## Product overview

■Compliant standard

- GB/T 14048.1 The general
- GB/T14048.2 Circuit breaker
- IEC 60947-1 The general
- IEC 60947-2 Circuit breaker

### ■ Pollution level

- CDM3E Series products operate at polution level 3
- The IEC 60947-1 and 60664-1 standards define the environment (industrial environment)
- According to Table H.1 of GB/T14048.1-2012: When the rated impulse withstand voltage is 8kV at an altitude of 2000m

### ■ Resistance to moisture and heat

- Dry cold, dry hot, wet hot

### ■ Ambient temperature

- The upper limit of ambient air temperature is +70℃, and the lower limit is -40℃.24h average temperature does not exceed 35℃ （Note: For use in the range of -40℃ ~-25℃, +40℃ ~+70℃, please contact the manufacturer or refer to the capacity reduction coefficient table）
- The storage temperature is -40℃ to 70℃

### ■ Reliable contact indication with isolation

The CDM3E series of molded case circuit breakers comply with the isolation defined in IEC standard 60947-2。

- The isolation position corresponds to the O (OFF) position
- Only when the contact is truly open can the operating handle indicate the "OFF" position
- Rotating the handle or the electric operating mechanism does not change the reliability of the contact indicating system

### ■ Altitude

- The altitude of the normal installation site does not exceed 2000m
- If it is necessary to install at an altitude of more than 2000m, the change in dielectric strength must be taken into account And air temperature drop factors, refer to the altitude reduction coefficient table to use, or please contact us。

### ■ Class of protection

- m Circuit breaker body: IP20 (without terminal)
- Circuit breakers installed in switchgear: Circuit breakers with rotary operation: IP40
- Circuit breaker with electric operation mechanism: IP40

### ■ humidness

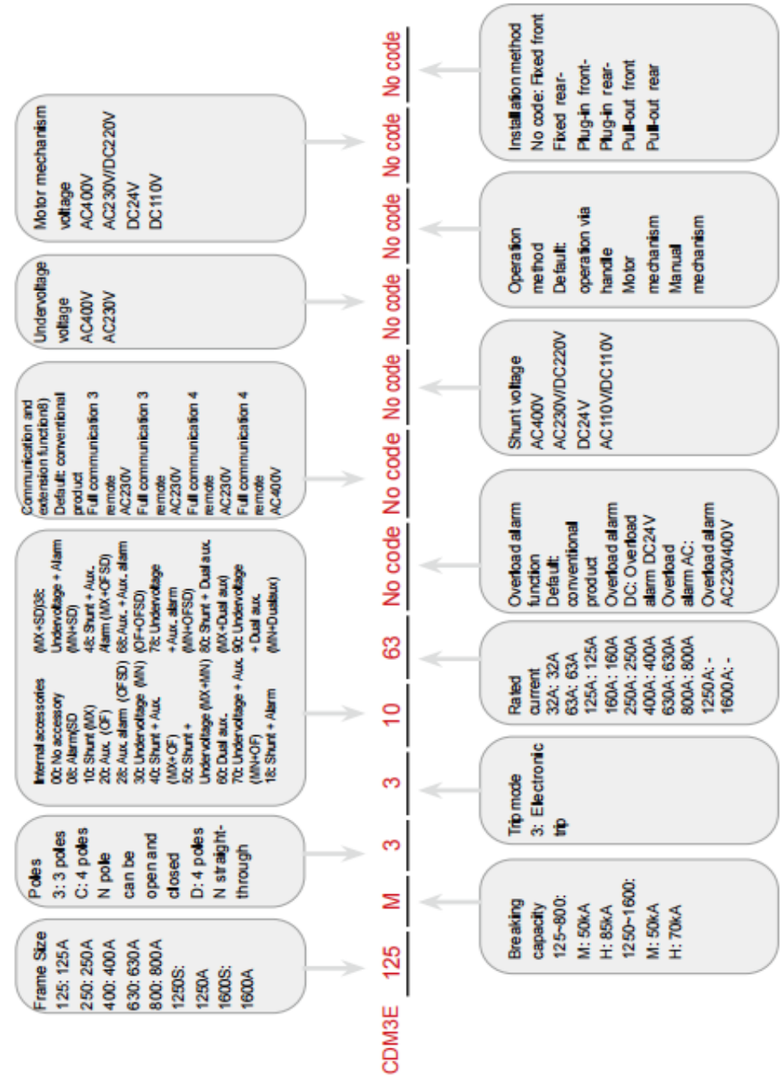
It should be satisfied during normal work:

- When the ambient air temperature is +40 ° C, the relative humidity of the atmosphere cannot exceed 50%, and if the temperature is low, it can be used under higher relative humidity conditions.
- The average monthly relative humidity in the wettest months is 90%.
- It is necessary to consider the effect of condensation on the product surface on the product performance.





## Product selection




Remark:

1）The 1250A and 1600A have no communication function

2）The 1250A and 1600A have no overload alarm function

3）The shunt excitation and electrical operation of 1250A and 1600A have no AC110V, DC110V, DC220V control voltage

4）800 shell frame and the following internal accessories (except undervoltage for terminal supply) Other products are standard for lead supply length 500mm; If there is any other length or need with terminals, please note;

5）125AF, 250AF non-withdrawable products. 400AF, 630AF no insert plate front products

6）The plug-in front product is configured with a horizontal cable outlet bar by default

7）Conventional product standard: phase spacing arc plate, mounting screw

8）Three remote standard (auxiliary report + communication module); Four remote standard (auxiliary report + electrical operation + communication module). The communication module voltage is AC230V/400V

## Technical parameter

| Product model | | CDM3E-125 | | | CDM3E-250 | CDM3E-400 | CDM3E-630 | CDM3E-800 | CDM3E-1250S | CDM3E-1600S |
|---|---|---|---|---|---|---|---|---|---|---|
| Rated voltage Ue（V） | | 400/415/690 | | | 400/415/690 | 400/415/690 | 400/415/690 | 400/415/690 | 400/415/690 | 400/415/690 |
| Rated insulation voltage Ui（V） | | 800 | | | 800 | 800 | 800 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage Uimp（V） | | 8000 | | | 8000 | 8000 | 8000 | 12000 | 12000 | 12000 |
| Rated frequency（HZ） | | 50 | | | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated current（A） | | 32 | 63 | 125 | 160、250 | 400 | 630 | 800 | 1250 | 1600 |
| Number of poles(4P-C/D type)(C:with protection and breaking; D: Through) | | 3/4 | | | 3/4 | 3/4 | 3/4 | 3/4 | 3 | 3 |
| Category of use | | A | | | A | B | B | B | B | B |
| Breaking capacity | Breaking grade | M | | | M | M | M | M | M | M |
| | Icu（kA）AC 400/415V | 50 | | | 50 | 50 | 50 | 50 | 50 | 50 |
| | Icu（kA）AC 690V | 20 | | | 20 | – | – | – | 20 | 35 |
| | Ics（kA）AC 400/415V | 50 | | | 50 | 50 | 50 | 50 | 36 | 50 |
| | Ics（kA）AC 690V | 10 | | | 10 | – | – | – | 20 | 35 |
| Rated short-time withstand current | | 0.5（1s | 0.5（1s | | | 5（1s） | 8（1s） | 10（1s） | 20（1s） | 20（1s） |
| Icw（kA）AC 400/415V | | | 1（1s） | 2.5（1s） | 3(1s) | 20000 | 20000 | 20000 | 25000 | 25000 |
| Mechanical life | Mechanical maintenance | 40000 | | | 40000 | 10000 | 10000 | 10000 | 12500 | 12500 |
| | no maintenance | 20000 | | | 20000 | 7500 | 7500 | 7500 | 6000 | 6000 |
| Electrical life | AC 400/415V | 10000 | | | 10000 | 6000 | 6000 | 6000 | 3000 | 3000 |
| | AC 690V | 8000 | | | 8000 | ■ | ■ | ■ | ■ | ■ |
| Protection type | Distribution protection | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Motor protection | ■ | | | ■ | | | | | |
| Trip mode | Electronic trip unit protection mode | LSI（N） | | | LSI（N） | LSI（N） | LSI（N） | LSI（N） | LSIG | LSIG |
| Installation method | Fixed plate front wiring | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Fixed plate rear wiring | ■（螺杆式） | | | ■（螺杆式） | ■（水平[1]） | ■（水平[1]） | ■（水平[1]） | | |
| | Insert plate front wiring | ■ | | | – | – | – | – | – | – |
| | Drawout type[2] | ■ | | | ■ | ■ | ■ | ■ | – | – |
| Product accessories | Undervoltage tripper | – | | | ■ | ■ | ■ | ■ | – | – |
| | Shunt tripper | ■ | | | ■ | ■ | ■ | ■ | – | – |
| | Alarm contact | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Auxiliary co | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Auxiliary contact (2 open 2 close) | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Ac and DC electric operation | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Circular direct hand exercises | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Square direct hand exercises | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Circular extension hand exercises | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Square extension hand exercises | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Interphase partition | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Communication backpack | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Overload alarm not tripping | ■ | | | ■ | ■ | ■ | ■ | ■ | ■ |
| | Zero flare hood (only M breaks 3P) | ■ | | | ■ | ■ | ■ | ■ | – | – |
| Self-mounting of accessories | | ■ | | | ■ | ■ | ■ | ■ | – | – |
| Isolation function | | ■ | | | ■ | ■ | ■ | ■ | – | – |
| authentication | | CCC/CE | | | CCC/CE | CCC/CE | CCC/CE | CCC /CE | CCC/CE | CCC/CE |

