

We touch your **electricity** everyday!

New WiNbreak



CE KEMA



**Moulded Case
Circuit Breaker**

upgrade of WiNbreak series **New WiNbreak**



Compatible and differentiated design

- Compatible with WiNbreak MCCB

Upgrade the coordination

- Upgrade the coordination with WiNbreak2 MCCB

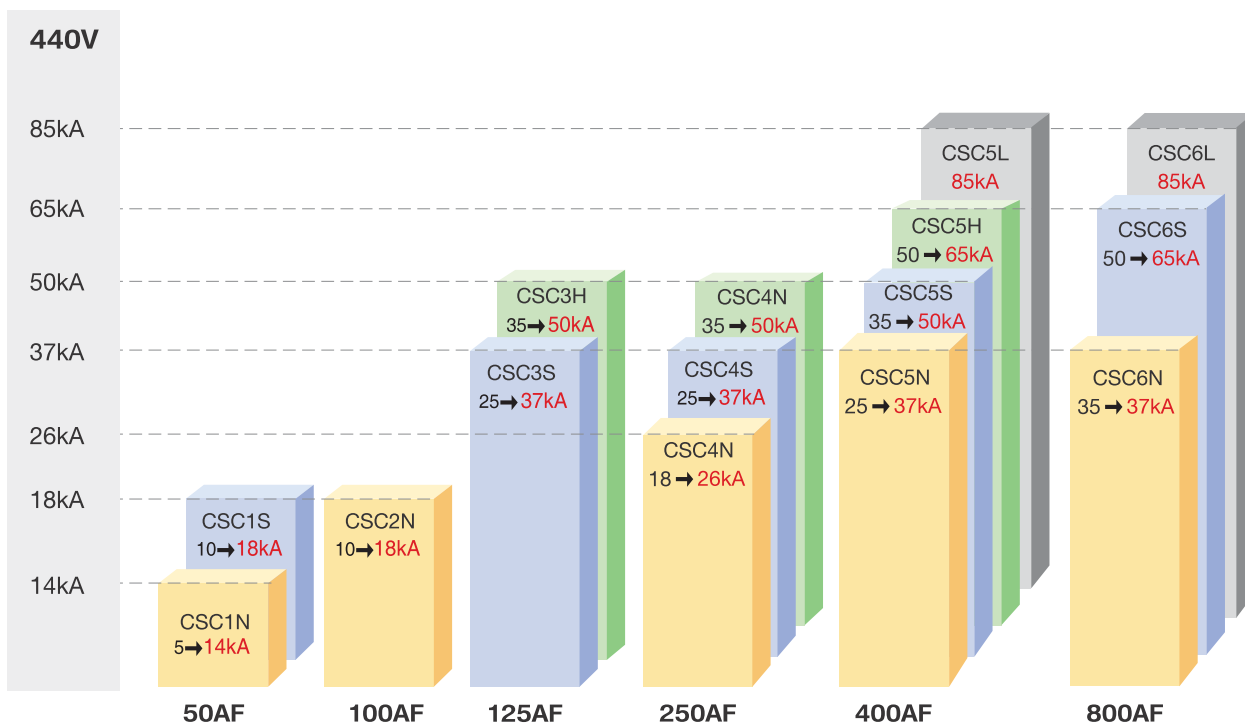
Upgrade breaking capacity

100AF: 10	→	18kA
125AF: 25	→	37kA
250AF: 25	→	37kA
250AF: 35	→	50kA
400AF: 25	→	37kA
400AF: 35	→	50kA
800AF: 50	→	65kA
Ics = 100% Icu		



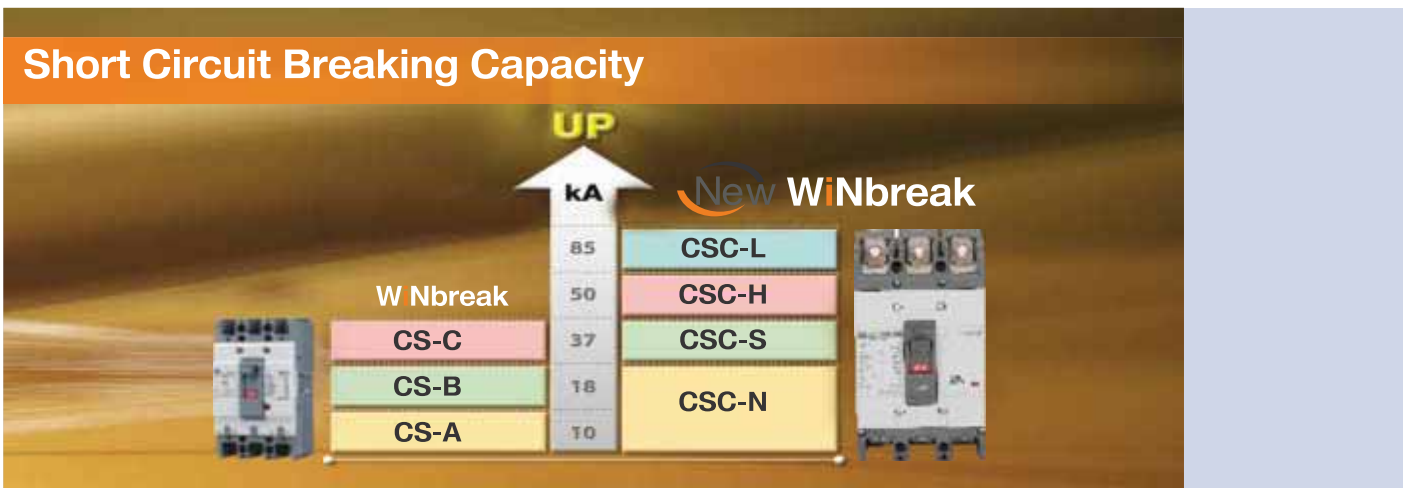
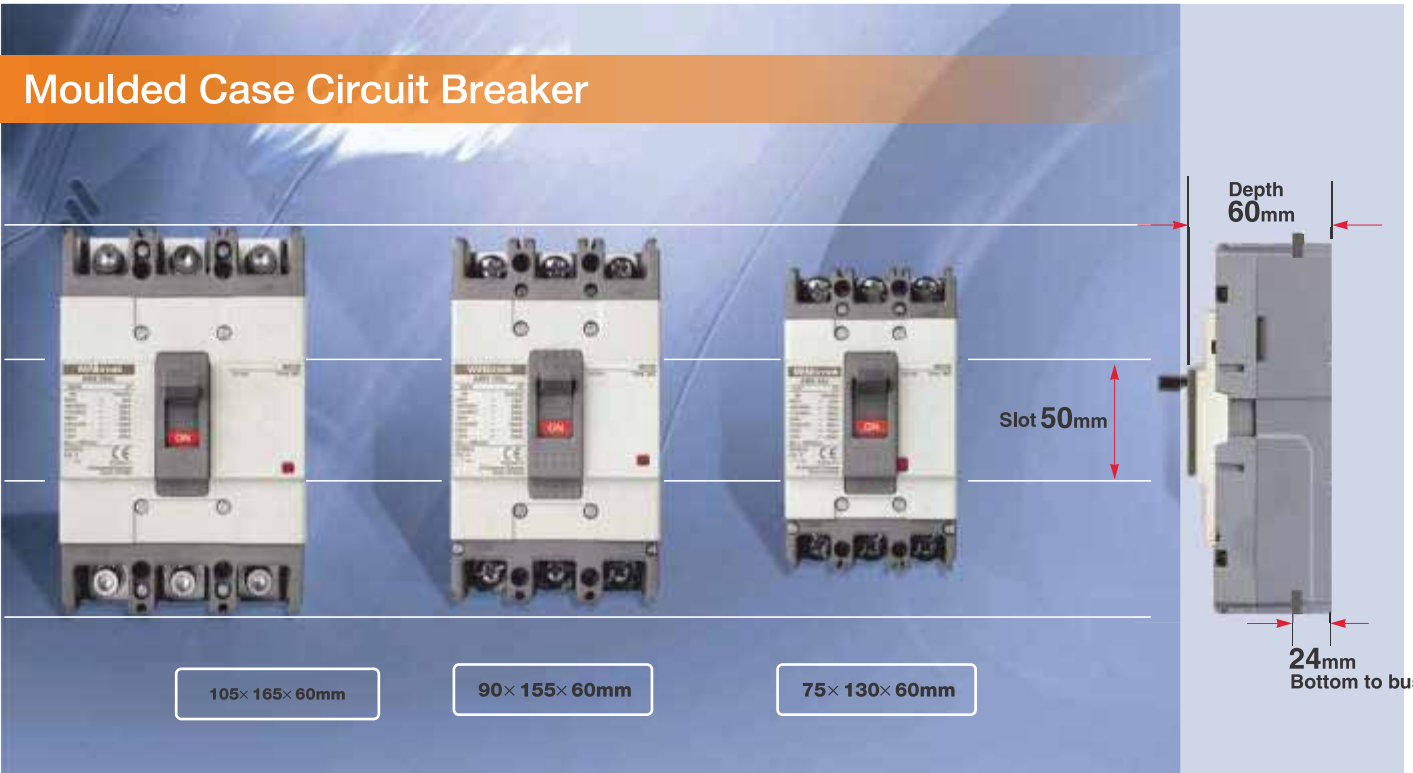
Ics = 100% Icu

