patterns of Instantaneous Tripping Current and Ranges of Tripping Current

瞬时脱扣电流的型式 Patterns of Instantaneous Tripping Current	脱扣电流范围 Ranges of Tripping Current
B	$3I_n \sim 5I_n$
C	$5I_n \sim 10I_n$
D	$10I_n \sim 20I_n$

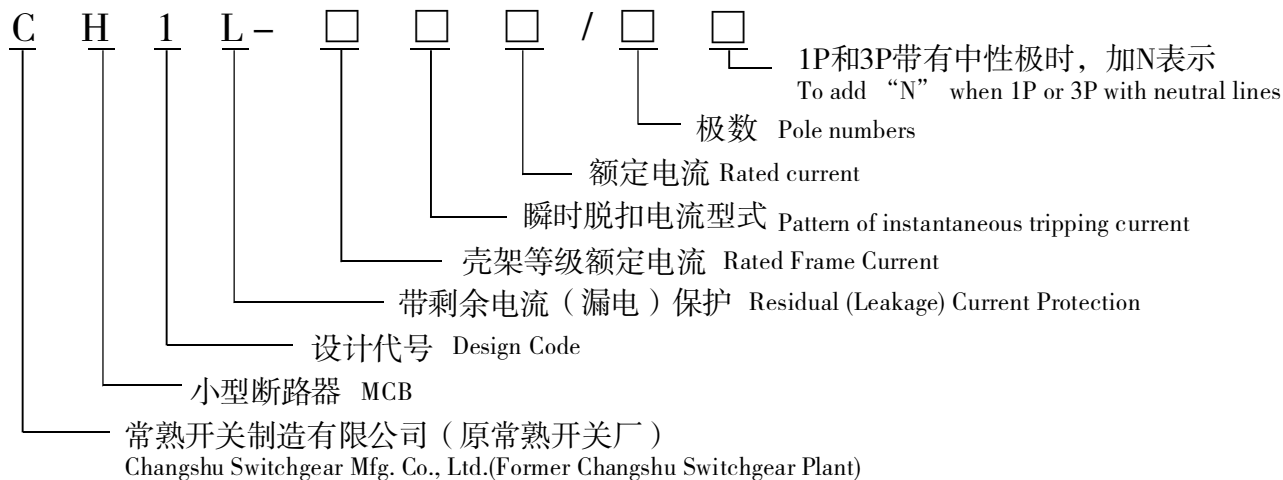
● 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions







● 型号和含义 Type and meaning



● 技术参数 Technical Parameters

壳架等级额定电流 $I_{nm}$ (A) Rated Frame Current $I_{nm}$ (A)	32	50					50				
型号 Type	CH1L - 32	CH1L - 50					CH1L - 50L				
符合标准 Reference Standard	GB 16917.1, IEC 61009-1										
外形 Outline											
极数 Poles	1 N	1 N	2	3	3 N	4	1 N	2	3	3 N	4
中性极 Neutral Line	开闭 Un-switching	不开闭 Un-switching			不开闭 Un-switching		不开闭 Un-switching			不开闭 Un-switching	
频率(Hz) Frequency (Hz)	50										
额定工作电压 $U_e$ (V) Rated Working Voltage $U_e$ (V)	230	230/400									
额定绝缘电压 $U_i$ (V) Rated Insulation Voltage $U_i$ (V)	230	400									
额定冲击耐受电压 $U_{imp}$ (kV) Rated Impulse Withstand Voltage $U_{imp}$ (kV)	4										
瞬时脱扣电流型式 Instantaneous Tripping Current Pattern	C										
额定电流 $I_n$ (A) Rated Current $I_n$ (A)	6、10、16 20、25	40、50					6、10、16、20、25、32				
运行短路分断能力 $I_{cs}$ (kA) Operating Short-circuit Breaking Capacity $I_{cs}$ (kA)	4.5	40A: $I_{cs}=6$ ; 50A: $I_{cs}=4.5$					6				
额定短路分断能力 $I_{cn}$ (kA) Rated Short-circuit Breaking Capacity $I_{cn}$ (kA)	4.5	40A: $I_{cs}=6$ ; 50A: $I_{cs}=4.5$					6				
额定剩余动作电流 $I_{\Delta n}$ (mA) Rated Residual Working Current $I_{\Delta n}$ (mA)	30										
机械和电气寿命 (次) Mechanical and Electrical Life(times)	20000										
接线能力 Wiring Capacity	10mm <sup>2</sup> 及以下导线 Conducting wire of 10mm <sup>2</sup> and below	25mm <sup>2</sup> 及以下导线 Conducting wire of 25 mm <sup>2</sup> and below									
漏电脱扣器电源电压 (V) Supply Voltage of Leakage Release (V)	230	230	230	400	230	230	230	230	400	230	230



- 瞬时脱扣器的型式和脱扣电流范围 Patterns of Instantaneous Release and Ranges of Tripping Current

瞬时脱扣器的型式 Patterns of Instantaneous Release	脱扣电流范围 Ranges of Tripping Current
C	$5I_n \sim 10 I_n$

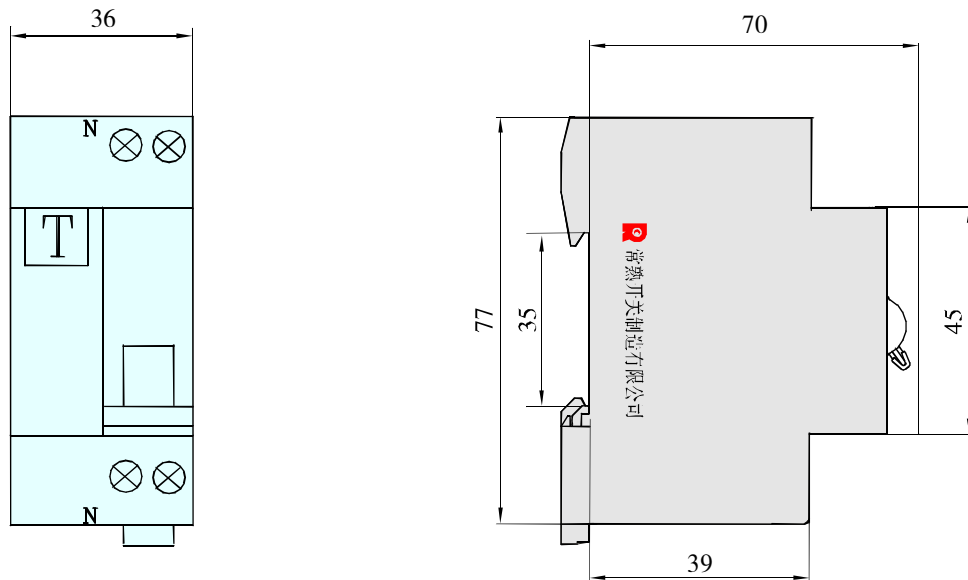
- 剩余电流分断时间 Residual Current Breaking Time