Note: 1）The production is horizontal wiring after the board, and the user can modify the vertical wiring after the board, see the fixed horizontal installation diagram after the board

2）The production is horizontal wiring after the board, and the user can modify the vertical wiring after the board, see the installation diagram of the withdrawable rear wiring

## ■ Temperature reduction coefficient table

| Rated current | +40℃ | +50℃ | +60℃ | +70℃ |
|---|---|---|---|---|
| 125A | – | – | Inm=80A | Inm=63A |
| 250A | – | – | Inm=200A | Inm=160A |
| 400A | – | – | Inm=315A | Inm=250A |
| 630A | – | – | Inm=500A | Inm=400A |
| 800A | – | – | Inm=560A | Inm=500A |
| 1250A | – | Inm=1200A | Inm=1150A | Inm=1100A |
| 1600A | – | Inm=1500A | Inm=1470A | Inm=1400A |

Note: $I_R$ The maximum setting value cannot exceed Inm.

To ensure that users can use the device at high temperature for a long time and avoid faults due to excessive temperature rise, you are advised to refer to the temperature reduction coefficient table.

## ■ Altitude reduction coefficient

### CDM3E-Below 800

The height below 2000 meters will not affect the circuit breaker performance. Above this height, the reduction of air insulation characteristics and cooling capacity must be considered; The correction factors given in the following table are used when the installation altitude exceeds 2000 m:

| altitude（m） | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
|---|---|---|---|---|---|---|---|
| Insulation voltage Ui（V） | 800 | 728 | 728 | 664 | 664 | 616 | 616 |
| Impulse withstand voltage Uimp（kV） | 8 | 7 | 7 | 6.5 | 6.5 | 6 | 6 |
| Maximum operating voltage Ue（V） | 690 | 690 | 690 | 660 | 600 | 600 | 550 |
| Thermal rating at 40℃ In（A） | 1In | 0.98In | 0.94In | 0.92In | 0.88In | 0.86In | 0.85In |

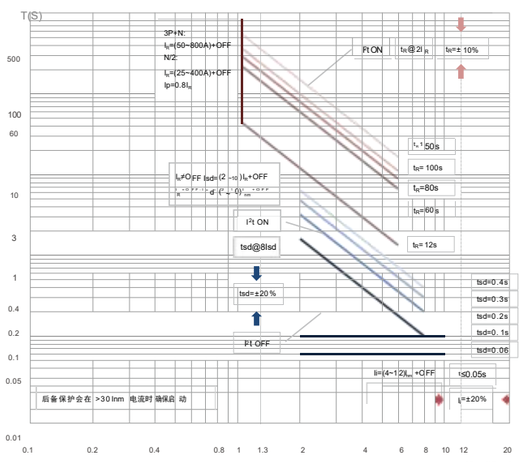
### CDM3E-1250/1600

| altitude（m） | 2000 | 3000 | 4000 | 5000 |
|---|---|---|---|---|
| Working current correction factor | 1In | 0.94In | 0.88In | 0.85In |
| Maximum operating voltage（V） | 690 | 600 | 500 | 440 |
| Insulation voltage（V） | 1000 | 800 | 700 | 600 |
| Power frequency withstand voltage（V） | 2000 | 1500 | 1000 | 800 |



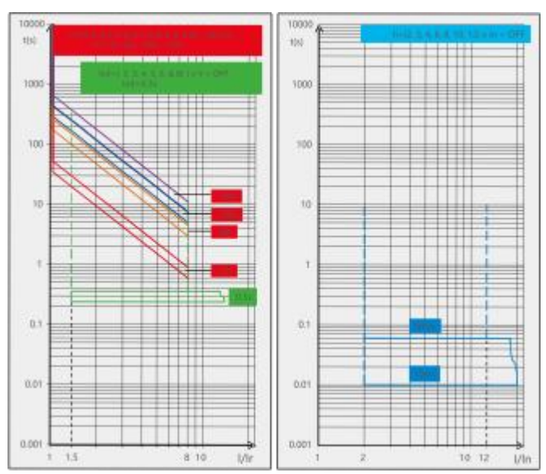
## ■ Trip curve

### CDM3E（125~800A




### CDM3E（1250-1600AF）

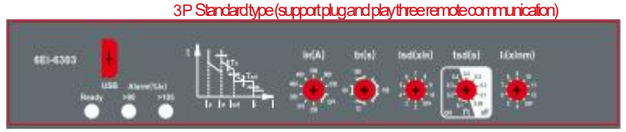
The black line is for distribution protection, and the red line is for motor protection.



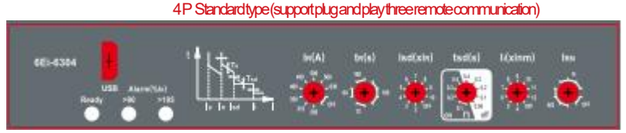

## ■ Functions and features of controllers 800 and below

### CDM3E-125~800

3P Standard type (support plug and play three remote communication)




4P Standard type (support plug and play three remote communication)




Communication type


$I_R$：Overload long delay setting current

Isd：Short circuit short delay setting current

Ii：Short circuit instantaneous setting current

Ready：Running light

>90%$I_R$：Pre-warning light

：LSI Three protection curves

$t_R$：Overload long delay setting time

tsd：Short-circuit short delay setting time

$I_{RN}$：Neutral pole setting protection

Alarm：Alarm indication

>105%$I_R$：Overload warning light

USB：Data interface

Distribution protection and motor protection use the same controller

Note: For more information, please see the official website of Delixi Electric (http://www.delixi-electric.com/), you can download the CDM3E series manual free of charge.

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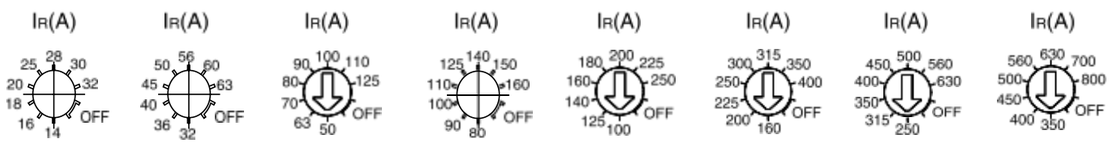
## 1）Overload long delay setting current IR

Adjust the knob of IR gear, you can select different current gear under the shell frame of the product to meet the needs of different lines for rated working current.The following is the IR adjustment knob data diagram of different current case frames.
The table lists all overload long delay setting current values of each current frame of CDM3E series.