Upgrade breaking capacity



External Configuration

- Fixed Thermal Magnetic MCCB
- 100% compatible with WiNbreak MCCB
- Standardized dimension (depth, cutout) offering flexibility for panel designers.



Upgraded Breaking Capacity

100AF 10 → 18kA	125AF 25 → 37kA	250AF 25 → 37kA	250AF 35 → 50kA
400AF 25 → 37kA	400AF 35 → 50kA	630AF 50 → 65kA	800AF 50 → 65kA

Handle

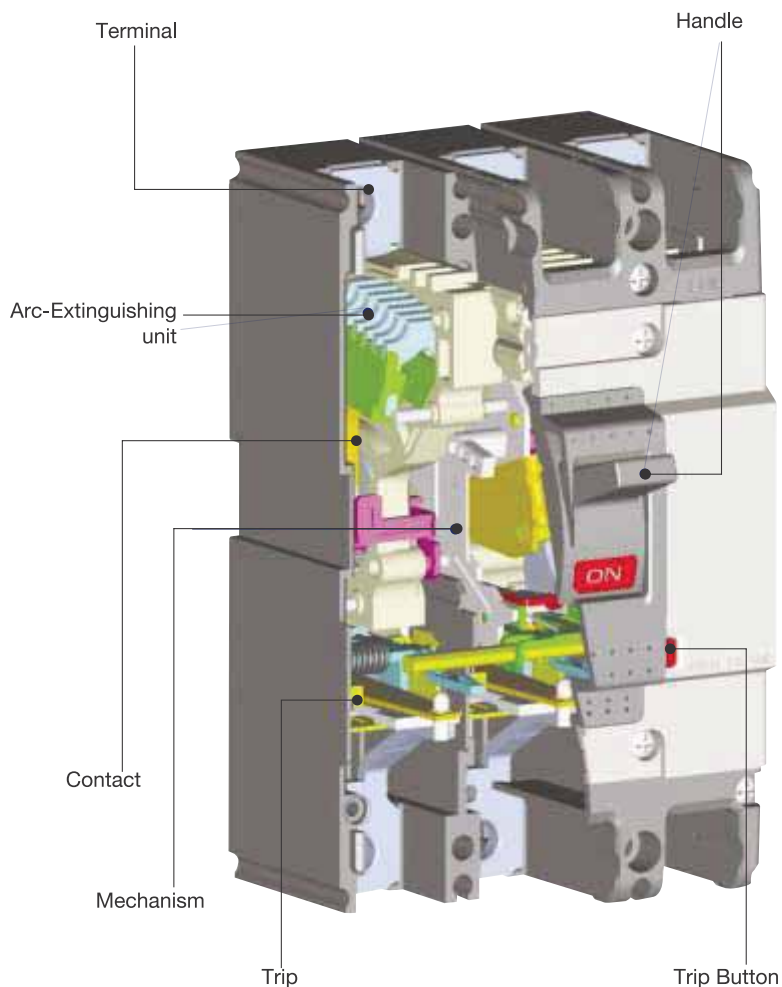
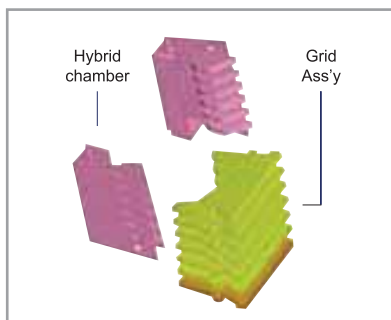
- Function of indications - "ON" "OFF" "TRIP"
- Resetting - When the handle indicate "tripped" position it must first be reset by moving the handle to the "OFF" position and then closing is possible
- Trip-Free even if the handle is held at "ON", the breaker will trip if an over current flows
- Suitable for verification of the main contact position under abnormal conditions because the handle doesn't indicate position

Arc-Extinguishing unit

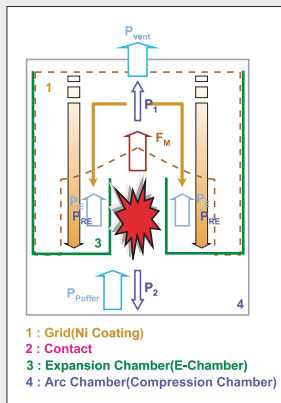
- Patent technique PASQ Arch-Extinguishing
PASQ (Puffer Assisted Self-Quenching)
- Reduce of arc voltage for a short time

Trip button (push to trip)

Enables tripping mechanically for outside, for confirming to operation of the MCCB and the manual resetting function.