壳架电流 $I_{nm}$ (A) Frame Current (A)	$I_{\Delta n}$ (mA)	最大(剩余电流)分断时间 (s) Maximum (Residual Current) Breaking Time			
		$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$I_{\Delta t}$
32	30	0.1	0.1	0.04	0.04
50	30	0.1	0.1	0.04	0.04

注：试验电流  $I_{\Delta t}$  为下列电流中的较大者，500A 或按 C 型的过电流瞬时脱扣范围的上限。  
Note: The testing current  $I_{\Delta t}$  is the upper limit of the over-current instantaneous tripping of the following current: 500A or when Pattern C of instantaneous release is selected.

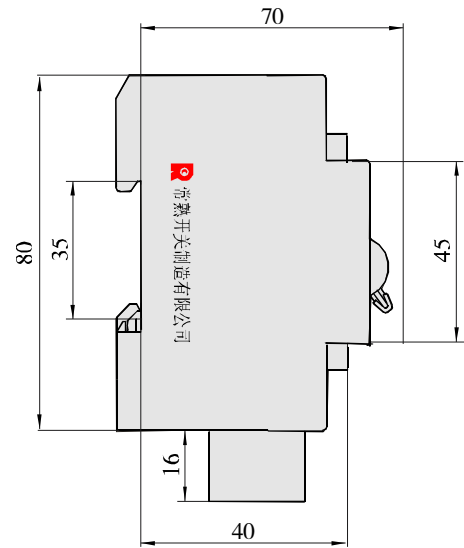
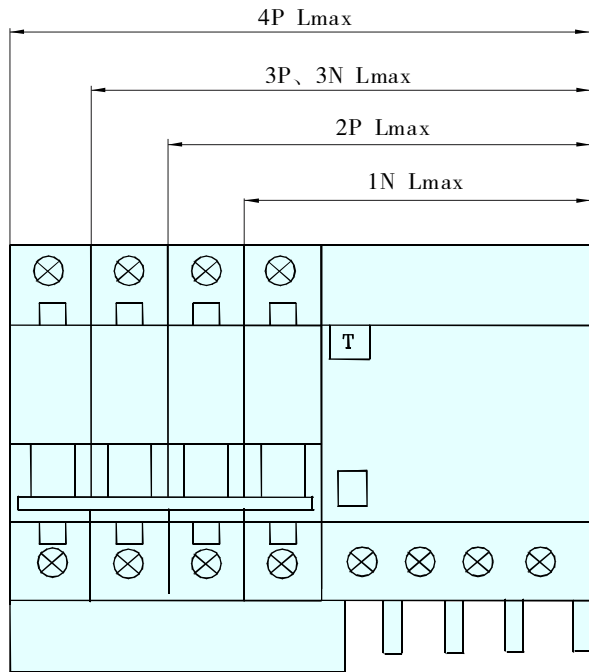
- 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions

CH1L-32





CH1L-50/CH1L-50L

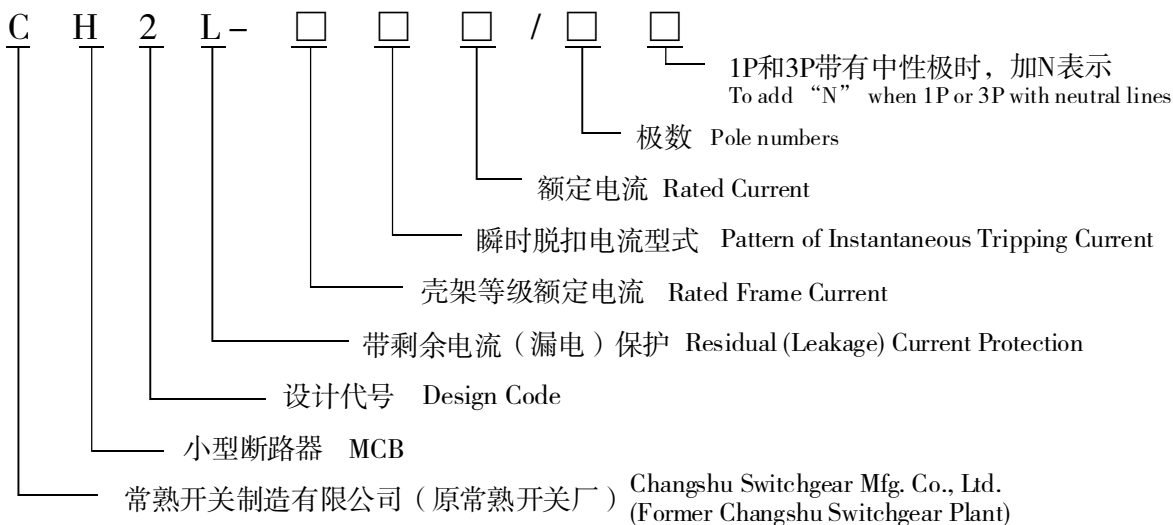


单位: mm  
Unit: mm






型号 type	极数 Poles 尺寸 Dimensions	1N	2	3	3N	4
		CH1L-50L	Lmax	45	63	90
CH1L-50	Lmax	54	72	103.5	117	135



● 型号和含义 Type and Meaning



● 技术参数 Technical Parameters

壳架等级额定电流 $I_{nm}$ (A) Rated Frame Current $I_{nm}$ (A)	63				
型号 Type	CH2L - 63				
符合标准 Reference Standard	GB 16917.1、IEC 61009-1				
外形 Outline					
极数 Poles	1 N	2	3	3 N	4
中性极 Neutral Line	不开闭 Un-switching			开闭 Switching	
频率(Hz) Frequency(Hz)	50				
额定工作电压 $U_e$ (V) Rated Working Voltage $U_e$ (V)	230/400				
额定绝缘电压 $U_i$ (V) Rated Insulation Voltage $U_i$ (V)	400				
额定冲击耐受电压 $U_{imp}$ (kV) Rated Impulse Withstand Voltage $U_{imp}$ (kV)	4				
瞬时脱扣电流型式 Instantaneous Tripping Current Type	B、C、D				
额定电流 $I_n$ (A) Rated Current $I_n$ (A)	1、2、4、6、10、16、20、25、32、40、50、63				
额定剩余动作电流 $I_{\Delta n}$ (mA) Rated Residual Working Current $I_{\Delta n}$ (mA)	30				
运行短路分断能力 $I_{cs}$ (kA) Operating Short-circuit Breaking Capacity $I_{cs}$ (kA)	7.5				
额定短路分断能力 $I_{cn}$ (kA) Rated Short-circuit Breaking Capacity $I_{cn}$ (kA)	10				
机械和电气寿命 (次) Mechanical and Electrical Life (times)	10000				
接线能力 Wiring Capacity	35mm <sup>2</sup> 及以下导线 Conducting wire of 35 mm <sup>2</sup> and below				
漏电脱扣器电源电压 (V) Supply Voltage of Leakage Release (V)	230	230	400	230	230