CDM3E-32 CDM3E-63 CDM3E-125 CDM3E-160 CDM3E-250 CDM3E-400 CDM3E-630 CDM3E-800

| Product model | Long delay overcurrent protection characteristic parameter setting IR (A) | Reserve note |
|---|---|---|
| CDM3E-125 32A | 14、16、18、20、25、28、30、32 | OFF |
| CDM3E-125 63A | 32、36、40、45、50、56、60、63 | OFF 表示关闭 |
| CDM3E-125 125A | 50、63、70、80、90、100、110、125 | OFF 表示关闭 |
| CDM3E-250 160A | 80、90、100、110、125、140、150、160 | OFF 表示关闭 |
| CDM3E-250 250A | 100、125、140、160、180、200、225、250 | OFF 表示关闭 |
| CDM3E-400 400A | 160.200.225、250.300.315、350、400 | OFF 表示关闭 |
| CDM3E-630 630A | 250.315、350、400、450、500、560、630 | OFF 表示关闭 |
| CDM3E-800 800A | 350、400、450、500、560、630、700、800 | OFF 表示关闭 |

three protection modes:

## 2）Overload long delay setting time tR

When the fault current of the line is 1.5IR, 2IR, 6IR respectively, the operation time corresponding to the overload long delay of different gears is as follows:

| Actual line current | Different gear operation time tR (s), accuracy ±10%, t = (2IR /I) 2 ×tR | | | | |
|---|---|---|---|---|---|
| | 12 | 60 | 80 | 100 | 150 |
| 1.5$I_R$ | 21.3 | 106.7 | 142.2 | 177.8 | 266.7 |
| 2$I_R$ | 12 | 60 | 80 | 100 | 150 |
| 6$I_R$ | 1.33 | 6.67 | 8.89 | 11.11 | 16.67 |

Taking CDM3E-400 shell frame product as an example, how to set the overload long delay setting current and setting time？ If IR selects 300, tR selects 60. When the overload current of the line is 1.5IR (450A), the overload operation time range is 106.7±10.67s.When the overload current of the line is 2IR (600A), the overload operation time range is 60±6s.When the overload current of the line is 6IR (1800A), the overload operation time range is 6.67±0.667s. And so on for the other gears.

$t_R$ (s)


CDM3E-125/250

$t_R$ (s)

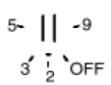

CDM3E-400/630/800

tRAction time@2$I_R$

## 3）Short circuit short delay setting current Isd

$I_{sd}$ (×$I_R$)

The selection gear of short-circuit short-delay setting current Isd is： 2、3、4、5、6、7、8、9、10、OFF.

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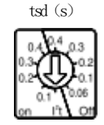
## 4）Short-circuit short delay setting time tsd

Short delay protection is used to ensure a selective fit with the next circuit breaker, with two modes of "I2t ON" (inverse time or fixed time) and "I2t OFF" (fixed time).The following table is the time value of short-time trip time tsd.
t= (8Isd/I) 2 x tsd

| | | | | | | |
|---|---|---|---|---|---|---|
| I²t ON （inverse time @8Isd） | Setimetsd（s） | – | 0.1 | 0.2 | 0.3 | 0.4 |
| | I>8$I_R$ delay time (s) | – | 0.1 | 0.2 | 0.3 | 0.4 |
| I²t OFF （fixed time） | Setimetsd（s） | 0.06 | 0.1 | 0.2 | 0.3 | 0.4 |
| | Time of return（ms） | 20 | 80 | 140 | 230 | 350 |
| | Maximum break time（ms） | 100 | 140 | 220 | 320 | 500 |

tsd (s)




tsd Actontime@8Isd

Taking CDM3E-250 shell frame product as an example, how to set the short circuit short delay inverse time setting time.If IR is 200, Isd is 2xIR, tsd is I2t ON, and tsd is 0.2 When the short circuit current of the line is 2xIR (400A), the short circuit delay action time range is 3.2s.

Note: When IR=OFF, the short-circuit short-delay action current Isd matches Inm.

## 5）Short Circuit instantaneous Setting current Ii(×Inm)

| | | |
|---|---|---|
| Short circuit instantaneous setting current | CDM3E-125/250/400/630/800 | （4、5、6、7、8、9、10、11、12、OFF）×Inm |

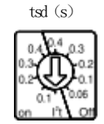
Ii(×Inm)


## 6）Neutral pole setting Protection IRN (×IR/Inm)

The setting current IRN value is the selected gear x IR/Inm. Neutral line protection is designed for quadrupole circuit breakers

- OFF：Disable neutral line protection when neutral line protection is not required for the power distribution system.
- N/2：It is used in a power distribution system where the cross-sectional area of the neutral conductor is equal to half of the phase line. In this case, the long delay and short delay of the neutral line are equal to 1/2 of the phase line protection setting value.
- N：It is used in a distribution system where the cross-sectional area of the neutral conductor is equal to that of the phase line, and the long delay, short delay, and instantaneous setting values of the neutral line are equal to the protection setting values of the phase line.

tsd (s)




Note: When IR is OFF, the controller automatically uses Inm as the reference current for neutral line protection.

## 7）Indication of the operating status of the controller

The working status of the operation indicator (Ready) and Alarm indicator (Alarm) is shown in the following table:

| Circuit breaker operating condition | Ready | Alarm | | |
|---|---|---|---|---|
| | green | yellow | red | |
| normal | twinkle | quench | quench | I<0.9$I_R$ |
| Pre-alarm | twinkle | twinkle | quench | 0.9$I_R$ ≤I ≤$I_R$ |
| Alarm does not trip | twinkle | Long bright | twinkle | 1.05$I_R$<I |
| trip | Quench | quench | quench | 1.05$I_R$<I |

Note: 1.I indicates the main circuit current, IR indicates the overload long delay setting current value;

2.When the yellow indicator blinks, it indicates that the overload long delay is enabled on the intelligent controller. During this process, the parameter setting of the controller panel is invalid.

## 8）Use of USB data interface

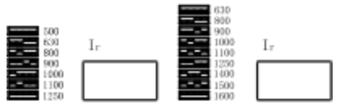
USB data interface can be used to use the Android system and support the mobile phone with the OTG function through the OTG data cable interconnection, to achieve telemetry, remote adjustment functions.

Welcome to install Delixi Electric: new intelligent APP.

## ■ 1600 controller

### 1）Overload long delay setting current Ir and setting time tr Long delay parameter setting IR (A)

| Productmodel | |
|---|---|
| CDM3E-1250 | 500/630/800/900/1000/1100/1250 |
| CDM3E-1600 | 630/800/900/1000/1100/1250/1400/1500/1600 |



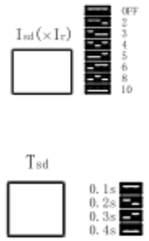

| Working current | Delay time setting value tR (s), accuracy ±10% | | | 12s |
|---|---|---|---|---|
| | 60s | 100s | 150s | |
| 1.05$I_R$ （Inverse time） | | | ⩾ 2h | |
| 1.3$I_R$ （Inverse time） | | | <2h | |
| 2$I_R$ | 12s | 60s | 100s | 150s |
| 4$I_R$ | 3s | 15s | 25s | 37.5s |


### 2）Short-circuit short-delay setting current Isd and setting time tsd

The selection gear of short-circuit short-delay setting current Isd is： 2、3、4、5、6、7、8、9、10、OFF.