Application of PASQ Arc Extinguishing



The reduction of breaking time by applying PASQ arc extinguishing for inhibition of arc voltage for a short time.

Application of Current limiting structure

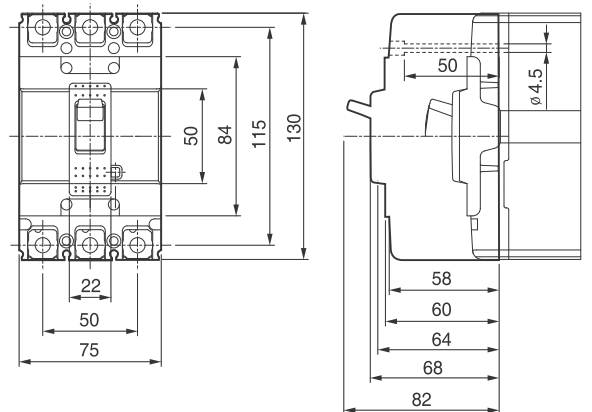


- Current limiting repulsion structure (U fixed structure)
- Toggle structure: When the operating unit repulses by short circuit current, repulsion structure at bigger angle.

Selection Table

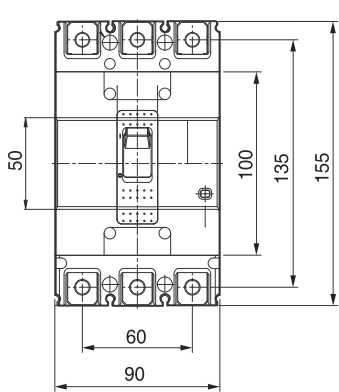
AF		50AF		100AF	
Frame type		CSC1		CSC2	
Type		N-Type		S-Type	N-Type
Type and Pole	2-pole	CSC1N2		CSC1S2	CSC2N2
	3-pole	CSC1N3		CSC1S3	CSC2N3
	4-pole	CSC1N4		CSC1S4	CSC2N4
Rated current, I _n	A	15,20,30,40,50		60, 75, 100	
Rated operational voltage, U _e	AC(V)	690		690	690
	DC(V)	500		500	500
Rated insulation voltage, U _i	V	750		750	750
Rated impulse withstand voltage, U _{imp}	kV	8		8	8
Rated short-circuit breaking capacity(I_{cu}) kA (Sym), IEC 60947-2					
AC	690V	2.5		5	5
	480/500V	7.5		10	10
	415/460V	14		18	18
	380V	18		22	22
	220/250V	30		35	35
DC	500V(3P)	5		10	10
	250V(2P)	5		10	10
I _{cs} =% × I _{cu}		100		100	100
Dimensions (mm)	W × H × D (3-pole)	75 × 130 × 60mm (Fig. 1)		75 × 130 × 60mm (Fig. 1)	

Type \ AF	50AF	100AF	125AF	250AF
CSC-N	CSC1N1 14kA	CSC2N 18kA		CSC4N 26kA
CSC-S	CSC1S 18kA		CSC3S 37kA	CSC4S 37kA
CSC-H			CSC3H 50kA	CSC4H 50kA

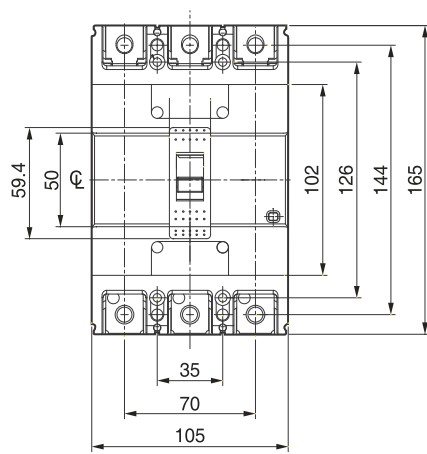


(Fig. 1)

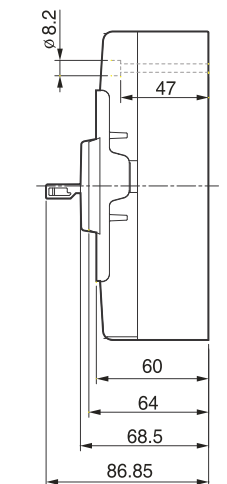
125AF			250AF	
CSC3		CSC4		
S-Type	H-Type	N-Type	S-Type	H-Type
-	-	CSC4N2	-	-
CSC3S3	CSC3H3	CSC4N3	CSC4S3	CSC4H3
CSC3S4	CSC3H4	CSC4N4	CSC4S4	CSC4H4
15, 20, 30, 40, 50, 60, 75, 100, 125		100, 125, 150, 175, 200, 225, 250	150, 175, 200, 225, 250	
690	690	690	690	690
500	500	500	500	500
750	750	750	750	750
8	8	8	8	8
8	10	8	8	10
26	35	18	26	35
37	50	26	37	50
42	50	30	42	50
85	100	65	85	100
20	30	10	20	30
20	30	10	20	30
100	100	100	100	100
90 × 155 × 60mm (Fig. 2)		105 × 165 × 60mm (Fig. 3)		



(Fig. 2)



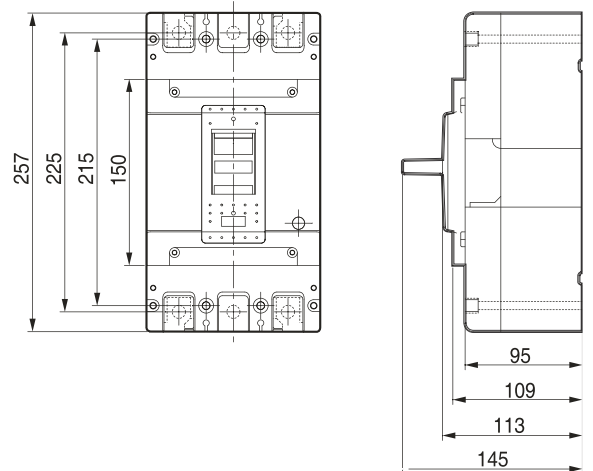
(Fig. 3)