- 瞬时脱扣器的型式和脱扣电流范围  
Patterns of Instantaneous Release and Ranges of Tripping Current

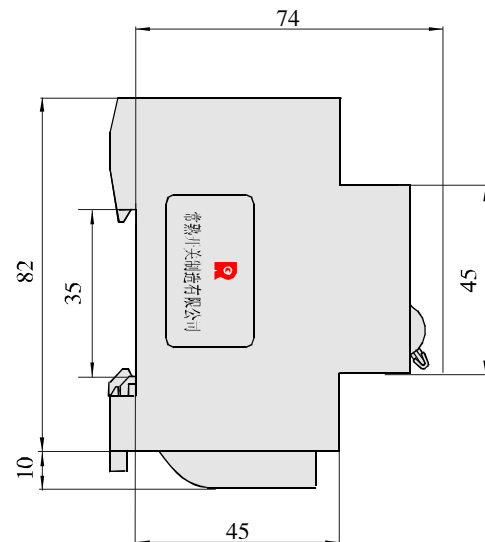
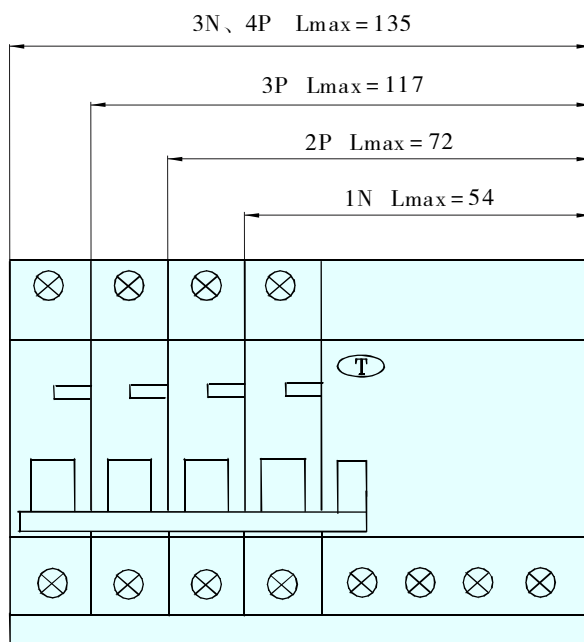
瞬时脱扣器的型式 Patterns of Instantaneous Release	脱扣电流范围 Ranges of Tripping Current
B	$3I_n \sim 5I_n$
C	$5I_n \sim 10I_n$
D	$10I_n \sim 20I_n$

- 剩余电流分断时间  
Residual Current Breaking Time

壳架电流 $I_n$ (A) Frame Current (A)	$I_{\Delta n}$ (mA)	最大 (剩余电流) 分断时间 (s) Maximum (Residual Current) Breaking Time			
		$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	$I_{\Delta t}$
63	30	0.1	0.1	0.04	0.04

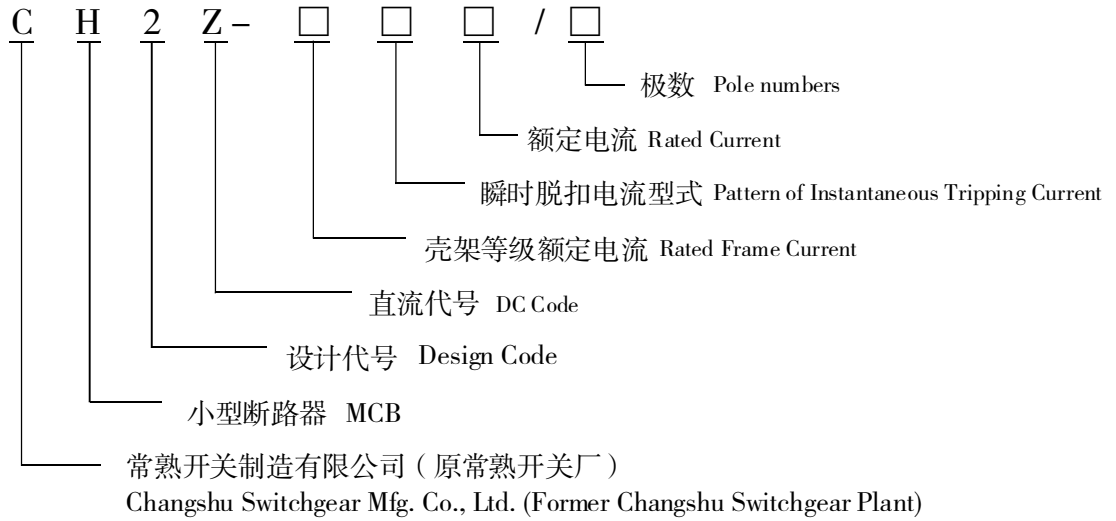
注：试验电流  $I_{\Delta t}$  为下列电流中的较大者，500A 或按 B 型、C 型或 D 型 (适用时) 的过电流瞬时脱扣范围的上限。  
Note: The testing current  $I_{\Delta t}$  is the upper limit of over-current instantaneous tripping of the following current: 500A or when Pattern B, C or D (when applicable) of instantaneous release is selected.