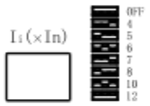
Setting current Isd value is selected gear × IR (adjustable overload release current setting value)

| Working current | Different gear operation time tR (s), accuracy ±15% | | | |
|---|---|---|---|---|
| | 0.1s | 0.2s | 0.3s | 0.4s |
| 0.85Isd | ≥2×（0.1s、0.2s、0.3s、0.4s）±15%reaction | | | |
| 1.15Isd | <2×（0.1s、0.2s、0.3s、0.4s）±15%delayaction | | | |
| Definite time | 0.1s | 0.2s | 0.3s | 0.4s |




### 3）Short circuit instantaneous setting current Ii

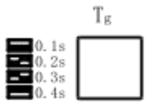
| Product model | （4，5，6，7，8，10，12）In+OFF（Exitposition） |
|---|---|




### 4）Ground fault setting current Ig and time Tg

| Product model | Ground fault current protection characteristic parameter setting Ig (A) |
|---|---|
| CDM3E-1250 | 500A/600A/700A/800A/900A/1000A/1100A/OFF Stepregulation+ OFF（Exit position） |
| CDM3E-1600 | 600A/700A/800A/900A/1000A/1100A/1200A/OFF Stepregulation+ OFF（Exit position） |


| Working current | Operation time Tg, accuracy ±15% | | | |
|---|---|---|---|---|
| | 0.1s | 0.2s | 0.3s | 0.4s |
| 0.85Ig 1.15Ig | ≥2×（0.1s、0.2s、0.3s、0.4s）±15%reaction | | | |
| Definite time | <2×（0.1s、0.2s、0.3s、0.4s）±15%action | | | |
| | 0.1s | 0.2s | 0.3s | 0.4s |

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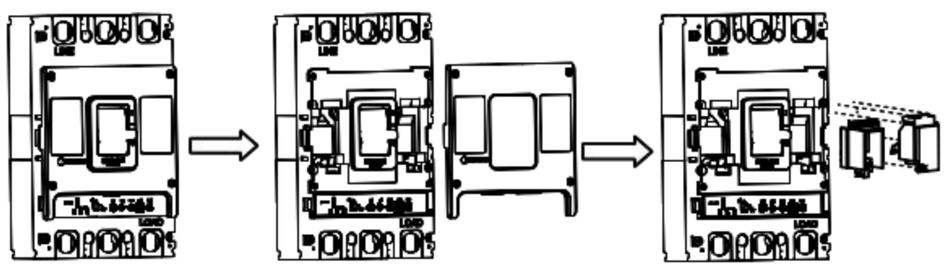
## ■Installation position of 800A or lower accessories

□ Alarm contact ■ Auxiliary contact ● Shunt release ○ Undervoltage release

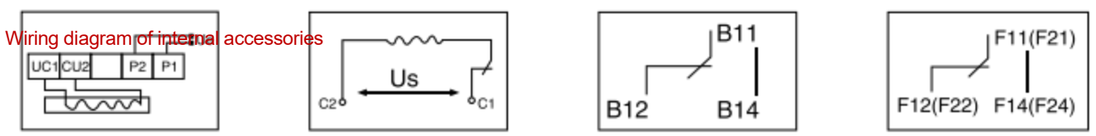
| Attached Code electronic | Name | Product model | | | | | |
|---|---|---|---|---|---|---|---|
| | | CDM3E-125 | CDM3E-250 | CDM3E-400 | CDM3E-630 | CDM3E-800 | CDM3E-1250S/1600S |
| 308 | Alarm contact （Can be left or right, | □ | □ | □ | □ | □ | □ |
| 310 | Shunt release （Can be left or right, default right） | ● | ● | ● | ● | ● | ● |
| 320 | Auxiliary contact （Can be left or right, Default left） | ■ | ■ | ■ | ■ | ■ | ■ |
| 330 | Undervoltage release | ○ | ○ | ○ | ○ | ○ | ○ |
| 340 | Shunt + assist | ■ ● | ■ ● | ■ ● | ■ ● | ■ ● | ● ■ |
| 350 | Shunt + undervoltage | ○ ● | ○ ● | ○ ● | ○ ● | ○ ● | — |
| 360 | Two sets of auxiliary contacts （Can be left or right, Default left） | ■■ | ■■ | ■■ | ■■ | ■■ | ■■ |
| 370 | Auxiliary + undervoltage | ○ ■ | ○ ■ | ○ ■ | | ○ ■ | ○ ■ |
| 318 | Shunt + alarm | □ ● | □ ● | □ ● | □ ● | □ ● | ● □ |
| 328 | Auxiliary + alarm (Can be left or right, Default left） | □■ | □■ | □■ | □■ | □■ | □■ |
| 338 | Undervoltage + alarm | ○ □ | ○ □ | ○ □ | ○ □ | ○ □ | ○ □ |
| 348 | Shunt + assist + alarm | □■ ● | □■ ● | □■ ● | □■ ● | □■ ● | ● □■ |
| 368 | Two auxiliary + alarm | □■ ■ | □■ ■ | □■ ■ | □■ ■ | □■ ■ | □■ |
| 378 | Assist+Undervoltage +alarm | ○ □■ | ○ □■ | ○ □■ | ○ □■ | ○ □■ | ○ □■ |

## ■ Electrical accessories installation can be installed

Installation diagram of internal accessories



Wiring diagram of internal accessories

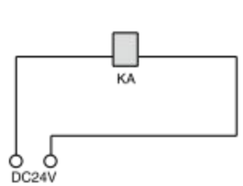



Undervoltage release Shunt release Alarm contact Auxiliary contact

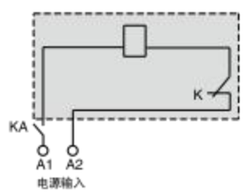
When the rated power supply voltage of the shunt trip is DC24V, the maximum length of the copper wire shall not exceed the requirements of the following table:

| | | |
|---|---|---|
| 100%Us | 150m | 250m |
| 80%Us | 100m | 160m |

If the above table does not meet the requirements, it is recommended to use the following figure to design the shunt trip control loop:




KA: is a DC24V intermediate relay with a shock current capacity of 1A

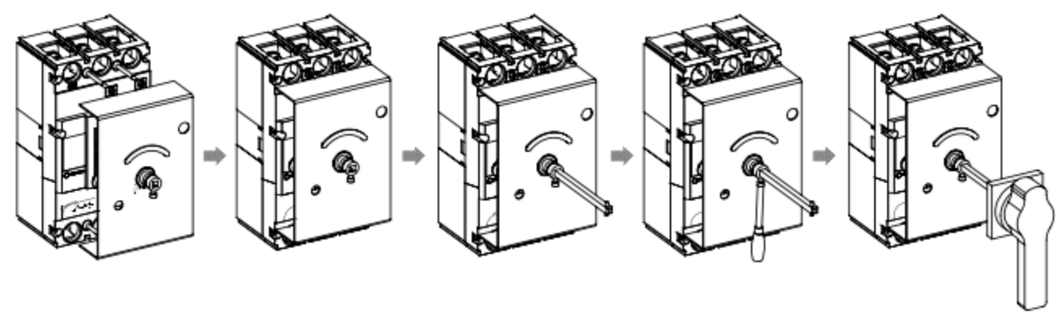



Voltage specifications at the power input:
AC50Hz 230V、400V； DC110V、220V

CDM3E Electronic plastic-case circuit breaker

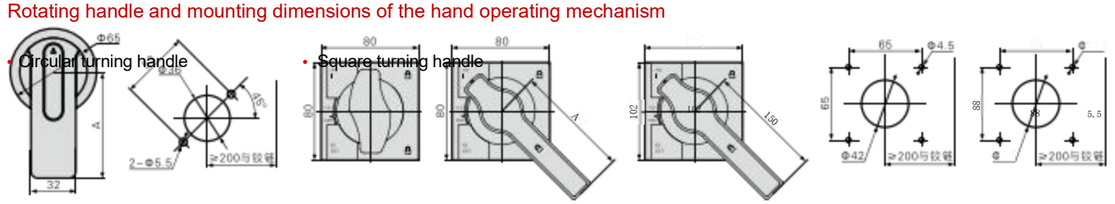
## ■ 800A and less external accessories installed

installation diagram of manual operation mechanism



Rotating handle and mounting dimensions of the hand operating mechanism

- Circular turning handle
- Square turning handle



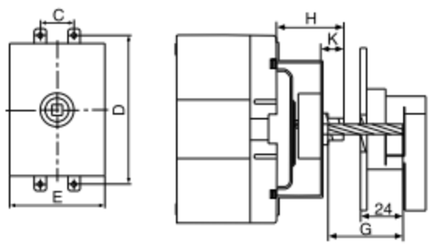

63

CDM3E-125/250 CDM3E-400/630/800 CDM3E-1250s~1600s CDM3E-125~800 CDM3E-1250s~1600s

Round handle size A, CDM3E-125/250 is 65 or 95 optional, default is 65. The CDM3E-400/630/800 can be 95 or 125. The default value is 95.

