

Product Overview

■ Standards

- GB/T 14048.1 General
- GB/T 14048.2 Circuit breaker
- IEC 60947-1 General
- IEC 60947-2 Circuit breaker



■ Pollution level

- The CDM6Ei range operates in pollution level 3
- In the environment as defined in IEC 60947-1 and IEC 60664-1 (industrial environment)

■ Resistance to heat and humidity

- Ambient air temperature upper limit +70°C, lower limit -40°C; 24h average temperature not to exceed 35°C
(Note: for use in the range -40°C ~ -25°C, +40°C ~ +70°C, please contact the manufacturer or refer to the table of capacity reduction factors)
- Storage temperature from -40°C to 70°C

■ Ambient temperature

- Ambient air temperature upper limit +70°C, lower limit -40°C; 24h average temperature not to exceed 35°C
(Note: for use in the range -40°C ~ -25°C, +40°C ~ +70°C, please contact the manufacturer or refer to the table of capacity reduction factors)
- Storage temperature from -40°C to 70°C

■ Humidity

Normal operation is subject to.

- relative humidity of the atmosphere must not exceed 50% at an ambient air temperature of +40°C, or at a higher relative humidity if the temperature is lower.
- The average monthly relative humidity in the wettest months was 90%.
- The effect of condensation on product performance from the product surface needs to be considered.

■ Altitude

- Normal working installation site at an altitude of not more than 2000m
- Circuit breakers mounted in switchgear:
Circuit breakers with rotary hand operation: IP40
Circuit breakers with motor mechanism: IP40

■ Protection class

- Circuit breaker body: IP20 (without terminals)
- Circuit breakers mounted in switchgear:
Circuit breakers with rotary hand operation: IP40
Circuit breakers with motor mechanism: IP40

■ Reliable contact indication with isolation

The CDM6Ei series of moulded case circuit breakers all comply with the isolation defined in IEC60947-2 • The isolation position corresponds to the O (OFF) position

- Only when the contact is actually open does the operating handle indicate the "OFF" position
- The reliability of the contact indication system is not altered by turning the handle or the motor mechanism
- Tested, safe and reliable isolation

Product Selection



Remarks.

- 1) 1250A and 1600A without communication
- 2) 1250A and 1600A without overload alarm
- 3) 1250A and 1600A shunt and electric operation without AC110V, DC110V, DC220V control voltage
- 4) 800 shell frame and the following internal accessories (except under-voltage, which is supplied in terminal form) Other products are supplied with a lead length of 500 mm as standard; please specify if other lengths or terminals are required.
- 5) 125AF, 250AF no extractable products. 400AF, 630AF no inserted front-panel products
- 6) Horizontal outlet rows by default for plug-in board front products.
- 7) Conventional product standard: spacer plate, mounting screws
- 8) Three remote controls are standard (auxiliary alarm + communication module); Four remote controls are standard (auxiliary alarm + electric operation + communication module).

Technical Parameters

Product type		CDM6Ei-125						CDM6Ei-250	
Rated voltage Ue (V)		400/415/690						400/415/690	
Rated insulation voltage Ui (V)		800						800	
Rated impulse withstand voltage Uimp (V)		8000						8000	
Rated frequency (HZ)		50						50	
Rated current (A)		32	63	125				160、250	
Number of poles (4P-C/D type) (C: with protection and breaking; D: straight through)		3/4						3/4	
Selective categories		A						A	
Breaking capacity	Breaking class	M	H	M	H	M	H	M	H
	Icu (kA) AC 400/415V	50	85	50	85	50	85	50	85
	Icu (kA) AC 690V	20	20	20	20	20	20	20	20
	Ics (kA) AC 400/415V	50	65	50	65	50	65	50	65
	Ics (kA) AC 690V	10	10	10	10	10	10	10	10
Rated short-time withstand current	Icw (kA) AC 400/415V	0.5（1s）		1（1s）		3（1s）		3（1s）	
Mechanical life	Machinery with maintenance	40000						40000	
	No maintenance of machinery	20000						20000	
Electrical life	AC 400/415V	10000						10000	
	AC 690V	8000						8000	
Type of protection	Power distribution protection	■						■	
	Motor protection	■						■	
Decoupling method	Electronic decoupling unit protection mode	LSI（N）						LSI（N）	
Mounting method	Fixed front panel wiring	■						■	
	Fixed behind board wiring	■(Screw type)						■(Screw type)	
	Plug-in front panel wiring	■						■	
	Plug-in back-of-plate wiring (horizontal)	■						■	
	Pull-out ²⁾	-						-	
Product Accessories	Undervoltage release	■						■	
	Shunt release	■						■	
	Alarm contacts	■						■	
	Auxiliary contact (1 open, 1 closed)	■						■	
	Auxiliary contacts (2 open and 2 closed)	■						■	
	AC/DC electric operation	■						■	
	Round direct hand manipulation	■						■	
	Square direct hand manipulation	■						■	
	Round Extension Hand Exercise	■						■	
	Square Extension Hand Exercise	■						■	
	Interphase dividers	■						■	
	Communication backpack	■						■	
	Overload alarm without decoupling	■						■	
Self-installation of accessories		■						■	
Isolation function		■						■	
Certification		CCC/CE						CCC/CE	

Note: 1) For back-panel horizontal wiring produced, users are required to change it to the back-panel vertical wiring connection; for details, see the fixed-type back-panel horizontal installation diagram.

2) For back-panel horizontal wiring produced, users are required to change it to the back-panel vertical wiring connection; for details, see the drawer-type back-panel horizontal installation diagram

CDM6Ei-400		CDM6Ei-630		CDM6Ei-800		CDM6Ei-1250S	CDM6Ei-1600S	
400/415/690		400/415/690		400/415/690		400/415/690	400/415/690	
800		800		1000		1000	1000	
8000		8000		12000		12000	12000	
50		50		50		50	50	
400		630		800		1250	1600	
3/4		3/4		3/4		3	3	
B		B		B		B	B	
M	H	M	H	M	H	M	M	H
50	85	50	85	50	85	50	50	70
-	20	-	20	-	30	20	35	35
50	65	50	65	50	65	36	50	50
-	15	-	15	-	20	20	35	35
5 (1s)		8 (1s)		10 (1s)		20 (1s)	20 (1s)	
20000		20000		20000		25000	25000	
10000		10000		10000		12500	12500	
7500		7500		7500		6000	6000	
6000		6000		6000		3000	3000	
■		■		■		■	■	
■		■		■		■	■	
LSI (N)		LSI (N)		LSI (N)		LSIG	LSIG	
■		■		■		■	■	
■(Level ¹⁾)		■(Level ¹⁾)		■(Level ¹⁾)		-	-	
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■ Table of temperature derating factors

Rated current	+40°C	+50°C	+60°C	+70°C
125A	-	-	$I_{nm}=80A$	$I_{nm}=63A$
250A	-	-	$I_{nm}=200A$	$I_{nm}=160A$
400A	-	-	$I_{nm}=315A$	$I_{nm}=250A$
630A	-	-	$I_{nm}=500A$	$I_{nm}=400A$
800A	-	-	$I_{nm}=560A$	$I_{nm}=500A$
1250A	-	$I_{nm}=1200A$	$I_{nm}=1150A$	$I_{nm}=1100A$
1600A	-	$I_{nm}=1500A$	$I_{nm}=1470A$	$I_{nm}=1400A$

Note: The maximum I_R setting must not exceed I_{nm}

To ensure that the user is not exposed to excessive temperature rises that can lead to malfunctions during long-term use at high temperatures, it is recommended that the user refers to this table of temperature derating factors.

■ Altitude reduction factor

CDM6Ei-800 below

Altitudes below 2000 m have no effect on the performance of the circuit breaker. Above this altitude, a reduction in air insulation characteristics and cooling capacity must be taken into account; the correction factors given in the following table are for installations at altitudes above 2000 m.