- 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions







● 型号和含义 Type and Meaning



● 技术参数 Technical Parameters

壳架等级额定电流 $I_{nm}$ (A) Rated Frame Current $I_{nm}$ (A)	63	
型号 Type	CH2Z - 63	
符合标准 Reference Standard	GB 14048.2、IEC 60947-2	
外形 Outline		
极数 Poles	1	2
额定工作电压 $U_e$ (V) Rated Working Voltage $U_e$ (V)	125	250
额定绝缘电压 $U_i$ (V) Rated Insulation Voltage $U_i$ (V)	1000	
额定冲击耐受电压 $U_{imp}$ (kV) Rated Impulse Withstand Voltage $U_{imp}$ (kV)	6	
瞬时脱扣电流型式 Instantaneous Tripping Current Type	B、C	
额定电流 $I_n$ (A) Rated Current $I_n$ (A)	1、2、3、4、6、8、10、12、16、20、25、32、40、50、63	
额定运行短路分断能力 $I_{cs}$ (kA) Rated service Short-circuit Breaking Capacity $I_{cs}$ (kA)	6	
额定极限短路分断能力 $I_{cu}$ (kA) Rated limited Short-circuit Breaking Capacity $I_{cu}$ (kA)	10	
机械和电气寿命 (次) Mechanical and Electrical Life (times)	10000	
接线能力 Wiring Capacity	35mm <sup>2</sup> 及以下导线 Conducting wire of 35 mm <sup>2</sup> and below	

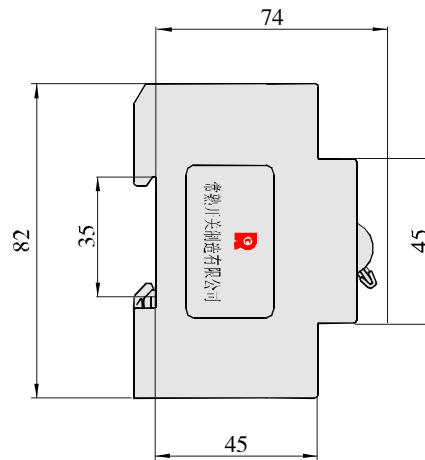
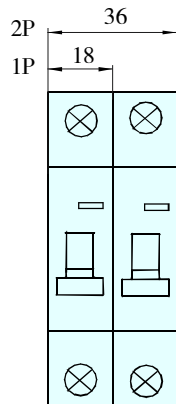


● 瞬时脱扣电流的型式和脱扣电流范围

Patterns of Instantaneous Tripping Current and Ranges of Tripping Current

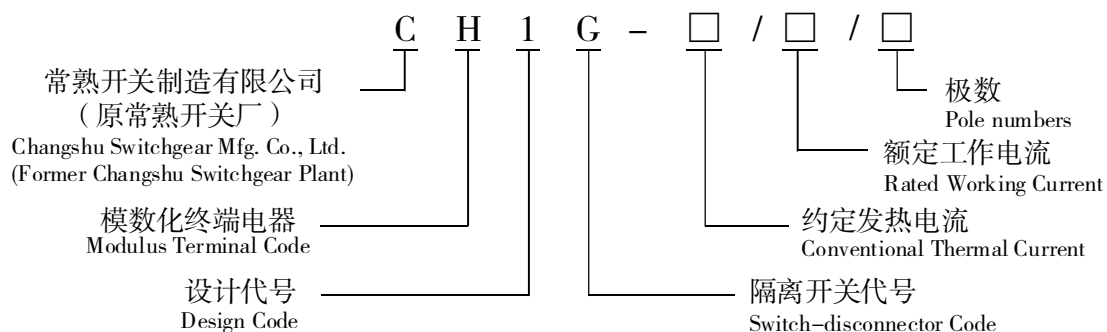
瞬时脱扣电流的型式 Patterns of Instantaneous Tripping Current	脱扣电流范围 Ranges of Tripping Current
B	$6I_n \pm 20\%$
C	$12I_n \pm 20\%$

● 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions






● 型号和含义 Type and Meaning



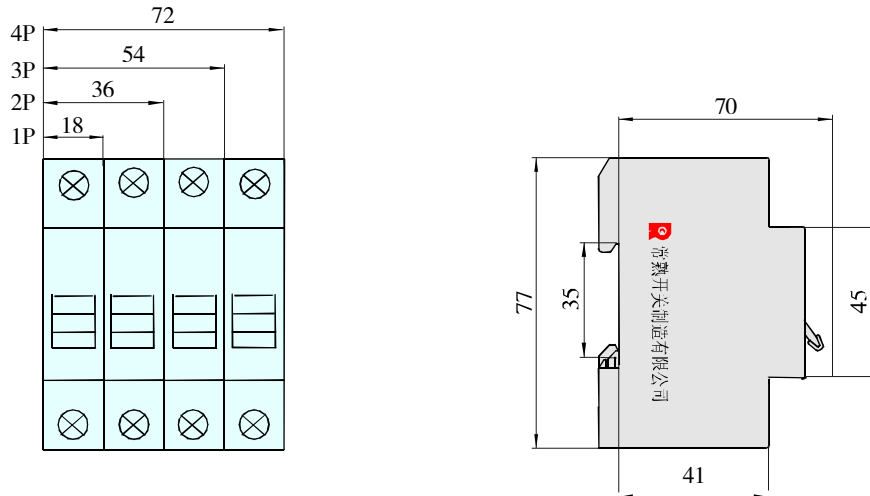
● 技术参数 Technical Parameters

约定发热电流Ith (A) Conventional Thermal Current Ith (A)	100			
型号 Type	CH1G-100			
符合标准 Reference Standard	GB 14048.3、IEC 60947-3			
产品外形 Outline				
极数 Poles	1	2	3	4
频率(Hz) Frequency(Hz)	50			
额定工作电压Ue(V) Rated Working Voltage Ue(V)	230/400			
额定绝缘电压Ui(V) Rated Insulation Voltage Ui(V)	400			
额定冲击耐受电压Uimp(kV) Rated Impulse Withstand Voltage Uimp(kV)	6			
额定工作电流In(A) Rated Working Current In(A)	32、63、100			
额定短时耐受电流Icw/Is Rated Short-time Withstand Current Icw/Is	20Ie			
使用类别 Utilization Category	AC-22A			
机械和电气寿命(次) Mechanical and Electrical Life (times)	10000			
接线能力 Wiring Capacity	50mm <sup>2</sup> 及以下导线 Conducting wire of 50 mm <sup>2</sup> and below			





## 外形尺寸和安装尺寸 Outline Dimensions and Mounting Dimensions

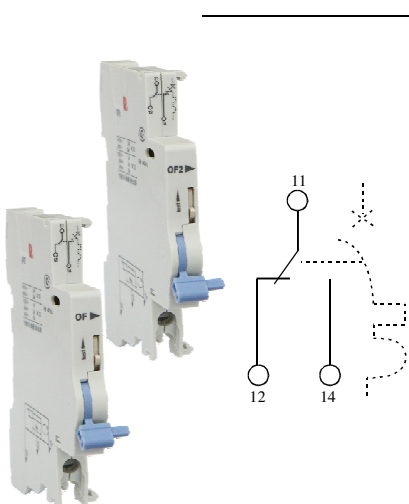


## 辅助触头、报警触头、分励脱扣器 auxiliary contact, alarm contact, shunt release

断路器加装OF、OF2辅助触头、SD、SD2报警触头、MX+OF、MX+OF2分励脱扣器，由工厂装配完整后提供给用户。  
订货方法：断路器型号+附件名称，如CH1-63C50/4+OF/电压值。

If user ordered accessory as of auxiliary contact sd alarm contact or MX+OF shunt release, our factory will install the accessory then deliver MCB to user.