Installation dimensions of the hand operating mechanism

| Product model | C | D | E | H | K |
|---|---|---|---|---|---|
| CDM3E-125/250 | 35 | 143 | 100 | 49 | 20 |
| CDM3E-400/630 | 44 | 215 | 140 | 76 | 20 |
| CDM3E-800 | 70 | 243 | 210 | 76 | 20 |
| CDM3E--1250s/1600s | 70 | 320 | 193 | 116 | 20 |



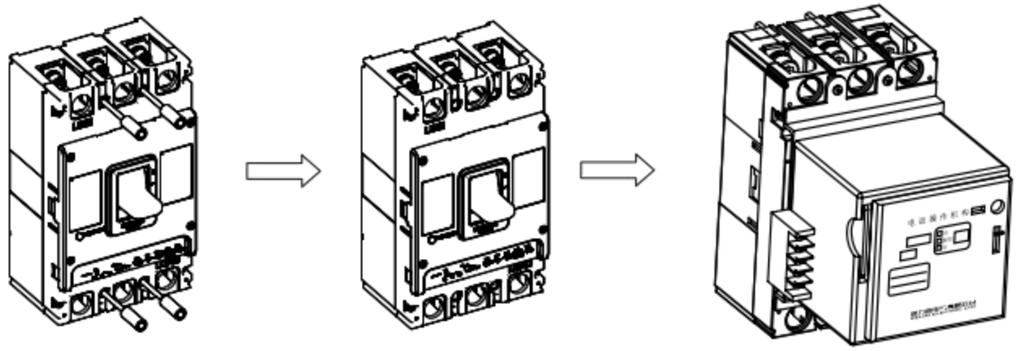

Note：1）The direct hand operation of the connecting rod at G is 40mm, and the extended hand operation is 150mm, if you need special customization, please contact the manufacturer.

2）If you need to operate the dial or USB interface, you need a professional to take down your hands and operate it.

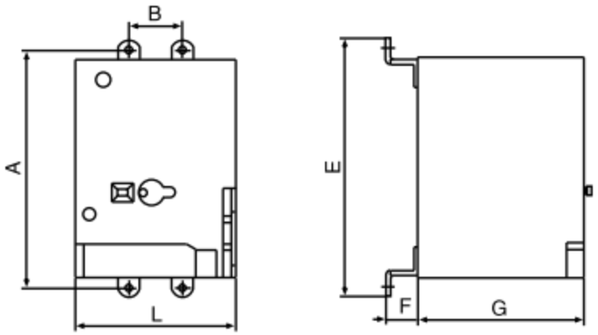
3）The operation of the installed rotating handle should be flexible, and the circuit breaker should be opened when the handle is horizontal, and the circuit breaker should be closed when the handle is in the vertical position.

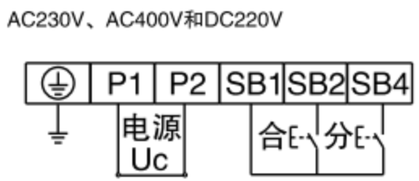
## ■ 800A and below electric operation mechanism

### Installation diagram of electric operation mechanism



### Electric operation mechanism installation dimensions and electrical wiring diagram




| Produxt model | A | B | L | E | F | G |
|---|---|---|---|---|---|---|
| CDM3E-125/250 | 126 | 35 | 90.5 | 140 | 12 | 77 |
| CDM3E-400/630 | 215 | 44 | 130 | 232 | 32 | 115 |
| CDM3E-800<br>CDM3E-1250s/1600s | 243 | 70 | 130 | 260 | 31 | 115 |
| | 319 | 70 | 130 | 337 | 18 | 116 |

Note： 1）After the circuit breaker trip of the live operating mechanism is tripped, the electric operating mechanism must be opened before it can be closed.

2) The circuit breaker can be remotely controlled through electrical operation. If you need to operate the dip dial or USB interface, you need to remove the electrical operation by professional personnel.





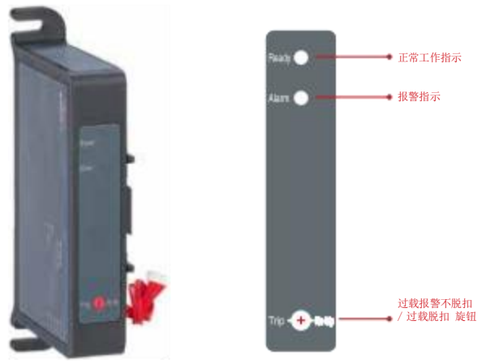
## ■ Communication Backpack (for 800A and below)

- Backpack can achieve "three remote" or "four remote" function
- Backpack power AC 230/400V adaptive
- HMI door indicator interface, which can be connected to the door monitor by RJ45 interface
- Backpack can realize passive shunt function, no additional shunt accessories need to be installed


| Communication type | | | | | |
|---|---|---|---|---|---|
| Electrical Connection | S1 | 1 | PE | – | 6 |
| | S2 | 2 | Power input | P1 | 8 |
| | S4 | 3 | Power input | P2 | 10 |
| Auxiliary passive output | NO | 11 | Auxiliary passive input | NO（F12） | 18 |
| | NC | 12 | Auxiliary passive input | NC（F14） | 19 |
| | COM | 13 | | COM（F11） | 20 |
| Alarm passive output | A1 | 14 | Alarm passive input | A1（B14） | 21 |
| | A2 | 15 | Alarm passive input | A2（B11） | 22 |
| Shunt passive input | Tripl | 16 | 485Communicationinterface | A | 23 |
| | Trip2 | 17 | 485Communicationinterface | B | 24 |


## ■ Overload alarm non-trip/overload trip backpack

- Backpack can realize overload alarm without tripping function
- Overload alarm non-trip/overload trip can be switched by knob selection
- Backpack power supply DC24V and AC230V/400V
- The backpack can realize the alarm signal output without the need to install additional alarm contact accessories




Overload alarm tripping or non-tripping type

| Interface name | Terminal coding | Terminal number |
|---|---|---|
| Power input | + | 1 |
| | – | 2 |
| Alarm passive output | COM | 4 |
| | No | 5 |
| | Nc | 6 |


（DC24V 标牌图）

Note: When choosing DC24V, configure the power conversion module by yourself. Delixi also optional power conversion module.

## ■ Installation and dimensions of communication modules and alarm non-trip modules

The installation of communication module and alarm non-trip module is shown in the following installation diagram:

1）Unscrew the cover screw and open the cover

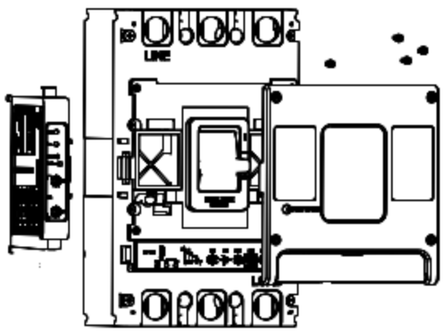
2）Remove the left strip to expose the circuit breaker and module access

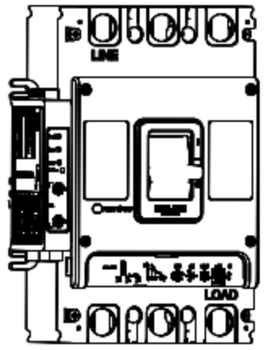
3）Connect the terminal of the module to the access inlet on the left side of the circuit breaker, and then clamp the right "V" convex of the module into the "V" groove on the left side of the circuit breaker

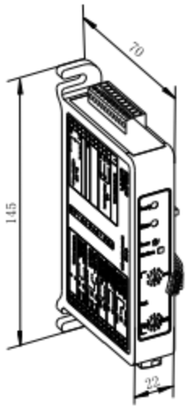
4）Reinstall the lid. The effect after installation is shown in the following installation effect drawing

The dimensions of the communication module and the alarm non-trip module are the same, see the dimensions diagram below（unit：mm)