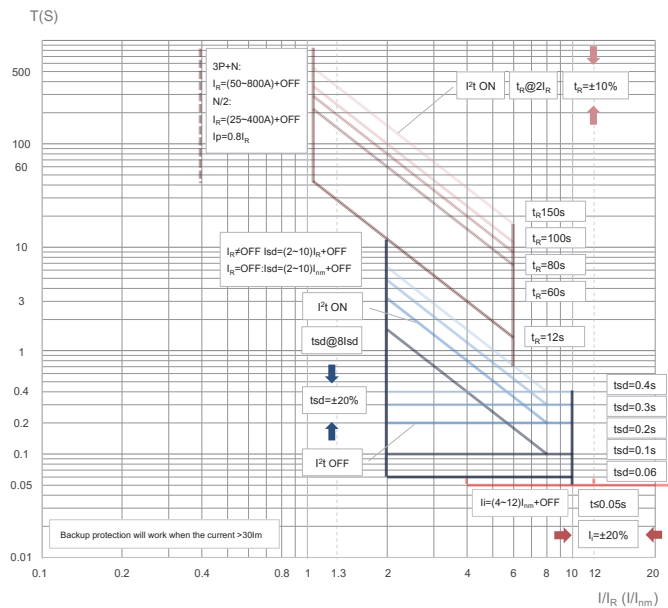
Altitude (m)	2000	2500	3000	3500	4000	4500	5000
Insulation voltage U_i (V)	800	728	728	664	664	616	616
Surge withstand voltage U_{imp} (kV)	8	7	7	6.5	6.5	6	6
Max. operating voltage U_e (V)	690	690	690	660	600	600	550
Operating current correction factor I_n	$1I_n$	$0.98I_n$	$0.94I_n$	$0.92I_n$	$0.88I_n$	$0.86I_n$	$0.85I_n$

CDM6Ei-1250/1600

Altitude (m)	2000	3000	4000	5000
Operating current correction factor I_n	$1I_n$	$0.94I_n$	$0.88I_n$	$0.85I_n$
Max. operating voltage U_e (V)	690	600	500	440
Insulation voltage U_i (V)	1000	800	700	600
Frequency withstand voltage (V)	2000	1500	1000	800

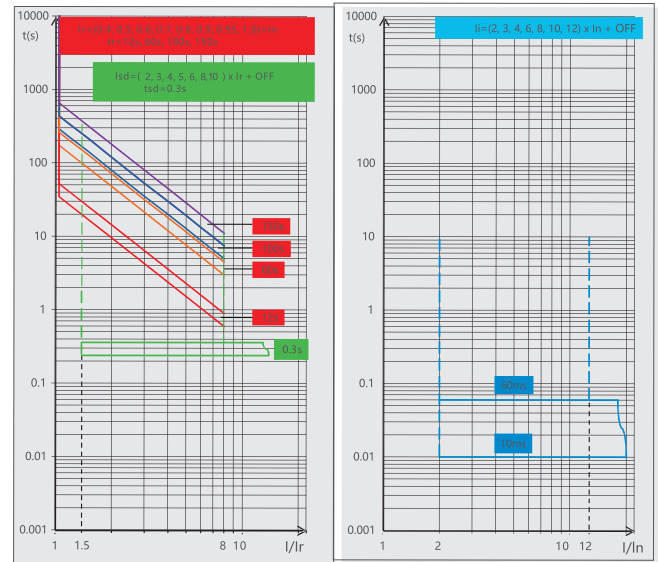
Trip curves

CDM6Ei(125~800AF)



CDM6Ei-1250-1600AF

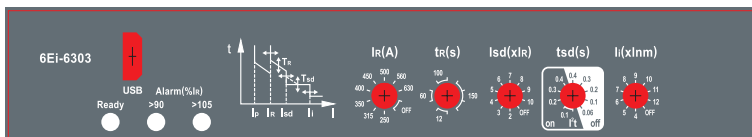
Black line for distribution protection, red line for motor protection



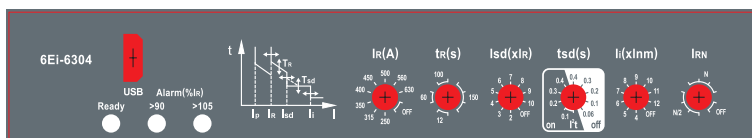
Controllers up to 800

CDM6Ei-125~800

3P for standard use (supports plug and play triple remote communication)



4P for standard use (supports plug and play triple remote communication)



Communication type



I_R : Overload long delay setting current

I_{sd} : short circuit short delay setting current

I_i : short-circuit instantaneous setting current

Ready: running indicator

>90% I_R : pre-alarm indicator

t_R : LSI three-stage protection curve

t_R : Overload long delay adjustment time

t_{sd} : short circuit short delay rectification time

I_{RN} : Neutral rectification protection

Alarm: Alarm indication

>105% I_R : Overload alarm indicator

USB: data interface

Distribution protection and motor protection using the same controller

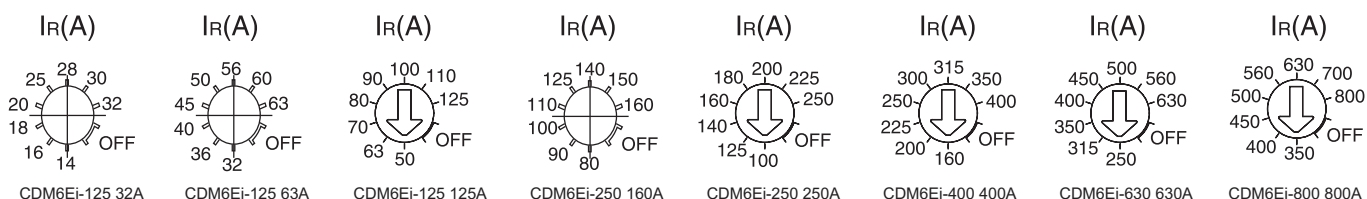
Note: For more details, see the official website of Delixi Electric (<http://www.delixi-electric.com/>), where you can download the CDM6Ei series manual for free.

1) Overload long-delay setting current I_R

The knob for the I_R gear allows you to select the different current levels under the housing to meet the requirements of different circuits for the rated operating current.

Below is an illustration of the I_R adjustment knob data for different current housing frames.

The table shows all the overload long delay setting currents for each current frame of the CDM6Ei series.

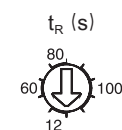


Model number	Long-delay overcurrent protection characteristics I_R (A)	Remark
CDM6Ei-125 32A	14, 16, 18, 20, 25, 28, 30, 32	OFF Indicates closure
CDM6Ei-125 63A	32, 36, 40, 45, 50, 56, 60, 63	OFF Indicates closure
CDM6Ei-125 125A	50, 63, 70, 80, 90, 100, 110, 125	OFF Indicates closure
CDM6Ei-250 160A	80, 90, 100, 110, 125, 140, 150, 160	OFF Indicates closure
CDM6Ei-250 250A	100, 125, 140, 160, 180, 200, 225, 250	OFF Indicates closure
CDM6Ei-400 400A	160, 200, 225, 250, 300, 315, 350, 400	OFF Indicates closure
CDM6Ei-630 630A	250, 315, 350, 400, 450, 500, 560, 630	OFF Indicates closure
CDM6Ei-800 800A	350, 400, 450, 500, 560, 630, 700, 800	OFF Indicates closure

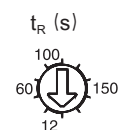
2) Overload long delay adjustment time t_R

When the line fault current is $1.5I_R$, $2I_R$ and $6I_R$ respectively, the action time values corresponding to the long overload delay at different levels are as follows

Actual line current	Operating time t_R (s) at different positions, accuracy $\pm 10\%$, $t = (2I_R/I) 2 \times t_R$				
	12	60	80	100	150
$1.5I_R$	21.3	106.7	142.2	177.8	266.7
$2I_R$	12	60	80	100	150
$6I_R$	1.33	6.67	8.89	11.11	16.67



CDM6Ei-125/250



CDM6Ei-400/630/800

t_R Action time @ $2I_R$

How do I set the overload long-delay setting current and setting time for the CDM6Ei-400 shell and frame product as an example?

If I_R is selected to 300, t_R is selected to 60.

Overload action time range of 106.7 ± 10.67 s for a line overload current of $1.5I_R$ (450A).

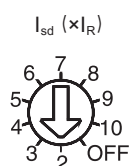
When the line overload current is $2I_R$ (600A), the overload action time range is 60 ± 6 s. When the line overload current is $6I_R$ (1800A), the overload action time range is 6.67 ± 0.667 s. The other steps and so on.

3) Short circuit short delay setting current I_{sd}

The short-circuit short-delay setting current I_{sd} is selected in the following steps: 2, 3, 4, 5, 6, 7, 8, 9, 10, OFF.

The setting current I_{sd} is the selected step $\times I_R$ (current setting value for adjustable overload detriggers). Where

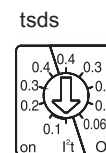
"OFF" means that the short-circuit short delay option is switched off.