Selection Table

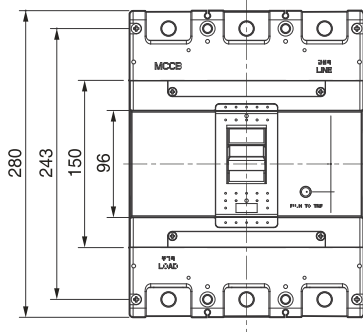
AF		400AF			
Frame type		CSC5			
Type		N-Type	S-Type	H-Type	L-Type
Type and Pole	3-pole	CSC5N3	CSC5S3	CSC5H3	CSC5L3
	4-pole	CSC5N4	CSC5S4	CSC5H4	CSC5L4
Rated current, I _n	A	300, 350, 400		250, 300, 350, 400	
Rated operational voltage, U _e	AC(V)	690	690	690	690
	DC(V)	500	500	500	500
Rated insulation voltage, U _i	V	750	750	750	750
Rated impulse withstand voltage, U _{imp}	kV	8	8	8	8
Rated short-circuit breaking capacity(I_{cu}) kA (Sym), IEC 60947-2					
AC	690V	5	8	10	14
	480/500V	18	35	50	65
	415/460V	37	50	65	85
	380V	42	65	70	100
	220/250V	50	75	85	125
DC	500V(3P)	10	20	40	40
	250V(2P)	10	20	40	40
I _{cs} =% × I _{cu}		100	100	100	75
Dimensions (mm)	W × H × D (3-pole)	140 × 257 × 109mm (Fig. 4)			

AF Type	400AF	800AF	1000AF	1200AF
CSC-N	CSC5N 37kA	CSC6N 37kA		
CSC-S	CSC5S 50kA	CSC6S 65kA	CSC7S 65kA	CSC8S 65kA
CSC-H	CSC5H 65kA			
CSC-L	CSC5L 85kA	CSC6L 85kA	CSC7L 85kA	CSC8L 85kA

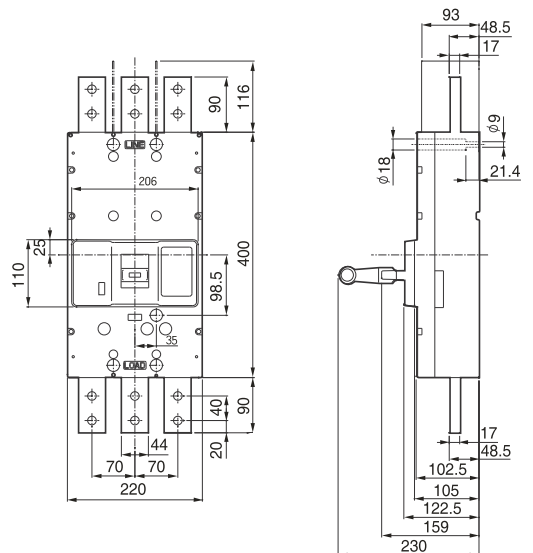
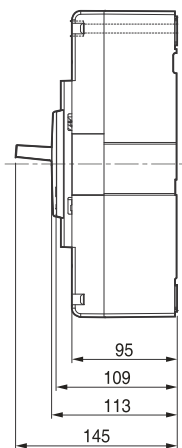


(Fig.4)

800AF			1000AF		1200AF	
CSC6			CSC7		CSC8	
N-Type	S-Type	L-Type	S-Type	L-Type	S-Type	L-Type
CSC6N3	CSC6S3	CSC6L3	CSC7S3	CSC7L3	CSC8S3	CSC8L3
CSC6N4	CSC6S4	CSC6L4	CSC7S4	CSC7L4	CSC8S4	CSC8L4
	500, 630, 700, 800		1000		1200	
690	690	690				
500	500	500				
750	750	750				
8	8	8				
8	10	14				
25	45	65	50	75	50	75
37	65	85	65	85	65	85
45	75	100	65	85	65	85
50	85	125	100	125	100	125
10	20	40				
10	20	40				
100	100	75				
210×280×109mm (Fig. 5)			220×400×105mm (Fig. 6)		220×400×105mm (Fig. 6)	

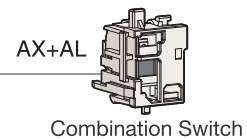
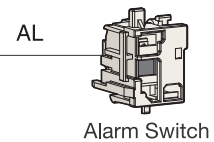
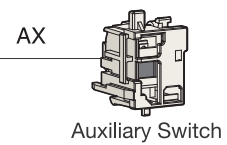
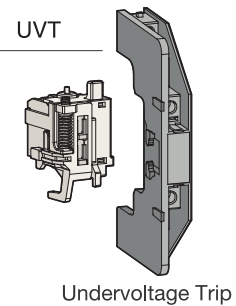
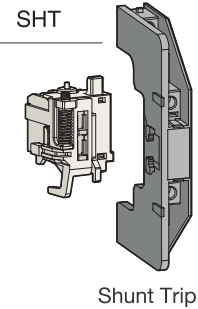
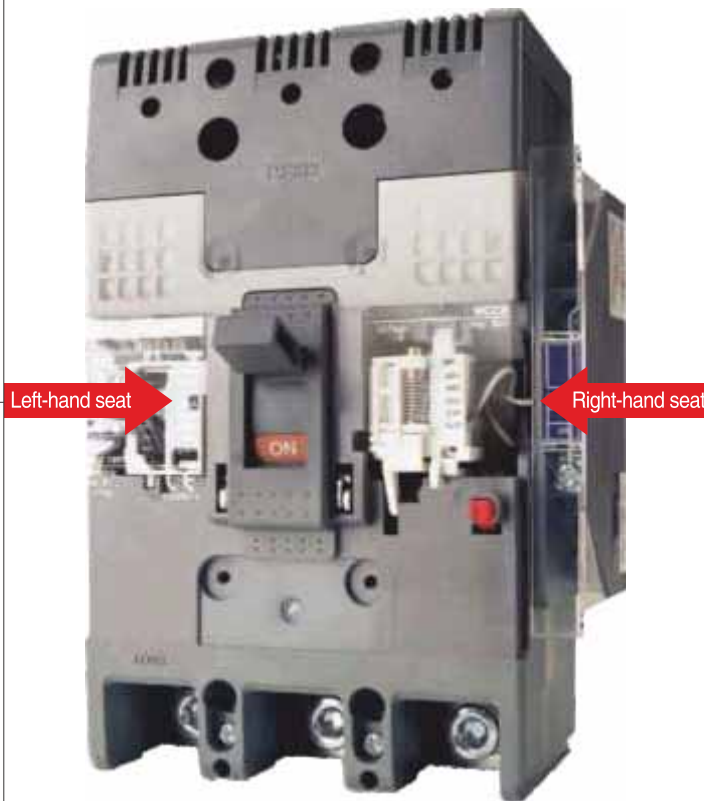
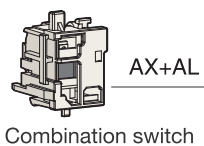
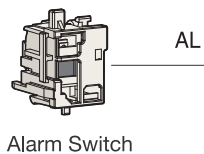
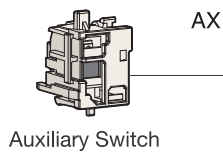