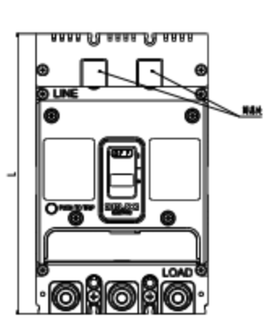
### Installation diagram

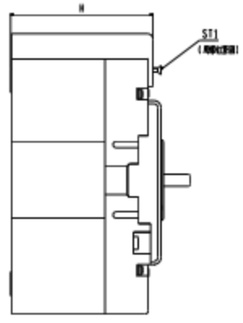


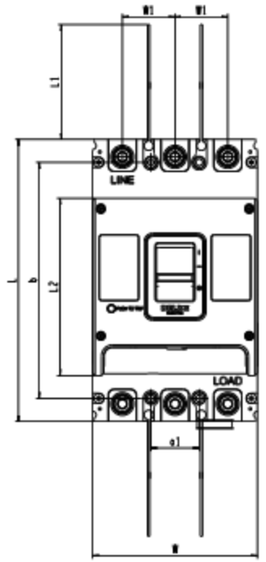

| | | | |
|---|---|---|---|
| 125/250 | 175.5 | 89 | ST2.9*10 |
| 400 | 269 | 99.5 | ST2.9*10 |
| 630/800 | 292 | 106 | ST3.5*10 |

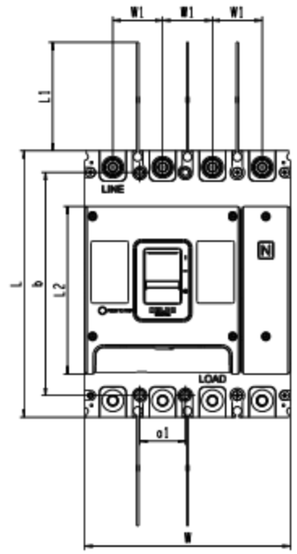


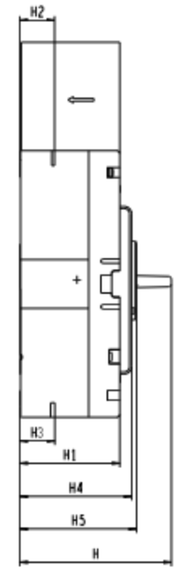






## ■ 800A and below

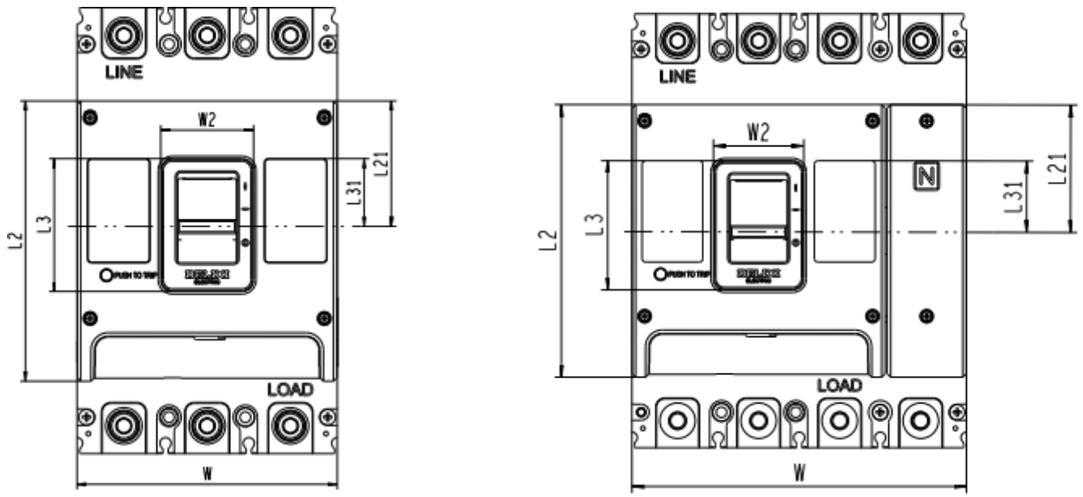



| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CDM3E-125 | 3<br>4 | 165 | 80 | 102.5 | 107<br>142 | 35 | 112.5 | 86 | 21.5 | 23 | 94 | 95.5 | 35 | 35 | 126 |
| CDM3E-250 | 3<br>4 | 165 | 80 | 102.5 | 107<br>142 | 35 | 112.5 | 86 | 23 | 23 | 94 | 95.5 | 35 | 35 | 126 |
| CDM3E-400 | 3<br>4 | 257 | 104.5 | 161.5 | 150<br>198 | 48 | 145.9 | 96.2 | 36.5 | 37 | 107.5 | 112.2 | 44 | – | 215 |
| CDM3E-630 | 3<br>4 | 257 | 104.5 | 161.5 | 150<br>198 | 48 | 145.9 | 96.2 | 38.5 | 39.5 | 107.5 | 112.2 | 44 | – | 215 |
| CDM3E-800 | 3<br>4 | 280 | 104.5 | 170 | 210<br>280 | 70 | 154 | 103 | 40.5 | 47 | 116 | 121 | 70 | 70 | 243 |

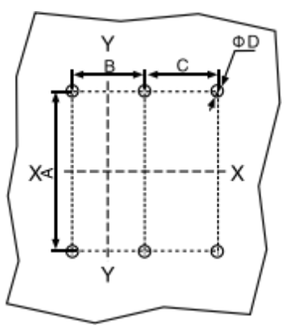
## ■ Drawing of opening size for product panel of 800A and below




| Product model | Number of poles | Expose the panel and flip the handle | | | Only the toggle handle is exposed | | |
|---|---|---|---|---|---|---|---|
| | | W | L2 | L21 | W2 | L3 | L31 |
| CDM3E-125 | 3 | 107 | 102.5 | 51 | 26 | 50.5 | 26.5 |
| | 4 | 142 | | | | | |
| CDM3E-250 | 3 | 107 | 102.5 | 51 | 26 | 50.5 | 26.5 |
| | 4 | 142 | | | | | |
| CDM3E-400 | 3 | 150 | 161.5 | 75 | 52.5 | 75.5 | 41 |
| | 4 | 198 | | | | | |
| CDM3E-630 | 3 | 150 | 161.5 | 75 | 52.5 | 75.5 | 41 |
| | 4 | 198 | | | | | |
| CDM3E-800 | 3 | 210 | 170 | 67.5 | 55 | 85 | 42.5 |
| | 4 | 280 | | | | | |

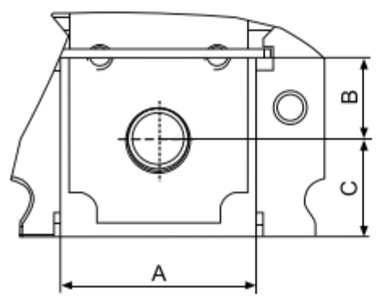
## ■ Size drawing of mounting hole in front of fixed plate 800A and below

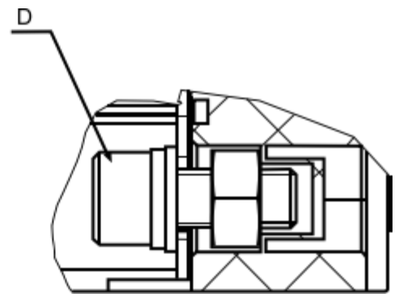
| Product model | number | A | B | C | φD |
|---|---|---|---|---|---|
| CDM3E-125 | 3 | 126 | 35 | – | 5.5 |
| | 4 | | | 35 | |
| CDM3E-250 | 3 | 126 | 35 | – | 5.5 |
| | 4 | | | 35 | |
| CDM3E-400 | 3 | 215 | 44 | – | 6.5 |
| | 4 | | | – | |
| CDM3E-630 | 3 | 215 | 44 | – | 6.5 |
| | 4 | | | – | |
| CDM3E-800 | 3 | 243 | 70 | – | 7.5 |
| | 4 | | | 70 | |




Note:X-X, Y-Y is the three-pole circuit breaker center.