4) Short-circuit short delay adjustment time tsd

Short time delay protection is used to ensure selective coordination with the next level of circuit breakers and is available in two modes: "I²t ON" (inverse or fixed time) and "I²t OFF" (fixed time). The following table shows the time values for the short time release time tsd. $t = (8I_{sd}/I)^2 \times tsd$

I ² t ON (Anti-time limit @8I _{sd})	Rectification time tsd (s)	-	0.1	0.2	0.3	0.4
	I > 8I _R Delay time (s)	-	0.1	0.2	0.3	0.4
I ² t OFF (fixed time frame)	Rectification time tsd (s)	0.06	0.1	0.2	0.3	0.4
	Returnable time (ms)	20	80	140	230	350
	Maximum disconnection time (ms)	100	140	220	320	500



tsd Action time @8I_{sd}

Take the CDM6Ei-250 shell and frame product as an example of how to set the short circuit short delay inverse time setting.

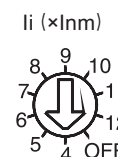
If I_R is selected 200, I_{sd} selects the 2xI_R position, tsd selects I²t ON and tsd selects the 0.2 position.

When the line short-circuit current is 2xI_R (400A), the short-circuit short-delay action time range is 3.2s.

Note: When I_R=OFF, the short circuit short delay action current I_{sd} matches I_{nm}.

5) Short-circuit instantaneous setting current I_i(×I_{nm})

Short-circuit transient setting current I _i (× I _{nm})	CDM6Ei-125/250/400/630/800	(4, 5, 6, 7, 8, 9, 10, 11, 12, OFF) × I _{nm}
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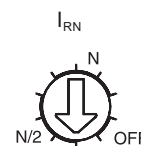


6) Neutral rectification protection I_{RN} (×I_R/I_{nm})

The value of the setting current I_{RN} is the selected step × I_R/I_{nm}. The neutral protection is specially configured for four-pole circuit breakers and is available in three protection modes.

- OFF: disables the neutral protection function, for use in power distribution systems where neutral protection is not required.
- N/2: For power distribution systems where the cross-sectional area of the neutral conductor is equal to half of the phase conductor, where the long and short delays of the neutral conductor are equal to 1/2 of the phase protection setting value
- N: for distribution systems where the cross-sectional area of the neutral conductor is equal to that of the phase line, where the long delay, short delay and instantaneous rectification values of the neutral line are equal to the protection rectification values of the phase line

Note: When I_R is OFF, the controller will automatically use I_{nm} as the reference current for neutral protection.



7) Indication of the controller's operating status

The operating status of the Ready and Alarm indicators is shown in the following table.

Breaker operating status	Ready	Alarm		Remarks
	Green	Yellow	Red	
Normal	Blinking	OFF	OFF	$I < 0.9I_R$
Early Warning	Blinking	Blinking	OFF	$0.9I_R \leq I \leq I_R$
Alarm but non-trip	Blinking	ON	Blinking	$1.05I_R < I$
Trip	OFF	OFF	OFF	$1.05I_R < I$

Note:

1. I indicates the main circuit current and I_R indicates the overload long delay setting current value.
2. When the yellow light is flashing, it means that the intelligent controller has enabled the long overload delay, during which the parameter adjustment to the controller panel is not valid.

8) Use of the USB data interface

The USB data interface can be used to interconnect Android phones with OTG functionality via OTG cable to enable telemetry and telemodulation.

Welcome to install Delixi Electric: New Intelligence APP



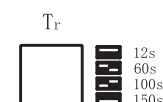
1600 Controllers

1) Overload long-delay setting current I_R and setting time t_R

Product type	Long delay time parameter adjustment value I_R (A)
CDM6Ei-1250	500/630/800/900/1000/1100/1250
CDM6Ei-1600	630/800/900/1000/1100/1250/1400/1500/1600



Operating current	Delay time adjustment value t_R (s), accuracy $\pm 10\%$			
	12s	60s	100s	150s
$1.05I_R$ (inverse time limit)	$\geq 2h$			
$1.3I_R$ (inverse time limit)	$< 2h$			
$2I_R$	12s	60s	100s	150s
$4I_R$	3s	15s	25s	37.5s

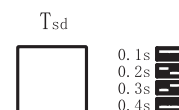
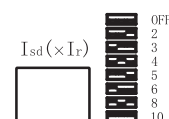


2) Short circuit short delay setting current I_{sd} and rectification time t_{sd}

The short-circuit short-delay setting current I_{sd} is selected in the following steps: 2, 3, 4, 5, 6, 7, 8, 9, 10, OFF.

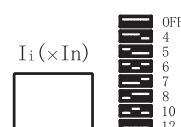
The setting current I_{sd} is selected in the following steps $\times I_R$ (adjustable) Current rectification of the overload decoupler fixed value)

Operating current	Action times in different gears t_R (s), accuracy $\pm 15\%$			
	0.1s	0.2s	0.3s	0.4s
$0.85I_{sd}$	$\geq 2 \times (0.1s, 0.2s, 0.3s, 0.4s) \pm 15\%$ No action			
$1.15I_{sd}$	$< 2 \times (0.1s, 0.2s, 0.3s, 0.4s) \pm 15\%$ Delayed action			
Fixed time frame	0.1s	0.2s	0.3s	0.4s



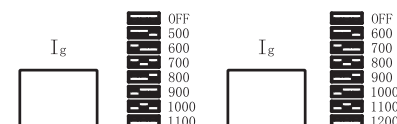
3) Short-circuit instantaneous setting current I_i

Product type	(4, 5, 6, 7, 8, 10, 12) I_n +OFF (exit position)
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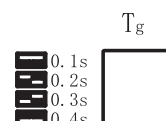


4) Earth fault setting current I_g and time T_g

Model number	Ground fault current protection characteristic parameter setting value I_g (A)
CDM6Ei-1250	500A/600A/700A/800A/900A/1000A/1100A/OFF Stepped adjustment +OFF (exit position)
CDM6Ei-1600	600A/700A/800A/900A/1000A/1100A/1200A/OFF Stepped adjustment +OFF (exit position)



Operating current	Action time T_g , accuracy $\pm 15\%$			
	0.1s	0.2s	0.3s	0.4s
$0.85I_g$	$\geq 2 \times (0.1s, 0.2s, 0.3s, 0.4s) \pm 15\%$ No action			
$1.15I_g$	$< 2 \times (0.1s, 0.2s, 0.3s, 0.4s) \pm 15\%$ Action			
Fixed time frame	0.1s	0.2s	0.3s	0.4s