(Fig. 5)



(Fig. 6)

Electrical accessories

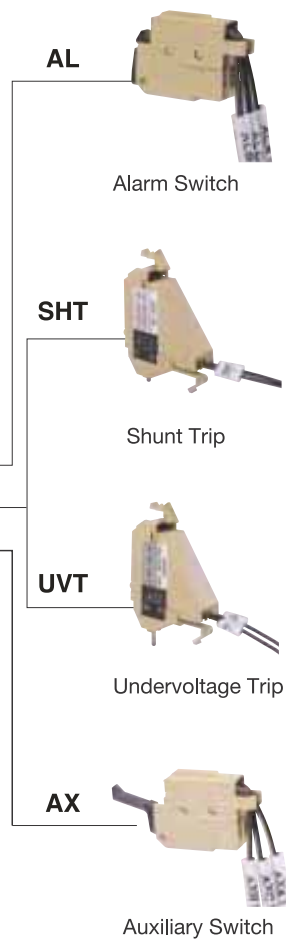
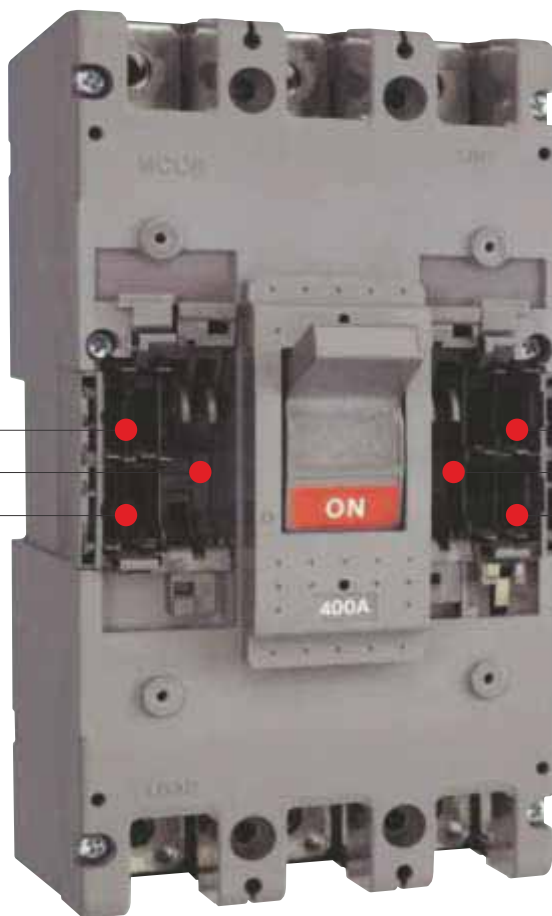


Option of connecting AX or AL or AX+AL
This seat is not available for 2 Pole breakers

Option of connecting SHT or UVT or AX or AL or AX+AL

Maximum possibilities

Position	Type	CSC2		CSC3		CSC4
		2P	3/4P	2P	3/4P	3/4P
Left-hand seat	AX	-	1	-	1	1
	AL	-	1	-	1	1
Right-hand seat	AX	1	1	1	1	1
	AL	1	1	1	1	1
	SHT/UVT	1	1	1	1	1



AL	AL	SHT or UVT
AX	AX	

Option for connection

AX or AL or AX+AL

This seat is not available for 2 pole breakers

SHT or UVT	AL	AL
	AX	AX

Option for connection

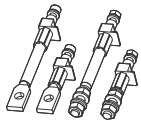
SHT or UVT or AX or AL or AX+AL

This seat is not available for ELCB.

Maximum possibilities

Position	Type	MCCB (400~800AF)
Left-hand seat	AX	2
	AL	2
	SHT/UVT	1
Right-hand seat	AX	2
	AL	2
	SHT/UVT	1

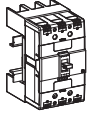
External Accessories & Operating Curve



Front and rear connection

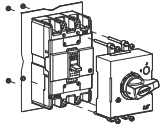
Several kinds of terminals can be equipped with ELCBs as well as MCCBs.

- Terminals for front connection
- Rear connection terminals



Plug-in base

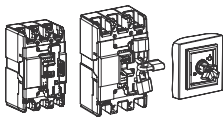
It makes to extract and/or rapidly replace the circuit breaker without having to touch connections. (Easy replacement and maintenance)



Direct & Extended Rotary Handle

There are two types of rotary handles.

- Direct rotary handle (with or w/o key lock device)
- Extended rotary handle



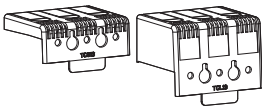
Locking device

- Fixed padlock
- Removable padlock
- Key lock device on direct handle



Insulation barrier

These allow the insulation characteristics between the phases at the connections to be increased.

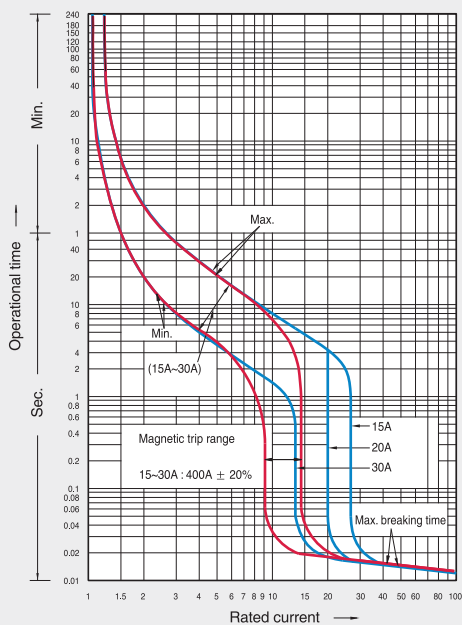


Insulation terminal cover

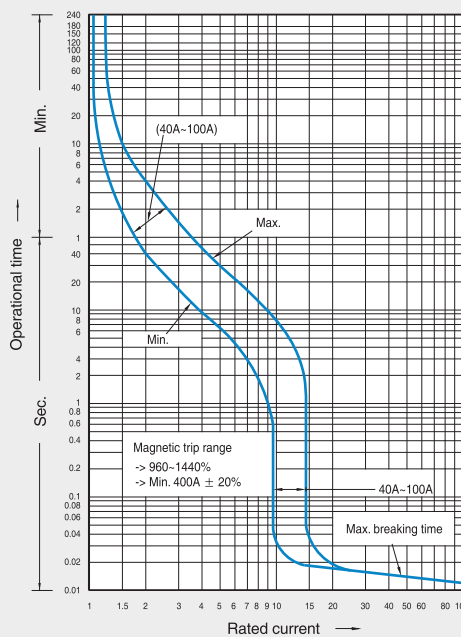
The terminal covers are applied to the circuit-breaker to prevent accidental contact with live parts and thereby guarantee protection against direct contacts.