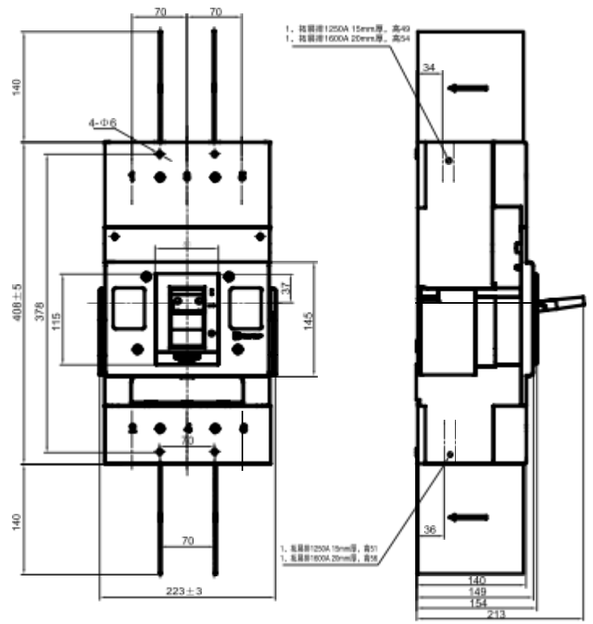




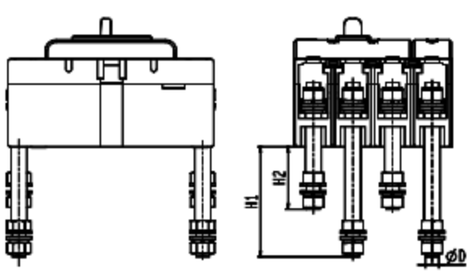

| Product model | A | B | C | D |
|---|---|---|---|---|
| CDM3E-125 | 25.5 | 12 | 10 | M8x20 |
| CDM3E-250 | 25.5 | 12 | 10 | M8x20 |
| CDM3E-400 | 32 | 13 | 16 | M10×25 |
| CDM3E-630 | 32 | 13 | 16 | M10×35 |
| CDM3E-800 | 45.5 | 16.8 | 18.5 | M12×35 |

## ■ 1250~1600A

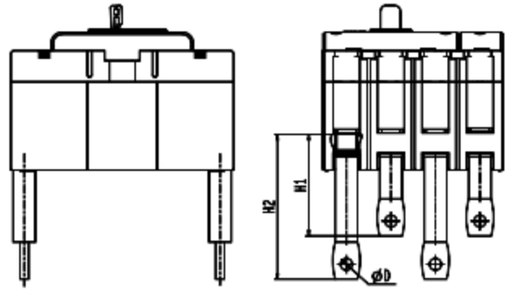


## ■ 800A and below fixed plate back

Installation size diagram of fixed plate rear wiring accessories




CDM3E-125/250



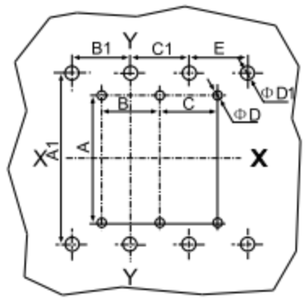

CDM3E-400/630/800

Note: The factory configuration is horizontal wiring, and the customer can loosen it and rotate it by 90° to become vertical wiring.

| | | | |
|---|---|---|---|
| CDM3E-125/250 | 102 | 72 | 10 |
| CDM3E-400/630 | 92 | 128 | 12.5 |
| CDM3E-800 | 129 | 129 | 13 |

Fixed plate rear mounting hole size diagram

| Product model | NO | A | B | C | ΦD | A1 | B1 | C1 | E | |
|---|---|---|---|---|---|---|---|---|---|---|
| CDM3E-125/250 | 3 | 126 | 35 | – | 5.5 | 145 | 35 | 35 | – | 15 |
| | 4 | | | 35 | | | | | 35 | |
| CDM3E-400/630 | 3 | 215 | 44 | – | 6.5 | 225 | 48 | 48 | – | 32 |
| | 4 | | | – | | | | | 48 | |
| CDM3E-800 | 3 | 243 | 70 | – | 7.5 | 243 | 70 | 70 | – | 40 |
| | 4 | | | 70 | | | | | 70 | |

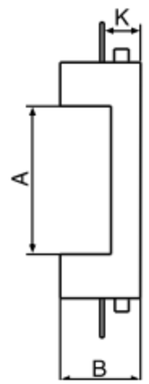


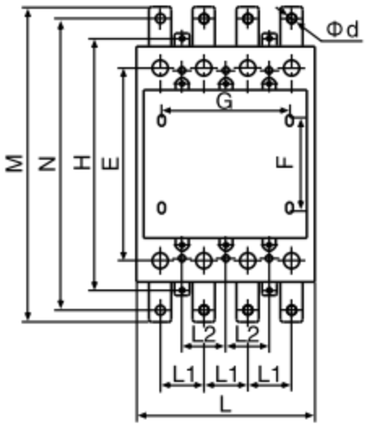

Note: X-X,Y-Y are three pole circuit breaker centers



## ■ 800A and below insert plate front

Insert plate front wiring attachment mounting dimensions

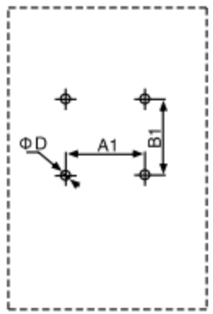



| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CDM3E-125/250 | 3 | 108.5 | 73.2 | 144 | 74 | 70 | 191 | 105 | 35 | 35 | 243 | 223 | 37.5 | 8.5 |
| | 4 | 108.5 | 73.2 | 144 | 74 | 105 | 191 | 140 | 35 | 35 | 243 | 223 | 37.5 | 8.5 |

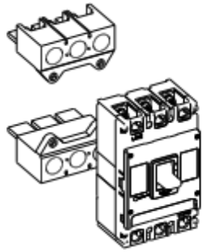
Insert plate front wiring installation hole size diagram

| Product model | No. | A1 | B1 | ΦD |
|---|---|---|---|---|
| CDM3E-125/250 | 3 | 35 | 150 | 5 |
| | 4 | 35 | 150 | 5 |

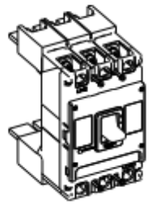


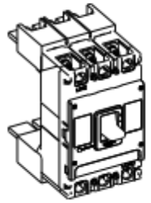
## ■ 800A and below behind the insert plate

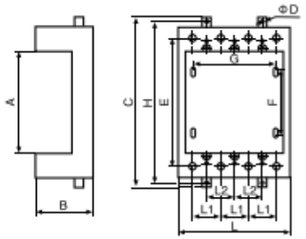
### Insert type board rear wiring attachment installation dimensions



Installation diagram of the rear wiring attachment of the insert plate





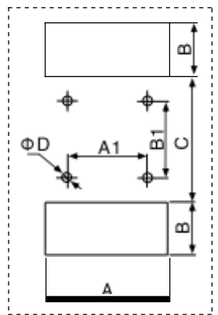



Insert type board rear wiring attachment installation dimensions

| 产品型号 | 极数 | A | B | C | D | E | F | G | H | L | L1 | L2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CDM3E-125/250 | 3 | 108.5 | 73.2 | 203 | M4 | 144 | 74 | 70 | 191 | 105 | 35 | 35 |
| | 4 | | | | | | | 105 | | 140 | | |
| CDM3E-400/630 | 3 | 170 | 60 | – | – | 225 | 130 | 60 | – | 152 | 48 | 44 |
| | 4 | | | | | | | 108 | | 200 | | |
| CDM3E-800 | 3 | 187 | 125 | 342 | M5 | 243 | 143 | 140 | 328 | 210 | 70 | 70 |
| | 4 | | | | | | | 210 | | 280 | | |

### Dimensions of mounting holes for insert plate rear accessories

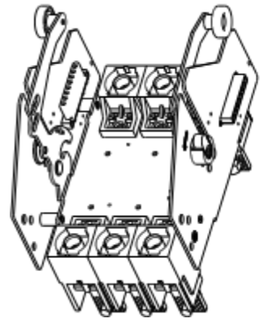
| 产品型号 | 极数 | A | A1 | B | B1 | C | ΦD |
|---|---|---|---|---|---|---|---|
| CDM3E-125/250 | 3 | 110 | 70 | 45 | 74 | 100 | 6.5 |
| | 4 | 145 | 105 | | | | |
| CDM3E-400/630 | 3 | 152 | 88 | 60 | 145 | 170 | 8.5 |
| | 4 | 200 | 132 | | | | |
| CDM3E-800 | 3 | 212 | 140 | 64 | 143 | 185 | 11 |
| | 4 | 282 | 210 | | | | |