■ Diagram of the installation position of accessories 800A and below

□ Alarm contact

■ Auxiliary contact

● Shunt release

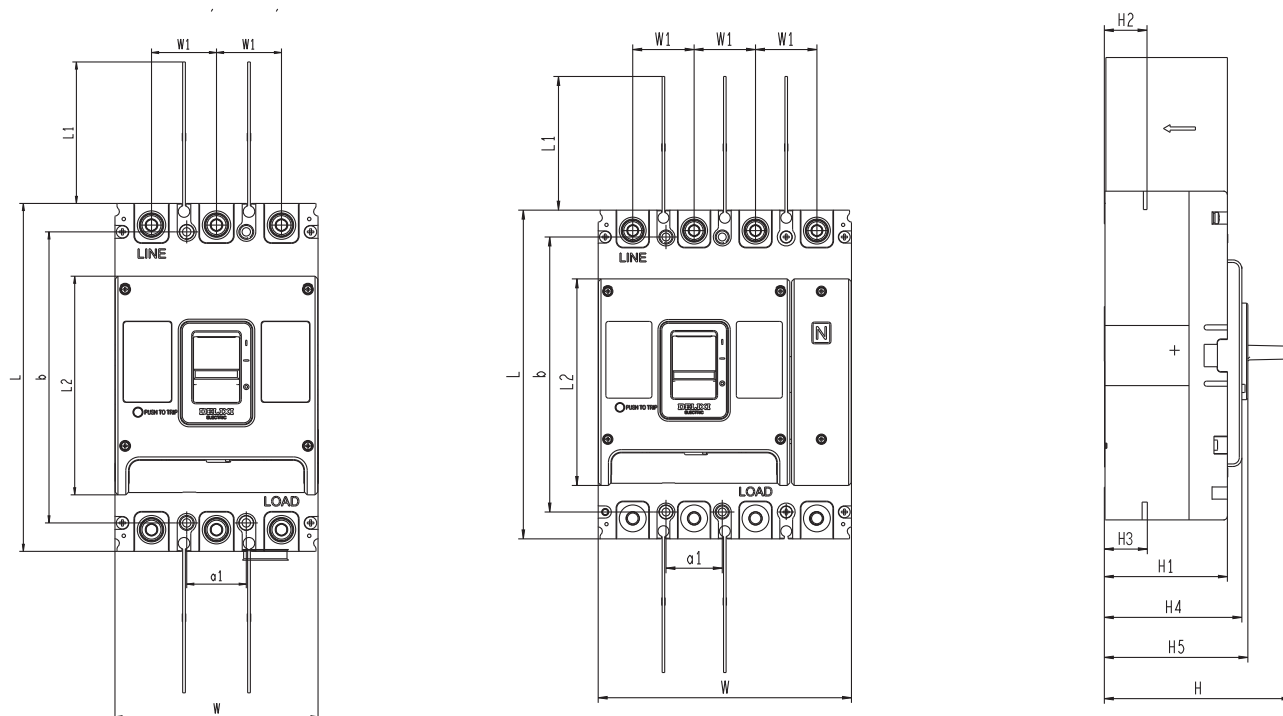
○ Undervoltage release



Annex code	Annex name	Product model					
Electronic		CDM6Ei-125	CDM6Ei-250	CDM6Ei-400	CDM6Ei-630	CDM6Ei-800	CDM6Ei-1250/1600
308	Alarm contacts (Both left and right, default left)	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □
310	Shunt release (both right and left, default right)	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □
320	Auxiliary contacts (Both left and right, default left)	■ □ □	■ □ □	■ □ □	■ □ □	■ □ □	□ □ ■
330	Undervoltage release	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □
340	Shunt + Auxiliary	■ □ □	■ □ □	■ □ □	■ □ □	■ □ □	□ □ ■
350	Shunt + undervoltage	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	—
360	Two sets of auxiliary contacts (Both left and right, default left)	■ ■ □ □	■ ■ □ □	■ ■ □ □	■ ■ □ □	■ ■ □ □	□ □ ■ ■
370	Auxiliary + undervoltage	□ □ ■	□ □ ■	□ □ ■	□ □ ■	□ □ ■	□ □ ■
318	Shunt + Alarm	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □
328	Auxiliary + Alarm (Both left and right, default left)	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ □ ■
338	Undervoltage + Alarm	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □
348	Shunt + Auxiliary + Alarm	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ □ ■
368	Auxiliary + Alarm	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ ■ □	□ □ ■
378	Auxiliary + undervoltage + alarm	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □	□ □ □

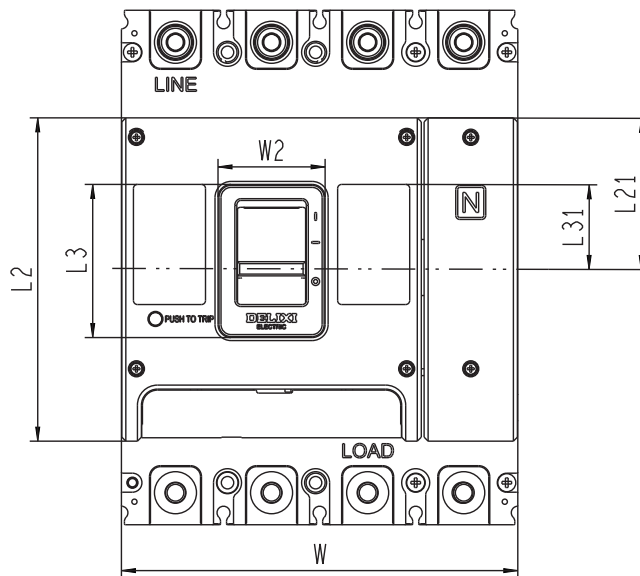
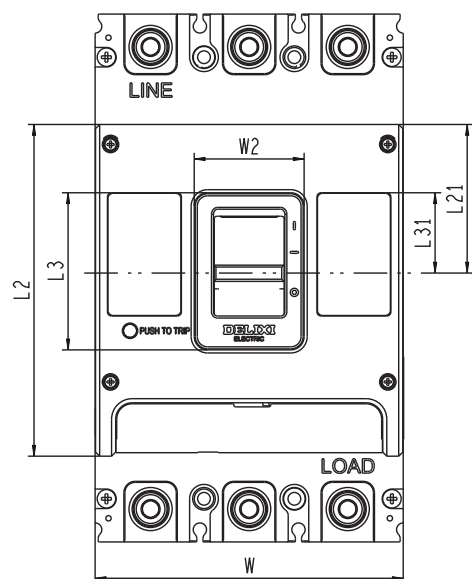
Outline and Installation Dimension

■ Fixed front-panel profile up to 800A



Model number	Number of poles	Dimensions											Installation dimension		
		L	L1	L2	W	W1	H	H1	H2	H3	H4	H5	a1	a2	b
CDM6Ei-125	3	165	80	102.5	107	35	112.5	86	21.5	23	94	95.5	35	35	126
	4				142										
CDM6Ei-250	3	165	80	102.5	107	35	112.5	86	23	23	94	95.5	35	35	126
	4				142										
CDM6Ei-400	3	257	104.5	161.5	150	48	145.9	96.2	36.5	37	107.5	112.2	44	-	215
	4				198										
CDM6Ei-630	3	257	104.5	161.5	150	48	145.9	96.2	38.5	39.5	107.5	112.2	44	-	215
	4				198										
CDM6Ei-800	3	280	104.5	170	210	70	154	103	40.5	47	116	121	70	70	243
	4				280										

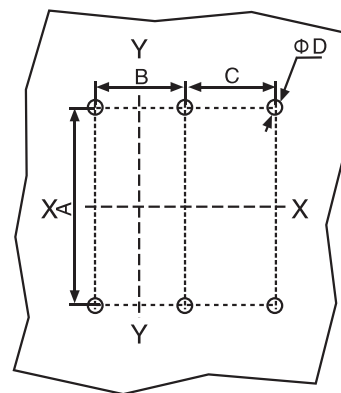
■ Panel hole sizes for products up to 800A



Product type	Number of poles	Exposed panel and toggle handle			Only the toggle handle is exposed		
		W	L2	L21	W2	L3	L31
CDM6Ei-125	3	107	102.5	51	26	50.5	26.5
	4	142					
CDM6Ei-250	3	107	102.5	51	26	50.5	26.5
	4	142					
CDM6Ei-400	3	150	161.5	75	52.5	75.5	41
	4	198					
CDM6Ei-630	3	150	161.5	75	52.5	75.5	41
	4	198					
CDM6Ei-800	3	210	170	67.5	55	85	42.5
	4	280					

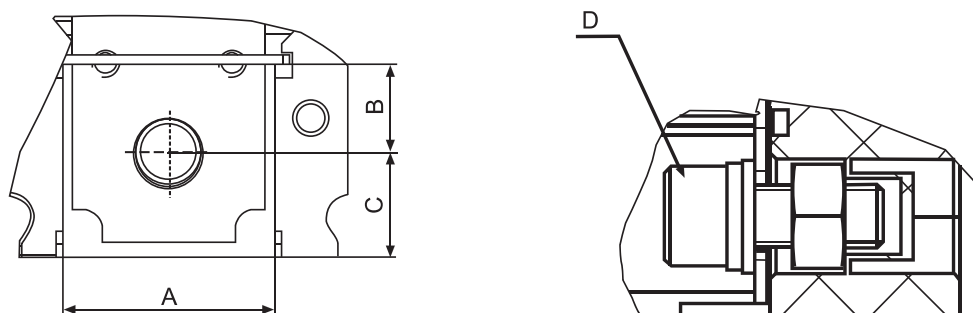
■ Fixed-type front-panel mounting hole sizes up to 800A

Product type	Number of poles	A	B	C	φD
CDM6Ei-125	3	126	35	-	5.5
	4			35	
CDM6Ei-250	3	126	35	-	5.5
	4			35	
CDM6Ei-400	3	215	44	-	6.5
	4			-	
CDM6Ei-630	3	215	44	-	6.5
	4			-	
CDM6Ei-800	3	243	70	-	7.5
	4			70	