CSC1N, CSC1S & CSC2N

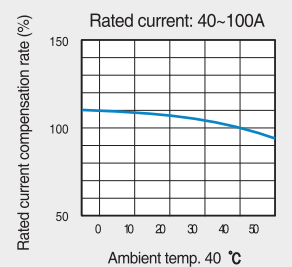
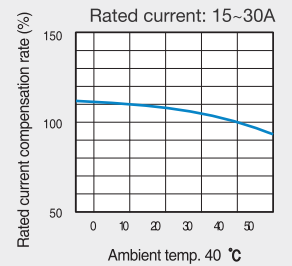
Rated current: 15~30A



Rated current: 40~100A

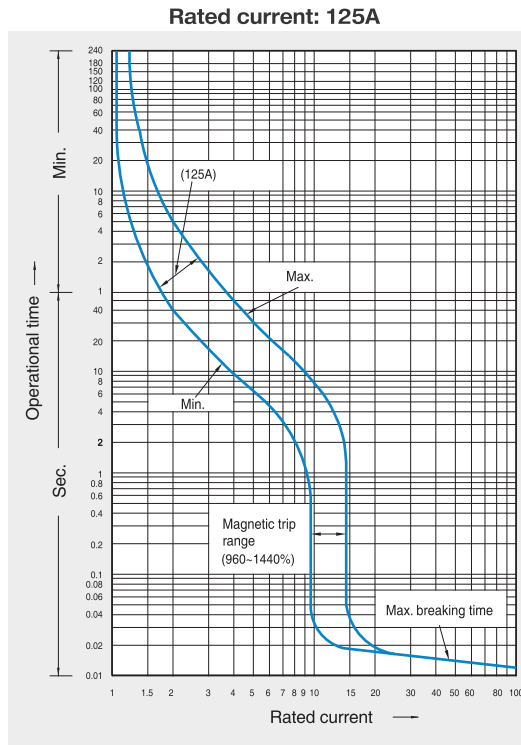
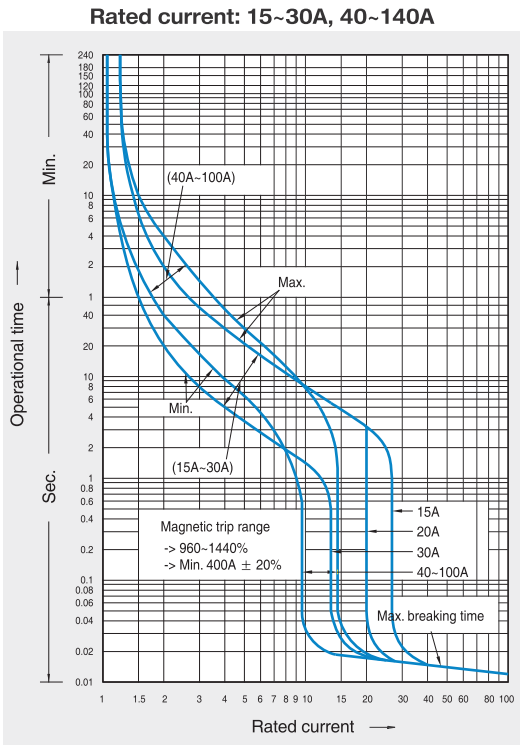


Compensation Curves

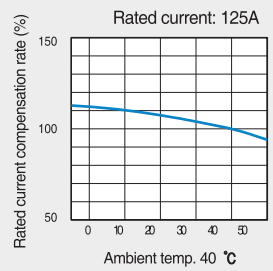
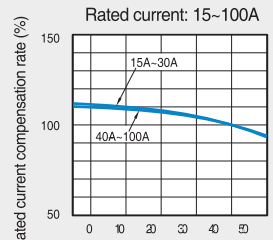


Operating Curve

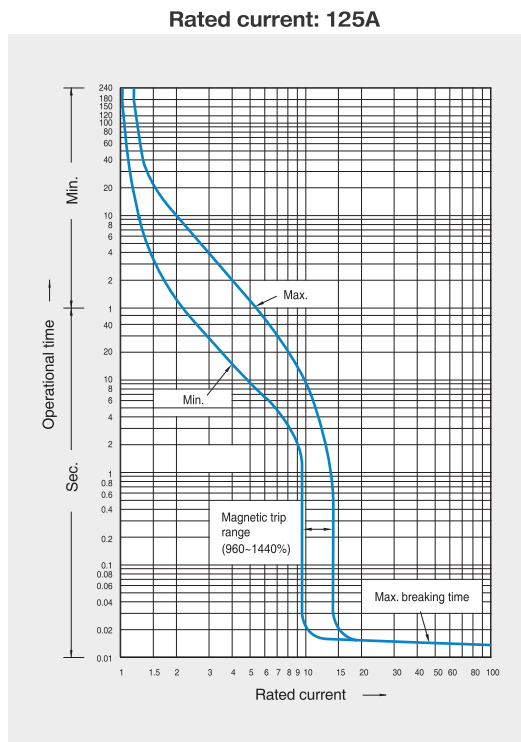
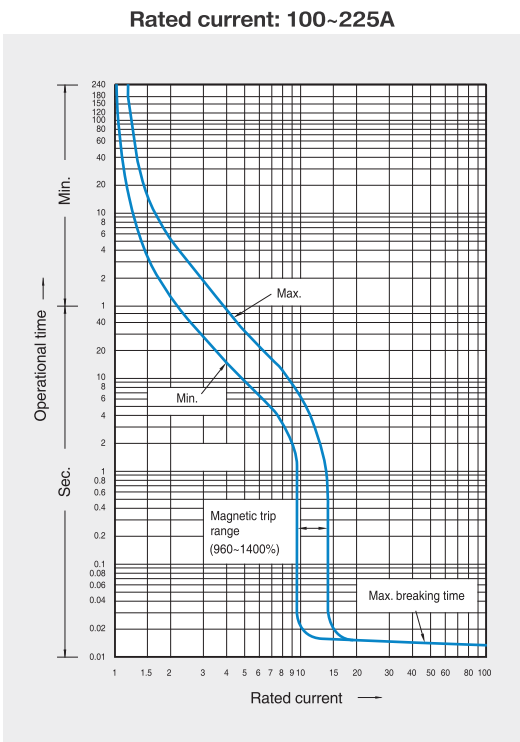
CSC3S & CSC3H