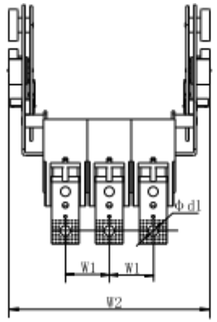


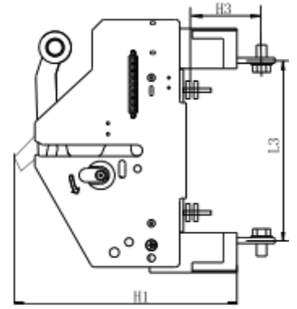



## ■ 800A and below pull out type plate back

### Installation size drawing of withdrawable board rear wiring accessories





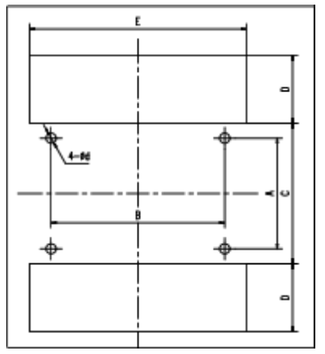




| Housing frame | number | Overall dimension | | | | | |
|---|---|---|---|---|---|---|---|
| | | L3 | H1 | H3 | W1 | W2 | φd1 |
| CDM3E-400 | 3P | 203 | 253 | 77 | 48 | 223 | φ11 |
| | 4P | 203 | 253 | 77 | 48 | 271 | φ11 |
| CDM3E-630 | 3P | 207 | 253 | 77 | 48 | 223 | φ11 |
| | 4P | 203 | 253 | 77 | 48 | 271 | φ11 |
| CDM3E-800 | 3P | 241 | 238 | 73 | 70 | 289 | Φ13 |
| | 4P | 241 | 238 | 73 | 70 | 359 | Φ13 |

| Housing frame | Board rear outlet hole size | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | A | B | | C | D | E | | d |
| | | 3P | 4P | | | 3P | 4P | |
| CDM3E-400 | 140 | 96 | 144 | 178 | 47 | 147 | 195 | 7 |
| CDM3E-630 | 140 | 96 | 144 | 178 | 47 | 147 | 195 | 7 |
| CDM3E-800 | 131 | 140 | 210 | 170 | 77 | 213 | 283 | 7 |

Note: 1.630 shell frame extraction capacity reduction for 500A use.

2. If there are no special remarks, the extraction type is not equipped with electrical interlocking function.



## ■ 800A and below product connection

### 1 Product wiring precautions

- The wiring must be carried out by professionally qualified personnel
- Before connecting the circuit breaker, ensure that the input power is completely disconnected
- The circuit breaker must be installed before the wiring operation
- The circuit breaker must be in accordance with the wiring sequence of up and down, that is, "LINE" is the upper line end (power side), "LOAD" is the lower line end (load side), and it is forbidden to reverse the wiring direction

### 2 Selection of standard connection wires

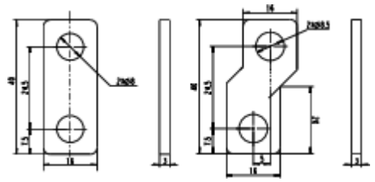
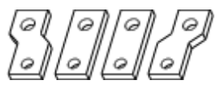
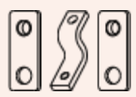
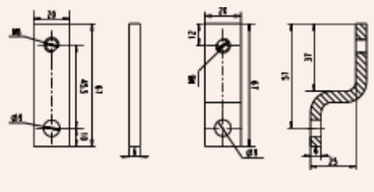
The cross-sectional area of the connecting wire and the corresponding product shell current are shown in the following table:

| Product model | Cable cross-sectional area（$mm^2$） | quantity |
|---|---|---|
| CDM3E-125 | 50 | 1 |
| CDM3E-250 | 120 | 1 |
| CDM3E-400 | 240 | 1 |
| CDM3E-630 | 185 | 2 |
| CDM3E-800 | 240 | 2 |

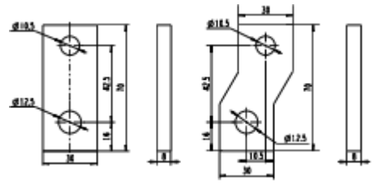
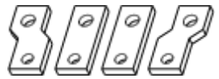
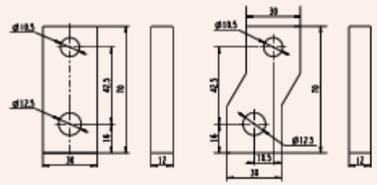
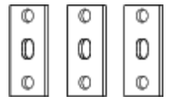
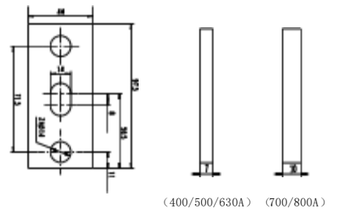
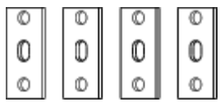
Note: If the external connection is copper, it is necessary to transfer the expansion terminal.

## ■ CDM3E Extension terminal

The extension terminal is connected to the standard terminal of the circuit breaker, thus providing a variety of wiring solutions in a small space: The extension terminal can be connected to the incoming or outgoing end of the circuit breaker.

| model | number | Reference picture | size |
|---|---|---|---|
| CDM3E-125 | 3P |  |  |
| | 4P |  | |
| CDM3E-250 | 3P |  |  |
| | 4P |  | |



| model | number | Reference picture | size |
|---|---|---|---|
| CDM3E-400<br>CDM3E-630 400A and below | 3P |  |  |
| | 4P |  | |
| CDM3E-630 400A and above | 3P |  |  |
| | 4P |  | |
| CDM3E-800 | 3P |  |  |
| | 4P |  | |

（400/500/630A） （700/800A）

## ■ Core material order number

| Material code | Product description |
|---|---|
| M3E125M1253300 | CDM3E-125M 3300 125A |
| M3E250M2503300 | CDM3E-250M 3300 250A |
| M3E400M4003300 | CDM3E-400M 3300 400A |
| M3E630M6303300 | CDM3E-630M 3300 630A |
| M3E800M8003300 | CDM3E-800M 3300 800A |
| M3E1250M3300 | CDM3E-1250M 3300 |
| M3E1250H3300 | CDM3E-1250H 3300 |
| M3E1600M3300 | CDM3E-1600M 3300 |
| M3E1600H3300 | CDM3E-1600H 3300 |
| M3E125M125C300 | CDM3E-125M 4300C 125A |
| M3E250M250C300 | CDM3E-250M 4300C 250A |
| M3E400M400C300 | CDM3E-400M 4300C 400A |
| M3E630M630D300 | CDM3E-630M 4300D 630A |
| M3E800M800D300 | CDM3E-800M 4300D 800A |
| M3E1250SH3300 | CDM3E-1250SH 3300 |
| M3E1250SM3300 | CDM3E-1250SM 3300 |

| Material code | Product description |
|---|---|
| M3E125M1253300N | CDM3E-125M 3300 125A 过报 DC |
| M3E250M2503300N | CDM3E-250M 3300 250A 过报 DC |
| M3E400M4003300N | CDM3E-400M 3300 400A 过报 DC |
| M3E630M6303300I | CDM3E-630M 3300 630A 过报 AC |
| M3E800M8003300I | CDM3E-800M 3300 800A 过报 AC |
| M3E125M1253300T8 | CDM3E-125M 3300 125A 4 遥 AC230V |
| M3E250M2503300T8 | CDM3E-250M 3300 250A 4 遥 AC230V |
| M3E400M4003300T8 | CDM3E-400M 3300 400A 4 遥 AC230V |
| M3E630M6303300T8 | CDM3E-630M 3300 630A 4 遥 AC230V |
| M3E800M8003300T8 | CDM3E-800M 3300 800A 4 遥 AC230V |
| M3E125M1253300TB | CDM3E-125M 3300 125A 4 遥 AC400V |
| M3E250M2503300TB | CDM3E-250M 3300 250A 4 遥 AC400V |
| M3E400M4003300TB | CDM3E-400M 3300 400A 4 遥 AC400V |
| M3E630M6303300TB | CDM3E-630M 3300 630A 4 遥 AC400V |
| M3E800M8003300TB | CDM3E-800M 3300 800A 4 遥 AC400V |