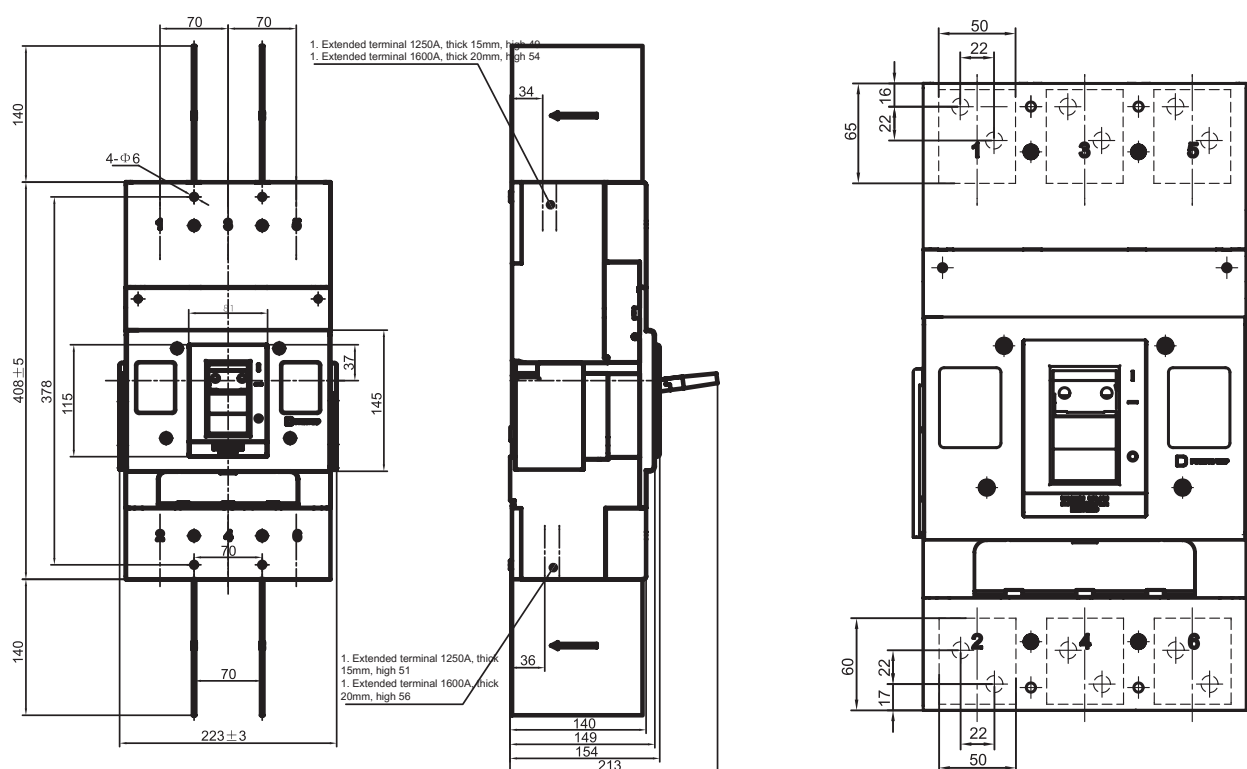
Note: X-X, Y-Y are three pole circuit breaker centres

Terminal block mounting hole diagram for 800A and below

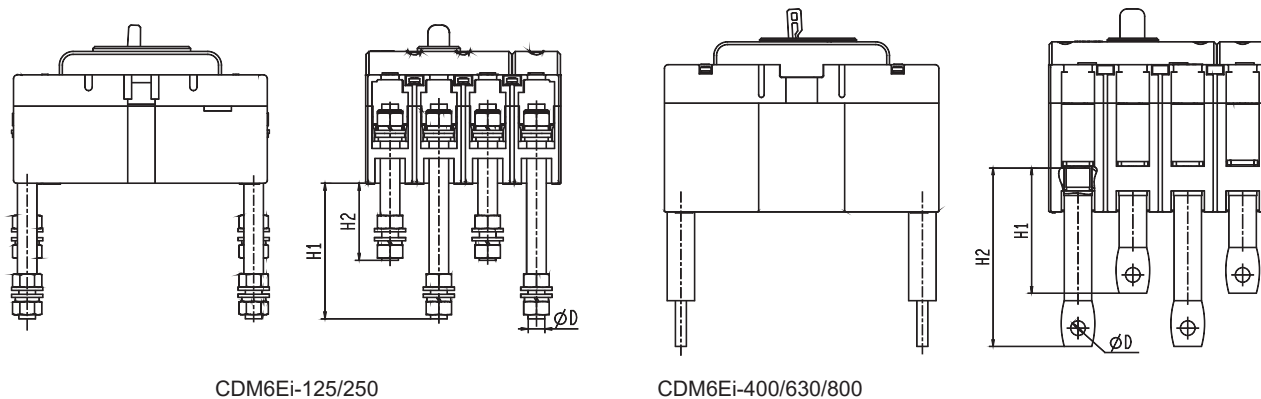


Model number	A	B	C	D
CDM6Ei-125	25.5	12	10	M8x20
CDM6Ei-250	25.5	12	10	M8x20
CDM6Ei-400	32	13	16	M10x25
CDM6Ei-630	32	13	16	M10x35
CDM6Ei-800	45.5	16.8	18.5	M12x35

Panel hole sizes for products up to 800A



■ Fixed-type back-panel profile

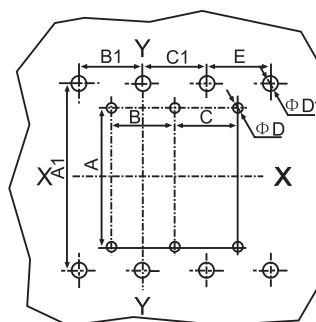


Note: The factory configuration is for horizontal wiring, the customer can loosen it and rotate it 90° to vertical wiring.

Product type	H1	H2	φD
CDM6Ei-125/250	102	72	10
CDM6Ei-400/630	92	128	12.5
CDM6Ei-800	129	129	13

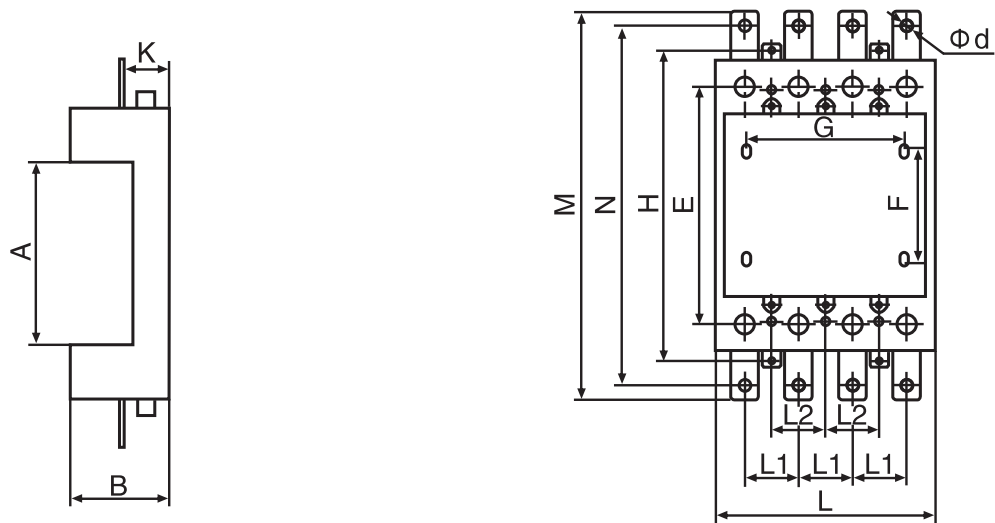
■ Fixed-type back-panel mounting hole dimensions

Product type	Number of poles	A	B	C	φD	A1	B1	C1	E	φD1
CDM6Ei-125/250	3	126	35	-	5.5	145	35	35	-	15
	4			35					35	
CDM6Ei-400/630	3	215	44	-	6.5	225	48	48	-	32
	4			-					48	
CDM6Ei-800	3	243	70	-	7.5	243	70	70	-	40
	4			70					70	



Note: X-X, Y-Y are three pole

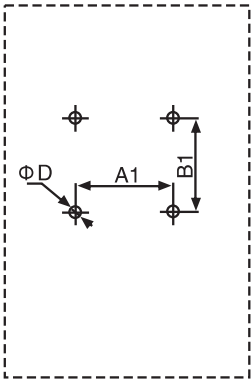
■ Inserted front-panel profile



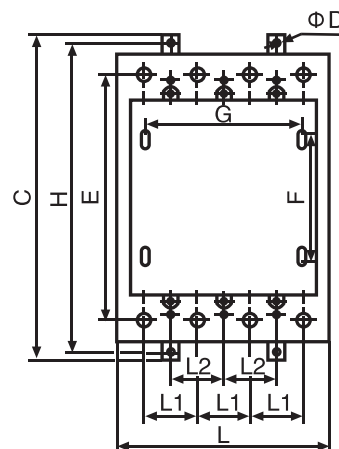
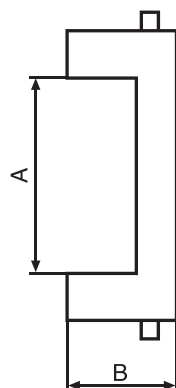
Product type	Number of poles	A	B	E	F	G	H	L	L1	L2	M	N	K	ϕd
CDM6Ei-125/250	3	108.5	73.2	144	74	70	191	105	35	35	243	223	37.5	8.5
	4	108.5	73.2	144	74	105	191	140	35	35	243	223	37.5	8.5