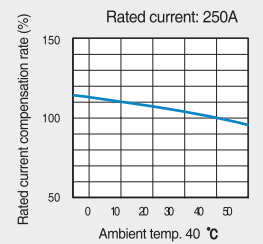
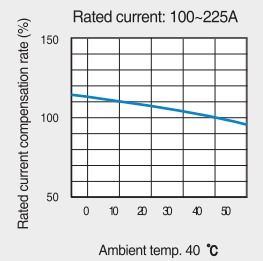
Compensation Curves



CSC4N, CSC4S & CSC4H



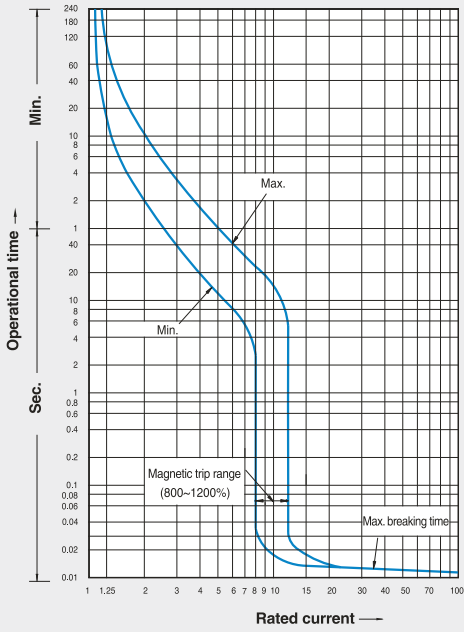
Compensation Curves



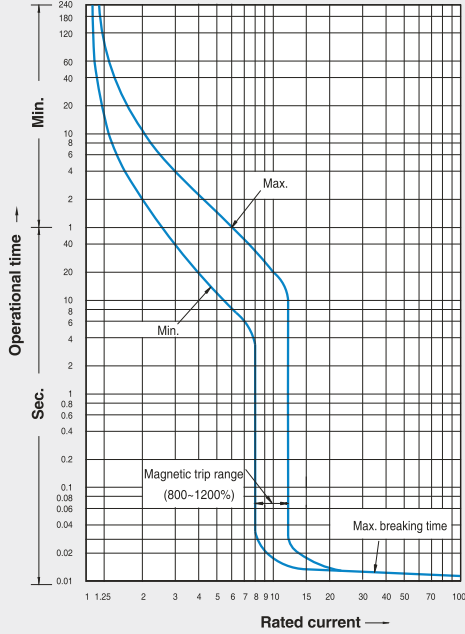
Operating Curve

CSC5N, CSC5S, CSC5H, CSC5L, CSC6N, CSC6S & CSC6L

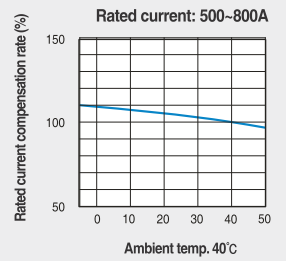
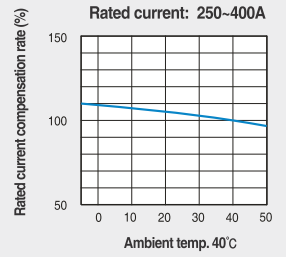
Rated current: 250-400A



Rated current: 500-800A

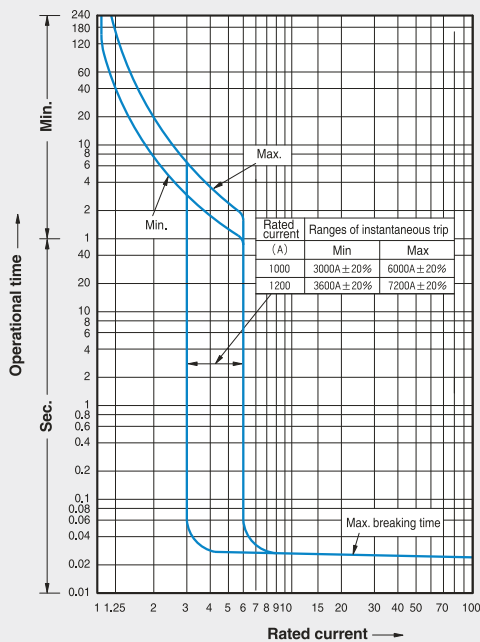


Compensation Curves

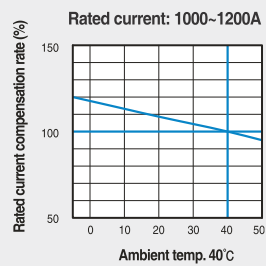


CSC7S, CSC7L & CSC8S

Rated current: 1000-1200A

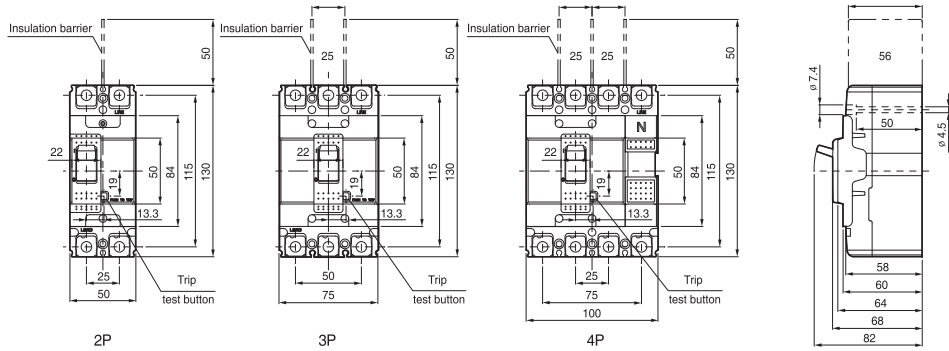


Compensation Curves

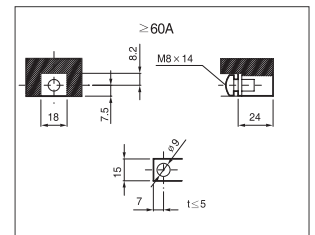
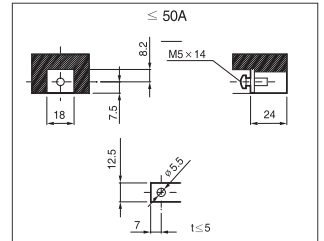