Order notice: type of MCB+name of accessory for example: CH1-63C50/4+OF/voltage.



宽度9mm  
Width: 9 mm

### OF、OF2辅助触头

- OF加装于CH1-63、CH1L-50、CH1L-50L系列左侧，OF2加装于CH2-63、CH2L-63、CH2Z-63系列左侧。
- 指示断路器通断状态

### 技术参数

- 额定工作电流

OF: AC 230V 6A AC 400V 3A	OF2: AC 240V 6A AC 415V 3A
DC 24V 6A DC 48V 2A	DC 24V 6A DC 48V 2A
DC 125V 1A DC 250V 0.4A	DC 130V 1A

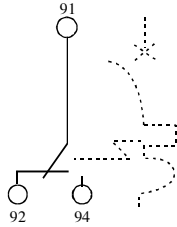
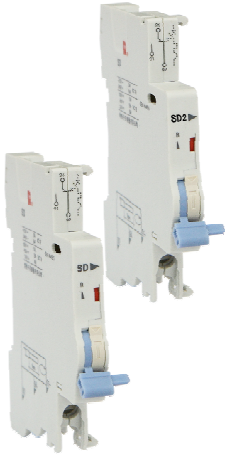
### OF、OF2 Auxiliary Contact

- OF To be installed on the left side of CH1-63、CH1L-50、CH1L-50L, OF2 to CH2L-63、CH2L-63、CH2Z-63.
- To indicate the on/off state of the MCB

### Technical Parameters

- Rated Working Current

OF: AC 230V 6A AC 400V 3A	OF2: AC 240V 6A AC 415V 3A
DC 24V 6A DC 48V 2A	DC 24V 6A DC 48V 2A
DC 125V 1A DC 250V 0.4A	DC 130V 1A



宽度9mm  
Width: 9 mm

SD、SD2报警触头

- SD加装于CH1-63、CH1L-50、CH1L-50L系列左侧，SD2加装于CH2-63、CH2L-63、CH2Z-63系列左侧。
- 指示断路器因故障脱扣的状态

技术参数

- 额定工作电流

SD: AC 230V 6A	AC 400V 3A	SD2: AC 240V 6A	AC 415V 3A
DC 24V 6A	DC 48V 2A	DC 24V 6A	DC 48V 2A
DC 125V 1A	DC 250V 0.4A	DC 130V 1A	

SD、SD2 Alarm Contact

- SD To be installed on the left side of CH1-63、CH1L-50、CH1L-50L, SD2 to CH2-63、CH2L-63、CH2Z-63..
- To indicate the tripping state of the MCB due to fault

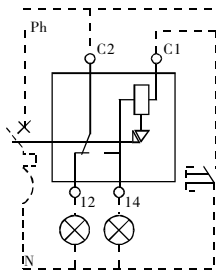
Technical Parameters

- Rated Working Current

SD: AC 230V 6A	AC 400V 3A	SD2: AC 240V 6A	AC 415V 3A
DC 24V 6A	DC 48V 2A	DC 24V 6A	DC 48V 2A
DC 125V 1A	DC 250V 0.4A	DC 130V 1A	



MX+OF



宽度18mm  
Width: 18 mm

MX+OF、MX+OF2分励脱扣器

- MX+OF加装于CH1-63系列右侧，MX+OF2加装于CH2-63、CH2L-63、CH2Z-63系列左侧。
- 指示断路器通断状态

技术参数

- 控制电压

AC 230V DC 24V

MX+OF、MX+OF2 Shunt Release

- MX+OF To be installed on the right side of CH1-63 MCBs, MX+OF2 to be installed on the left side of CH2-63、CH2L-63、CH2Z-63.
- To indicate the on/off state of the MCB

Technical Parameters

- Control Voltage

AC 230V DC 24V

接线能力

- 单线: 2.5mm<sup>2</sup>
- 双线: 1.5mm<sup>2</sup>

Wiring Capacity

- Singel line : 2.5mm<sup>2</sup>
- Double line : 1.5mm<sup>2</sup>



MX+OF2

注意：分励脱扣器中OF/OF2电压应与MX 控制电压一致，否则有可能损坏线路和设备！

Note: OF/OF2 voltage of shunt release is same with MX voltage, unless line or device may be damaged!



- 过欠压脱扣器、过压脱扣器、欠压脱扣器  
over/under voltage release, over-voltage release, under-voltage release

## ① 概述

## General

CH2-63系列小型断路器、CH2L-63系列漏电断路器加装GQ2、GQ2A过欠压脱扣器可实现过欠压保护，加装G2过压脱扣器可实现过压保护，加装Q2、Q2A欠压脱扣器可实现欠压保护，可由工厂装配或用户自行装配。

mounting GQ2、GQ2A over/under voltage release, provide over/under voltage protection; mounting G2 over voltage release, provide over voltage protection; mounting Q2, Q2A under voltage release, provide under voltage protection for CH2-63 or CH2L-63. Maybe factory mounting or user mounting.