Insert plate front

model	Number of poles	A1	B1	ϕD
CDM6Ei-125/250	3	35	150	5
	4	35	150	5



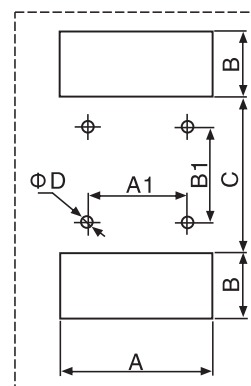
■ Insert-type back-panel profile



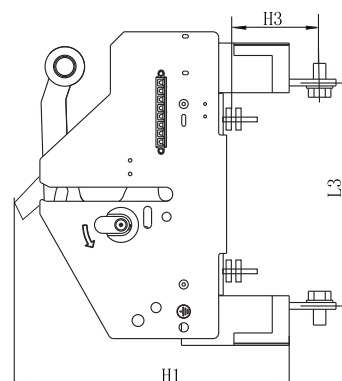
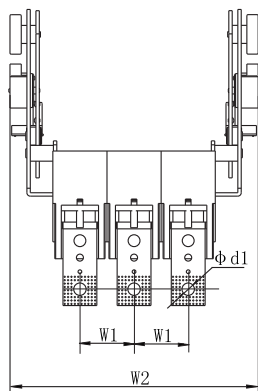
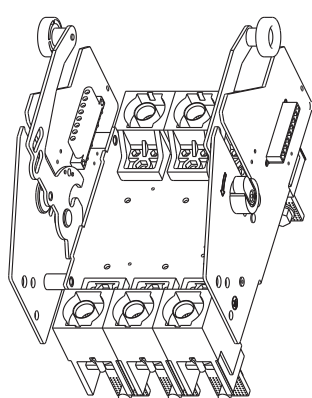
Product type	Number of poles	A	B	C	D	E	F	G	H	L	L1	L2
CDM6Ei-125/250	3	108.5	73.2	203	M4	144	74	70	191	105	35	35
	4							105		140		
CDM6Ei-400/630	3	170	60	-	-	225	130	60	-	152	48	44
	4							108		200		
CDM6Ei-800	3	187	125	342	M5	243	143	140	328	210	70	70
	4							210		280		

Insert-type back-panel mounting hole size

Model number	Number of poles	A	A1	B	B1	C	ΦD
CDM6Ei-125/250	3	110	70	45	74	100	6.5
	4	145	105				
CDM6Ei-400/630	3	152	88	60	145	170	8.5
	4	200	132				
CDM6Ei-800	3	212	140	64	143	185	11
	4	282	210				



Outline dimensions of drawer-type back-panel



Shell frame	Number of poles	Dimensions					
		L3	H1	H3	W1	W2	φd1
CDM6Ei-400	3P	203	253	77	48	223	φ11
	4P	203	253	77	48	271	φ11
CDM6Ei-630	3P	207	253	77	48	223	φ11
	4P	203	253	77	48	271	φ11
CDM6Ei-800	3P	241	238	73	70	289	φ13
	4P	241	238	73	70	359	φ13

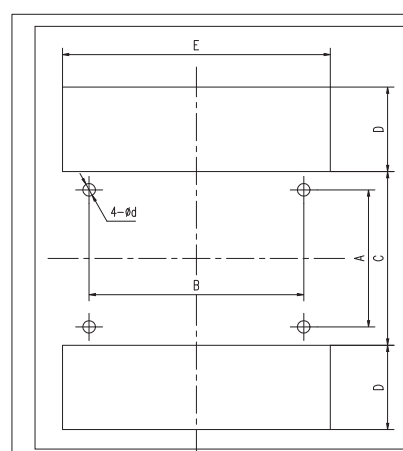
Drawer-type back-panel mounting hole size

Shell frame	Back-panel outlet hole size							
	A	B		C	D	E		d
		3P	4P			3P	4P	
CDM6Ei-400	140	96	144	178	47	147	195	7
CDM6Ei-630	140	96	144	178	47	147	195	7
CDM6Ei-800	131	140	210	170	77	213	283	7

Note:

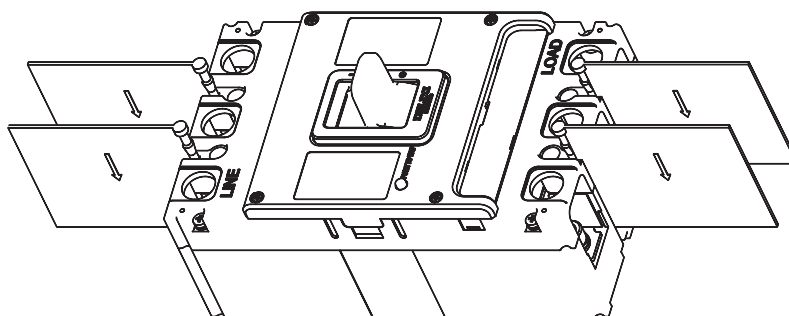
1.630 frame drawer-type, Reduced capacity for 500A for use.

2.If no special remarks are made, the drawer-type is not equipped with an electrical interlocking function.



■ Torque and connecting leads

The wiring screws must be tightened to a torque not less than that required in the table below. The product must be fitted with the phase spacer provided in the accessory bag (see figure below) and the wire terminals insulated to prevent short-circuiting between phases.



Flash barrier installation

CDM6Ei Electronic Moulded Case Circuit Breaker

Product type	Wiring screws	Torque range (N .m)
CDM6Ei-125/250	M8×20mm	9.5-10.5
CDM6Ei-400/630	M10×25mm	19.5-20.5
CDM6Ei-800	M12×35mm	29.5-30.5

CDM6Ei connection lead

Product type	Cable cross-sectional area (mm ²)	Qty.
CDM6Ei-125	50	1
CDM6Ei-250	120	1
CDM6Ei-400	240	1
CDM6Ei-630	185	2
CDM6Ei-800	240	2

Note: If the external connection is a copper busbar, an extension terminal must be connected.

■ Electrical accessories

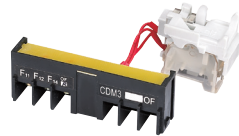
Auxiliary contacts / Alarm contacts

Auxiliary contact: an accessory connected to the auxiliary circuit of the switching apparatus to indicate when the circuit breaker is energised (ON) or not (OFF or Trip)

Alarm contact: An accessory used to indicate that a circuit breaker is in a non-disengaged (ON or OFF) or disengaged (Trip) state when the alarm contact indicates that the circuit breaker is

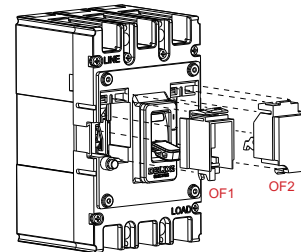
There are five possibilities in the Trip (decoupled) state.

- With overload or short circuit faults
- With residual current fault
- Manually tested button release
- Shunt decoupler operation
- Line fault, undervoltage release operated



Electrical wiring diagram		
Annex Name	ON	OFF / Trip
Auxiliary contacts		
Accessory Name	Closing / Breaking	Trip
Alarm contacts		

Electrical parameters of the auxiliary alarm contacts		
Resistive current (A)	3A	
Use category (GB14048 .5-1)	AC15	DC13
Operating voltage 50/60Hz AC400V	0.3A	-
DC220V	-	0.15A



Auxiliary contact installation diagram

Shunt release

- At 70% to 110% of the rated control supply voltage U, the shunt release should reliably make the circuit breaker trip
- After the circuit breaker trips through the shunt release, local reset is required.