## ② 特性

## Characteristic

附件型号 accessory type	动作值 acting value	动作特性 action characteristic	适配断路器 fitting breaker	最多安装数 Maximum mount number
GQ2过欠压脱扣器 Over/under voltage release	过压: $280 \pm 12$ V, 时间: $< 0.2s$ ; Over-voltage time 欠压: $(70\% \sim 50\%)U_e$ , 时间: $< 1s$ Under-voltage time	过压动作 Over-voltage action 欠压动作, 失压不能合闸 Under-voltage action, lose voltage can't be closed	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	在断路器左 面相同附件 可安装3只; 不同附件可 安装3只; 并且最多3 只。 Mounting three pieces same or not same at breaker's left
G2过压脱扣器 Over-voltage release	过压: $280 \pm 12$ V, 时间: $< 0.2s$ Over-voltage time	过压动作 Over-voltage action	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	
Q2欠压脱扣器 Under-voltage release	欠压: $(70\% \sim 50\%)U_e$ , 时间: $< 1s$ Under-voltage time	欠压动作, 失压不能合闸 Under-voltage action, lose voltage can't be closed	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	
Q2 (0.2) 欠压脱扣器 Under-voltage release	欠压: $(70\% \sim 50\%)U_e$ , 时间: $< 0.2s$ Under-voltage time	欠压动作, 失压不能合闸 Under-voltage action, lose voltage can't be closed	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	
GQ2A过欠压脱扣器 Over/under voltage release	过压: $280 \pm 12$ V, 时间: $< 0.2s$ ; Over-voltage time 欠压: $170 \pm 7$ V, 时间: $< 1s$ Under-voltage time	过压动作 Over-voltage action 欠压动作, 失压不动作 Under-voltage action lose voltage no action	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	
Q2A欠压脱扣器 Under-voltage release	欠压: $170 \pm 7$ V, 时间: $< 1s$ Under-voltage time	欠压动作, 失压不动作 Under-voltage action lose voltage no action	CH2-63/1、2、 3、4 CH2L-63/1N、 2、3、3N、4	

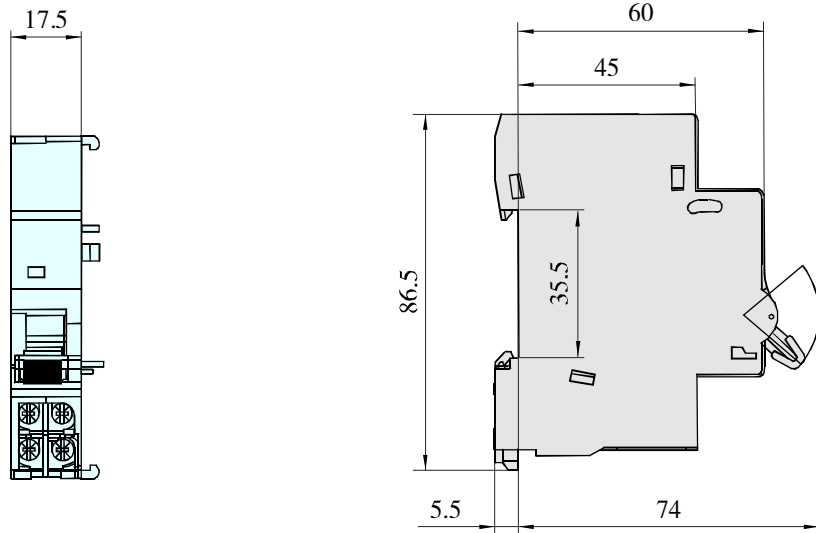
注:  $U_e$ 为额定电压230V。

Note: rated voltage is 230V



③ 外形尺寸

Outline dimension



④ 订货方式

Order

用户订货时，请注明断路器型号、过压和/或欠压脱扣器型号及所配脱扣器数量。例如用户订CH2-63C63/4断路器1台、所配G2过压脱扣器3只，则写为CH2-63C63/4+G2×3。

Please note breaker's type, over-voltage and/or under-voltage release type, number, for example, order CH2-63C63/4 one breaker, G2 over-voltage release three pieces, note CH2-63C63/4 + G2 × 3.



■ 配用CH1-63、CH1L-50、CH1L-50L  
for CH1-63, CH1L-50, CH1L-50L

附件 型号 Accessories type	分励脱扣器 MX+OF Shunt release	辅助触头 OF Auxiliary contact	报警触头 SD Alarm contact	安装数及安装顺序 Number and sequence
可配最大数量 Fitting max number	1	2	1	辅助触头、报警触头安装 无先后顺序 without sequence for auxiliary and alarm contacts
	1	1	2	
	1	0	3	
	1	3	0	
适配断路器及位置 Suitting for MCB and position	CH1-63 右侧 Right side	CH1-63 左侧 Left side CH1L-50 左侧 Left side CH1L-50L 左侧 Left side	CH1-63 左侧 Left side CH1L-50 左侧 Left side CH1L-50L 左侧 Left side	

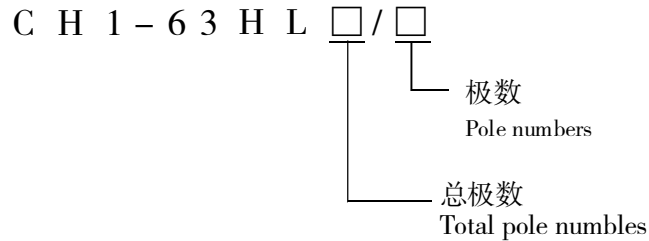
■ 配用CH2-63、CH2L-63、CH2Z-63  
for CH2-63, CH2L-63, CH2Z-63

附件 型号 Accessories type	分励脱扣器 MX+OF2 Shunt release	过和/或欠电压脱扣器 Over and/or under voltage release GQ2、G2、Q2、Q2(0.2)、GQ2A、Q2A	辅助触头 OF2 Auxiliary contact	报警触头 SD2 Alarm contact	安装数及安装顺序 Number and sequence
可配最大数量 Fitting max number	1	0	2	1	应先安装辅助触头、报警 触头（此两者安装无先后 顺序）后安装过和/或欠电 压脱扣器、分励脱扣器 （此两者安装无先后顺 序） First mounting auxiliary or alarm contact (without sequence for this contacts),second mounting over/under voltage release or shunt release (without sequence for this release).
	0	1	2	1	
	1	0	1	2	
	0	1	1	2	
	1	0	3	0	
	0	1	3	0	
	1	0	0	3	
	0	1	0	3	
适配断路器及位置 Suitting for MCB and position	CH2-63 左侧 Left side CH2L-63 左侧 Left side CH2Z-63 左侧 Left side	CH2-63 左侧 Left side CH2L-63 左侧 Left side	CH2-63 左侧 Left side CH2L-63 左侧 Left side CH2Z-63 左侧 Left side	CH2-63 左侧 Left side CH2L-63 左侧 Left side CH2Z-63 左侧 Left side	



- 汇流排型号和含义

Type and Meaning of Collecting Bar

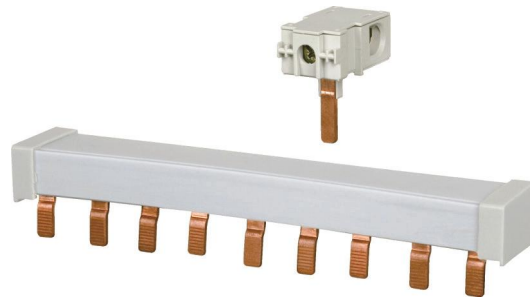


- 主要技术参数

- 额定绝缘电压：500V；
- 约定发热电流：100A；
- 额定冲击耐受电压：6kV；
- 额定短时耐受电流：25kA/0.5s；
- 工频耐压：可承受2500V(AC50Hz)，1min而无击穿和闪络现象。

- Main technical parameters

- Rated Insulation Voltage: 500 V;
- Conventional Thermal Current: 100 A;
- Rated Impulse Withstand Voltage: 6 kV;
- Rated Short-time Withstand Current: 25 kA/0.5s
- Power Frequency Withstand Voltage: 2500V (AC50Hz) at 1 min without puncture and flashover.



- 汇流排结构特点

- 汇流排由梳状铜排及绝缘护套组成；
  - 梳状铜排用纯铜板T2材料，绝缘护套用增强阻燃PPO材料；
  - 结构紧凑、使用方便；
  - 防护等级：IP20；
  - 附件：接线器：用于汇流排电流的供给；  
端盖：用于汇流排两端的密封。
- 注：汇流排最长1m、60位。

- Design Features of Collecting Bar

- Collecting bar is composed of pectination copper bar and insulating sheath;
- Pectination copper bar is made of pure copper plate, and insulating sheath is made of enhanced inflaming retarding PPO;
- Modularization design, easily operating;
- Protection degree: IP20
- Accessories: Connector which is used for supplying to the collecting bar with current  
End cover which is used for sealing the double end of the collecting bar

- 订货须知

订货时须注明汇流排的型号、名称及所带附件名称、数量。

- Ordering Notice:

Please indicate the type and name of the collecting bar and its accessories' name and quantity when ordering.



● 时间—电流动作特性 Time-current Operating Characteristics

CH1、CH2、CH1L、CH2L时间—电流动作特性表  
Time-current Operating Characteristics of CH1, CH2, CH1L, CH2L

过电流脱扣器类型 Type of Over-current Release		额定电流 $I_n$ (A) Rated Current (A)	起始状态 Initial State	试验电流 (A) Test Current (A)	规定时间 (t) Prescriptive Time (t)	预期结果 Expected Result	试验环境温度 Ambient Temperature of Test
热脱扣器 Thermal Release	$\leq 63$	$\leq 63$	冷态 Cold state	$1.13I_n$		1小时内不脱扣 Not tripping within 1 h	30℃ ~ 35℃
			热态 Thermal state	$1.45I_n$	$t < 1h$	脱扣 Tripping	
	$\leq 32$	$\leq 32$	冷态 Cold state	$2.55 I_n$	$1s < t < 60s$	脱扣 Tripping	
	$> 32$		冷态 Cold state		$1s < t < 120s$		
瞬时脱扣器 Instantaneous Release	B	$\leq 63$	冷态 Cold state	$3I_n$		0.1s内不脱扣 Not tripping within 0.1s	
	C		冷态 Cold state	$5I_n$			
	D		冷态 Cold state	$10I_n$			
	B	$\leq 63$	冷态 Cold state	$5I_n$	$t < 0.1s$	脱扣 Tripping	
	C		冷态 Cold state	$10I_n$			
	D		冷态 Cold state	$20I_n^*$			
*注：CH1系列为14In *Note: 14In for CH series							

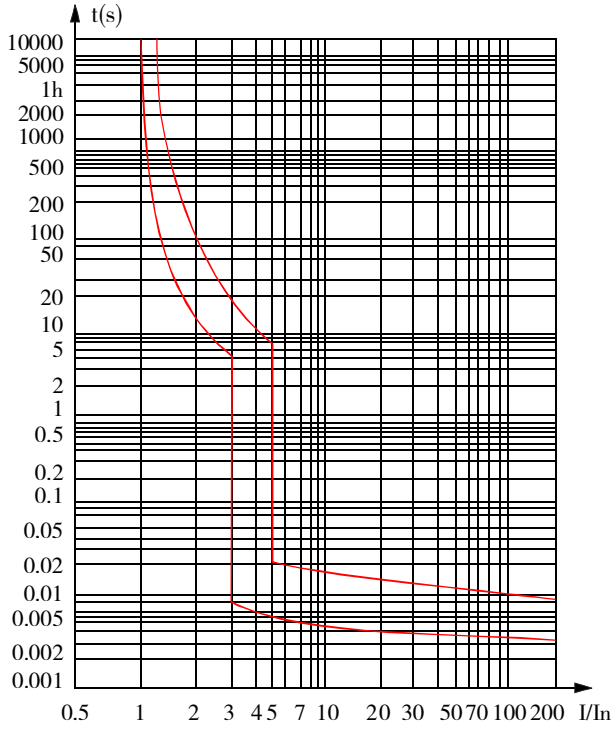
CH2Z时间—电流动作特性表  
Time-current Operating Characteristics of CH2Z

过电流脱扣器类型 Type of Over-current Release		额定电流 $I_n$ (A) Rated Current (A)	起始状态 Initial State	试验电流 (A) Test Current (A)	预期结果 Expected Result	试验环境温度 Ambient Temperature of Test
热脱扣器 Thermal Release	$\leq 63$	$\leq 63$	冷态 Cold state	$1.05I_n$	1小时内不脱扣 Not tripping within 1 h	30℃ ± 2℃
	$\leq 63$	$\leq 63$	热态 Thermal state	$1.3I_n$	1小时内脱扣 Tripping within 1 h	
瞬时脱扣器 Instantaneous Release	B	$\leq 63$	冷态 Cold state	$6I_n$	$t < 0.2s$	+10℃ ~ +40℃
	C	$\leq 63$	冷态 Cold state	$12I_n$	脱扣 Tripping	