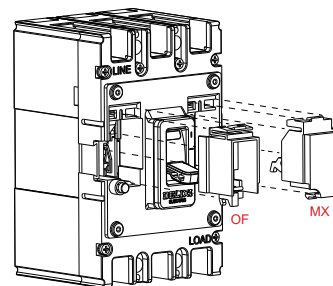
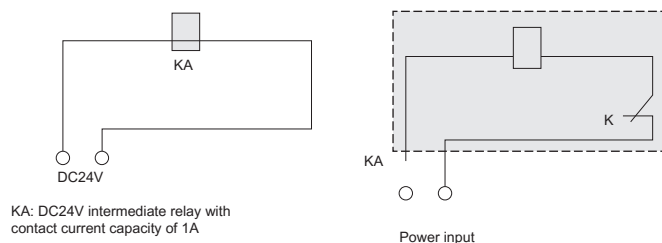
	Power of shunt coil (W)		
	AC400V	AC230V	DC24V
CDM6Ei-125/250	112	68.6	85.3
CDM6Ei-400/630	67	62.3	100
CDM6Ei-800	163	153	120



When the rated control voltage of the shunt release is DC24V, the maximum length of the copper conductor must meet the following requirements.

Rated control Supply voltage U_c (DC24V)	Conductor area	
	1.5mm ²	2.5mm ²
100% U_c	150m	250m
85% U_c	100m	160m

If the requirements of the above table are not met, the following diagram is recommended for the design of the shunt release control circuit.

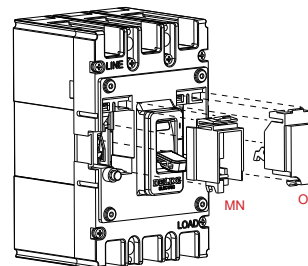


Installation diagram of the shunt release

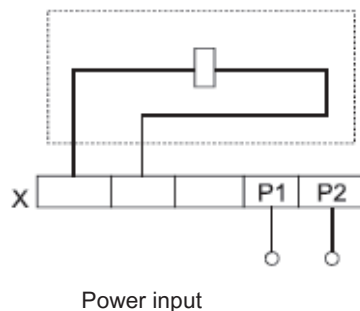
Undervoltage release

- under-voltage release should reliably disengage the circuit breakers at 35-70% of the rated operating voltage.
- At 85-110% of the rated operating voltage, the undervoltage release shall ensure that the circuit breaker can close.
- The undervoltage release should prevent the circuit breaker from closing if the rated operating voltage is below 35%.

	Undervoltage coil power (W)	
	AC400V	AC230V
CDM6Ei-125/250	4.3	3.3
CDM6Ei-400/630	3.6	2.5
CDM6Ei-800	2	1.6



Installation diagram of the undervoltage release



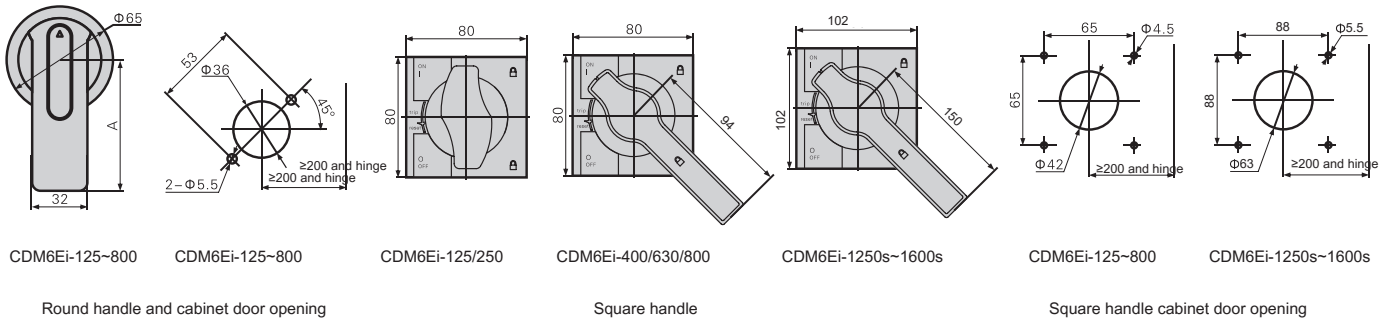
Wiring diagram

Note: X- Terminal block .

Note: The dotted box shows the wiring diagram for the internal accessories of the circuit breaker

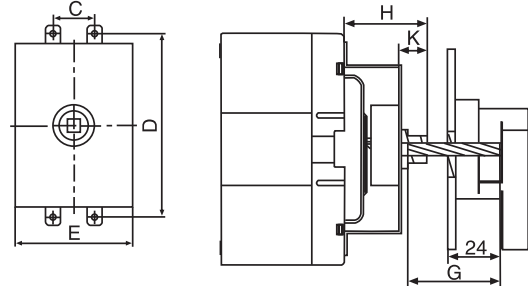
■ Operating accessories

Manual operating mechanism



Round handle size A, CDM6Ei-125/250 is available in 65 or 95, default 65. CDM6Ei-400/630/800 is available in 95 or 125, default 95.

Hand operated Installation dimensions	C	D	E	H	K
CDM6Ei-125/250	35	143	100	49	20
CDM6Ei-400/630	44	215	140	76	20
CDM6Ei-800	70	243	210	76	20
CDM6Ei-1250s/1600s	70	320	193	116	20



Note:

1) The connecting rod at G is 40mm direct hand-operated, the extension hand-operated is 150mm factory standard, for special customisation please contact the factory.

2) If you need to operate the dial or the USB interface, you must have access to it after a specialist has removed the hand controls.

The mounted swinghandle should be flexible in operation and the circuit breaker should open when the handle is horizontal, and should be closed when the handle is in the vertical position.

Motor mechanism

• Suitable for electric closing, breaking and re-trip of circuit breakers over long distances and for automatic control applications.

Electro-operated models	Operating current (A)		Motor power (W)
	230VAC/220VDC 400VAC 110VAC/110VDC	24VDC	
125~250	≤0.5	≤3	14
400~800	≤2	≤6	35
1250~1600	≤2	/	35

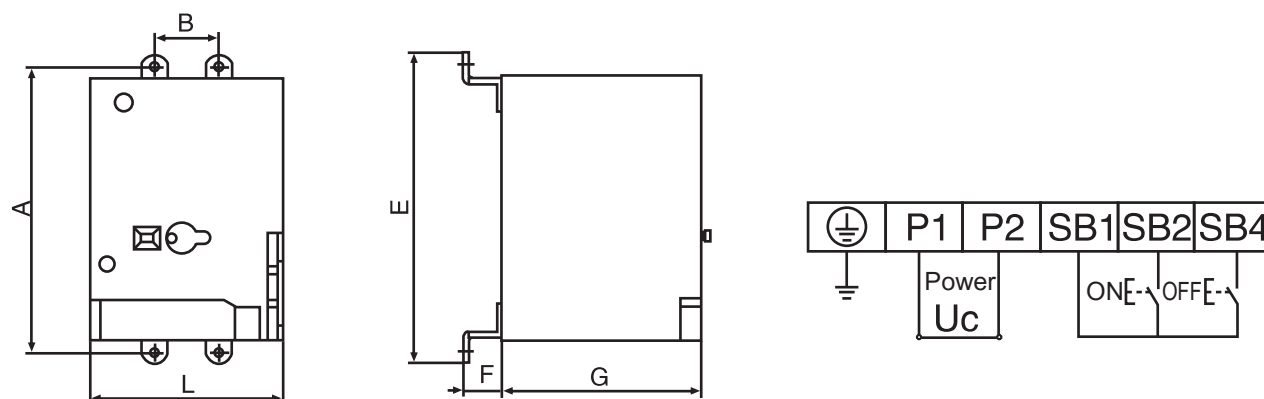
• Rated control supply voltage: 184~253VAC/187~242VDC at 230VAC/220VDC

• Rated control supply voltage: 110VAC/110VDC with a voltage tolerance range of 88 to 121VAC/93.5 to 121VDC

• Rated control supply voltage: 320~440VAC at 400VAC with a voltage tolerance range of 320~440VAC

• Rated control supply voltage: 22.8 to 25.2VDC at 24VDC

• For the different size of the operating force of the circuit breaker, the motor mechanism of the switch with relatively small force can work normally



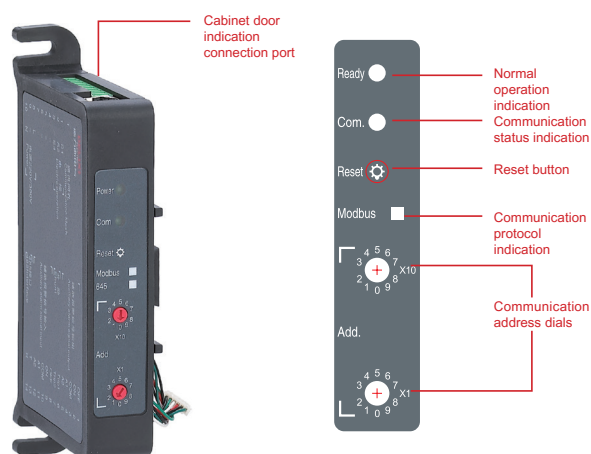
Product type	A	B	L	E	F	G
CDM6Ei-125/250	126	35	90.5	140	12	77
CDM6Ei-400/630	215	44	130	232	32	115
CDM6Ei-800	243	70	130	260	31	115
CDM6Ei-1250s/1600s	319	70	130	337	18	116

Note:

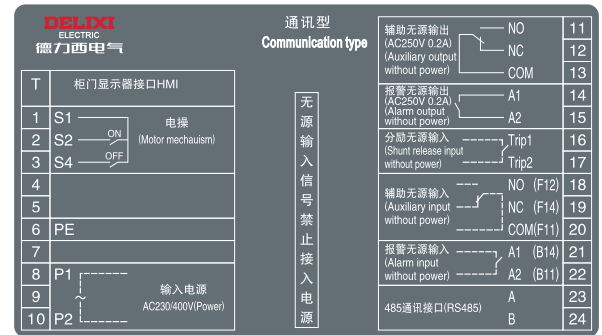
- 1) After a circuit breaker with an motor mechanism has tripped off, the motor mechanism must first open before it can be closed.
- 2) Remote control of the circuit breaker can be realized by means of an motor mechanism, if the dial or USB interface is to be operated, the motor mechanism must be removed by a specialist.

■ Communication backpack (for 800A and below)

- Backpack with "triple" or "quadruple" remote function
- Backpack power supply AC 230/400V adaptive
- HMI door indication interface for connection to the door display via RJ45 connector
- Backpack enables passive shunt without the need for additional shunt accessories

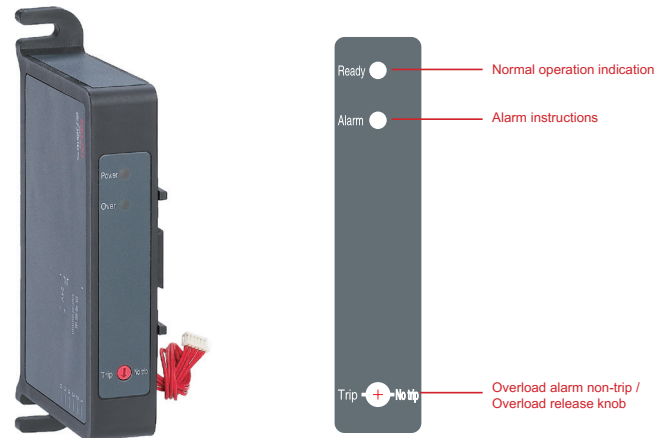


Interface name	Terminal code	Terminal number	Interface name	Terminal code	Terminal number
Electrical connection	S1	1	PE	-	6
	S2	2	Power input	P1	8
	S4	3	Power input	P2	10
Auxiliary output without power	NO	11	Auxiliary passive inputs	NO (F12)	18
	NC	12	Auxiliary passive inputs	NC (F14)	19
	COM	13	Auxiliary passive inputs	COM(F11)	20
Auxiliary output without power	A1	14	Auxiliary input without power	A1 (B14)	21
	A2	15	Auxiliary input without power	A2 (B11)	22
Shunt input without power	Trip1	16	485 communication interface	A	23
	Trip2	17	485 communication interface	B	24



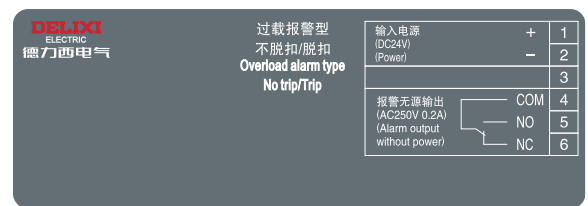
■ Overload alarm backpack (for 800A and below)

- Backpack with overload alarm non-trip / overload alarm release function
- Overload alarm non-disengagement / Overload disengagement selectable via knob
- Backpack power supply DC24V and AC230V/400V
- Backpack enables alarm signal output without the need for additional alarm contact accessories



Interface name	Terminal code	Terminal number
Power input	+	1
	-	2
Auxiliary output without power	COM	4
	NO	5
	NC	6

Note: When selecting DC24V, please configure your own power conversion module. The power conversion module is also available as an option from Delixi.



(DC24V signage diagram)

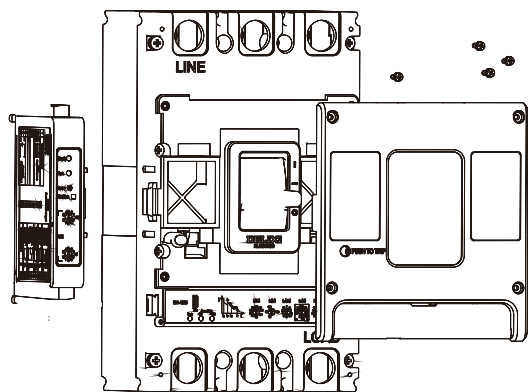
■ Installation and dimensions of the communication and alarm modules

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

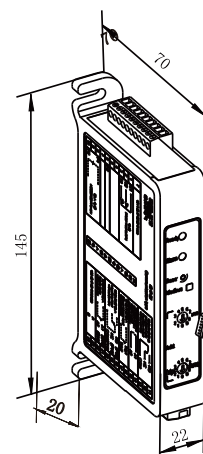
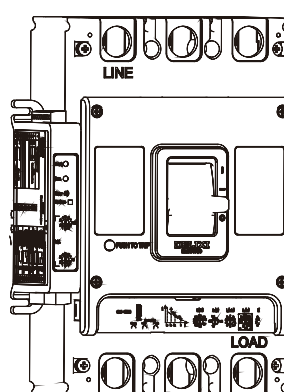
- Unscrew the cover screws and open the cover
- Remove the left hand side panel to expose the access point between the circuit breaker and the module
- Connect the terminal block of the module to the left-hand side of the circuit breaker, then snap the right-hand "V" tab of the module into the "V" recess on the left-hand side of the circuit breaker
- Reinstall the face cover. See below for the finished result

The communication module and the alarm non-trip module have the same external dimensions, see dimensional drawing below (in mm)

Installation diagram



Installation view and dimensional drawing



■ Core material order number

Material Code	Product description
M6Ei125M1253300	CDM6Ei-125M 3300 125A
M6Ei250M2503300	CDM6Ei-250M 3300 250A
M6Ei400M4003300	CDM6Ei-400M 3300 400A
M6Ei630M6303300	CDM6Ei-630M 3300 630A
M6Ei800M8003300	CDM6Ei-800M 3300 800A
M6Ei1250M3300	CDM6Ei-1250M 3300
M6Ei1600M3300	CDM6Ei-1600M 3300
M6Ei1600H3300	CDM6Ei-1600H 3300
M6Ei125M125C300	CDM6Ei-125M 4300C 125A
M6Ei250M250C300	CDM6Ei-250M 4300C 250A
M6Ei400M400C300	CDM6Ei-400M 4300C 400A
M6Ei630M630D300	CDM6Ei-630M 4300D 630A
M6Ei800M800D300	CDM6Ei-800M 4300D 800A
M6Ei125M1253300N	CDM6Ei-125M 3300 125A Overstatement DC
M6Ei250M2503300N	CDM6Ei-250M 3300 250A Overstatement DC
M6Ei400M4003300N	CDM6Ei-400M 3300 400A Overstatement DC
M6Ei630M6303300I	CDM6Ei-630M 3300 630A Overstatement AC
M6Ei800M8003300I	CDM6Ei-800M 3300 800A Overstatement AC
M6Ei125M1253300T8	CDM6Ei-125M 3300 125A Remote AC230V
M6Ei250M2503300T8	CDM6Ei-250M 3300 250A Remote AC230V
M6Ei400M4003300T8	CDM6Ei-400M 3300 400A Remote AC230V
M6Ei630M6303300T8	CDM6Ei-630M 3300 630A Remote AC230V
M6Ei800M8003300T8	CDM6Ei-800M 3300 800A Remote AC230V
M6Ei125M1253300TB	CDM6Ei-125M 3300 125A Remote AC400V
M6Ei250M2503300TB	CDM6Ei-250M 3300 250A Remote AC400V
M6Ei400M4003300TB	CDM6Ei-400M 3300 400A Remote AC400V
M6Ei630M6303300TB	CDM6Ei-630M 3300 630A Remote AC400V
M6Ei800M8003300TB	CDM6Ei-800M 3300 800A Remote AC400V