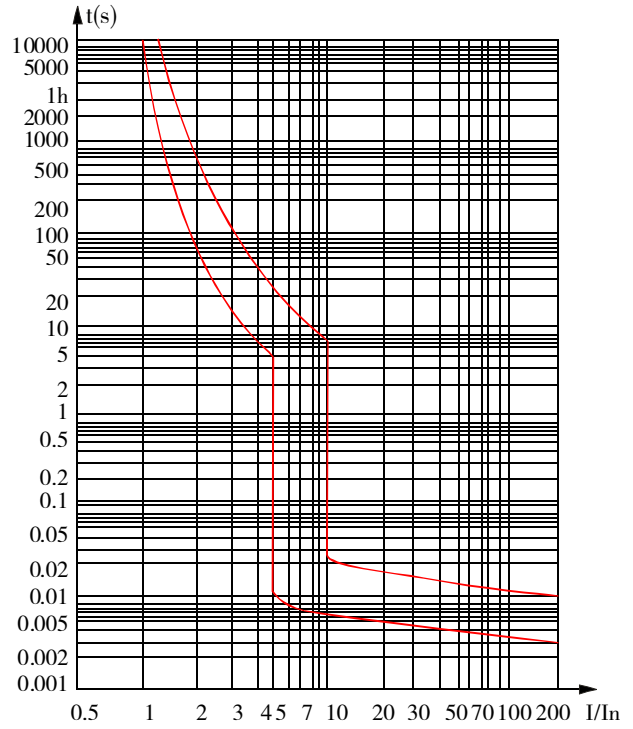


- 瞬时脱扣器型式B、C、D特性曲线  
Type B,C,D instantaneous releases characteristic curve

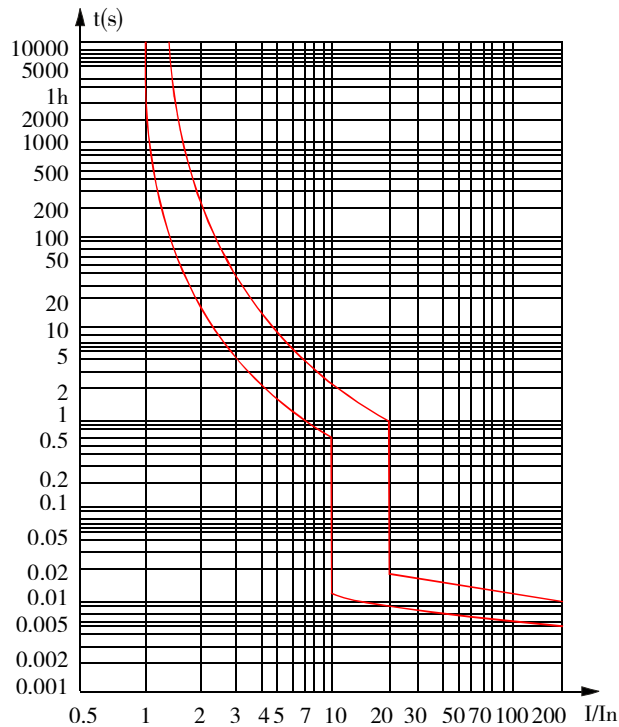
B型 (3~5I<sub>n</sub>)



C型 (5~10I<sub>n</sub>)



D型 (10~20I<sub>n</sub>)







## ● 温度修正系数表 Temperature correction current table

额定电流(A) rated current 修正电流(A) correction current 温度(°C) temperature	-35	-30	-25	-20	-15	-10	-5	0	5	10	15
1	1.27	1.25	1.23	1.21	1.19	1.17	1.15	1.13	1.10	1.08	1.06
3	3.89	3.83	3.76	3.70	3.64	3.57	3.50	3.44	3.37	3.30	3.22
6	7.70	7.58	7.46	7.34	7.21	7.09	6.96	6.83	6.70	6.56	6.42
10	13.89	13.62	13.35	13.07	12.81	12.53	12.23	11.93	11.63	11.33	11.01
16	20.78	20.43	20.08	19.75	19.40	19.05	18.70	18.33	17.96	17.58	17.20
20	25.67	25.28	24.88	24.47	24.06	23.64	23.22	22.78	22.34	21.89	21.43
25	32.21	31.72	31.22	30.70	30.18	29.65	29.10	28.55	27.98	27.41	26.82
32	41.04	40.46	39.82	39.17	38.51	37.84	37.15	36.47	35.75	35.03	34.30
40	51.63	50.86	50.04	49.21	48.37	47.51	46.63	45.74	44.83	43.90	42.95
50	64.92	63.97	62.92	61.68	60.77	59.67	58.54	57.40	56.23	55.05	53.81
63	83.48	82.06	80.64	79.19	77.72	76.22	74.70	73.14	71.54	69.91	68.24

额定电流(A) rated current 修正电流(A) correction current 温度(°C) temperature	20	25	30	35	40	45	50	55	60	65	70
1	1.05	1.02	1.00	0.97	0.94	0.91	0.89	0.86	0.83	0.80	0.77
3	3.14	3.06	3.00	2.92	2.84	2.76	2.67	2.58	2.49	2.38	2.27
6	6.27	6.14	6.00	5.84	5.68	5.52	5.36	5.19	5.01	4.83	4.64
10	10.67	10.34	10.00	9.63	9.24	8.85	8.45	8.01	7.55	7.06	6.55
16	16.80	16.40	16.00	15.55	15.11	14.66	14.20	13.71	13.21	12.70	12.75
20	20.96	20.47	20.00	19.47	18.95	18.42	17.87	17.30	16.71	16.10	15.47
25	26.22	25.61	25.00	24.33	23.67	23.00	22.28	21.56	20.80	20.02	19.21
32	33.54	32.77	32.00	31.17	30.34	29.48	28.60	27.69	26.75	25.78	24.77
40	41.98	40.99	40.00	38.93	37.85	36.75	35.61	34.43	33.21	31.95	30.63
50	52.56	51.28	50.00	47.82	46.24	44.81	43.33	41.81	40.23	38.58	35.77
63	66.53	64.78	63.00	60.11	58.19	56.21	54.16	52.03	49.81	47.50	43.05



在不同的直流系统中CH2Z断路器接线示例  
Wiring sample of CH2Z MCB in different DC system

断路器额定电压 Rated voltage of circuit breaker	125V	250V	250V
导线间最高电压 Max voltage of liner to line	125V	250V	250V
相对地最高电压 Max voltage of line to earth	125V	125V	250V <sup>a</sup>
断路器 Circuit breaker	单极 Single pole	二极 Two poles	二极 Two poles
电路 Circuitry			
<p>a 负极接地 a negative pole earth</p>			

常熟开关 持续超越

- 国家创新型试点企业
- 国家重点高新技术企业
- 全国企事业知识产权示范单位
- 全国守合同重信用企业
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## 常熟开关制造有限公司(原常熟开关厂) CHANGSHU SWITCHGEAR MFG. CO., LTD. (FORMER CHANGSHU SWITCHGEAR PLANT)

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