Overall Dimensions

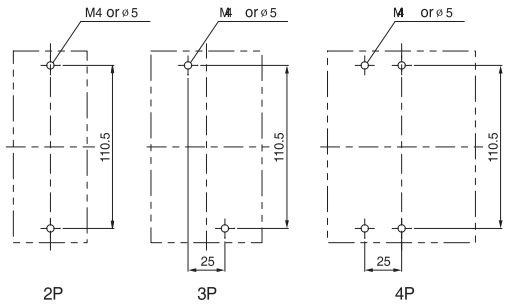
CSC1N, CSC1S & CSC2N



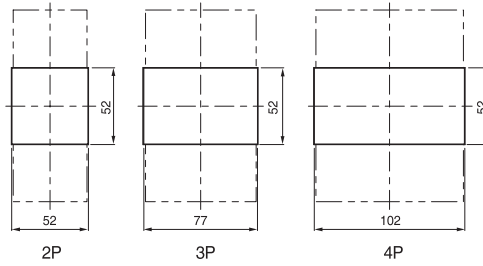
Terminal Details



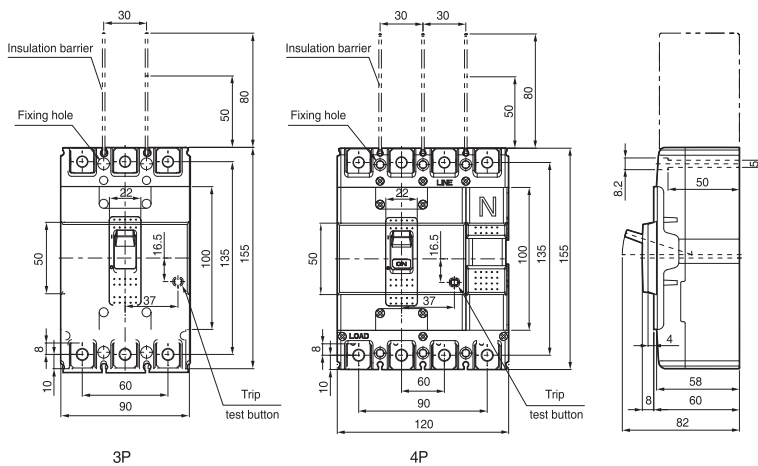
Panel drilling



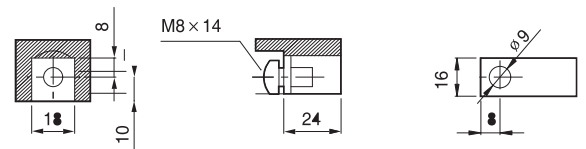
Front panel cutting



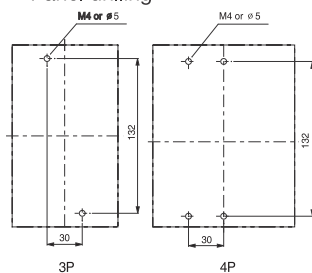
CSC3S & CSC3H



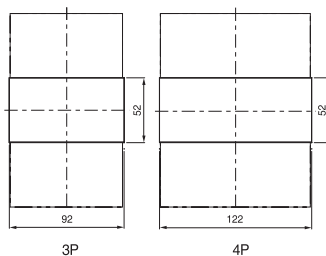
Mounting Details



Panel drilling

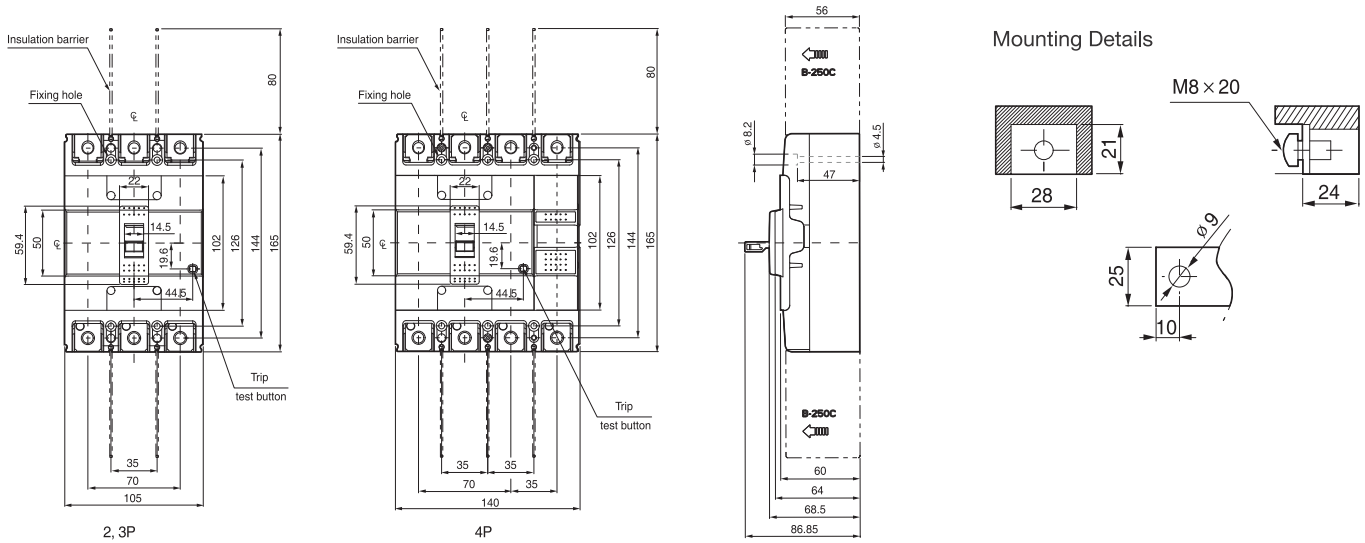


Front panel cutting

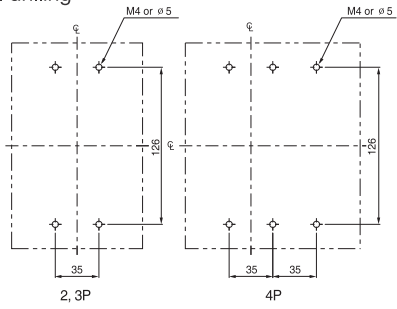


Overall Dimensions

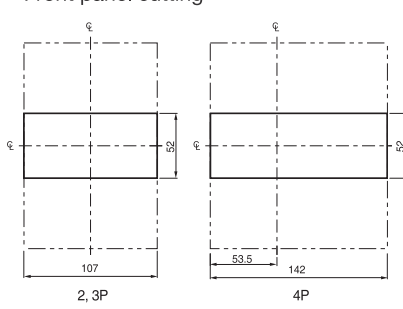
CSC4N, CSC4S & CSC4H



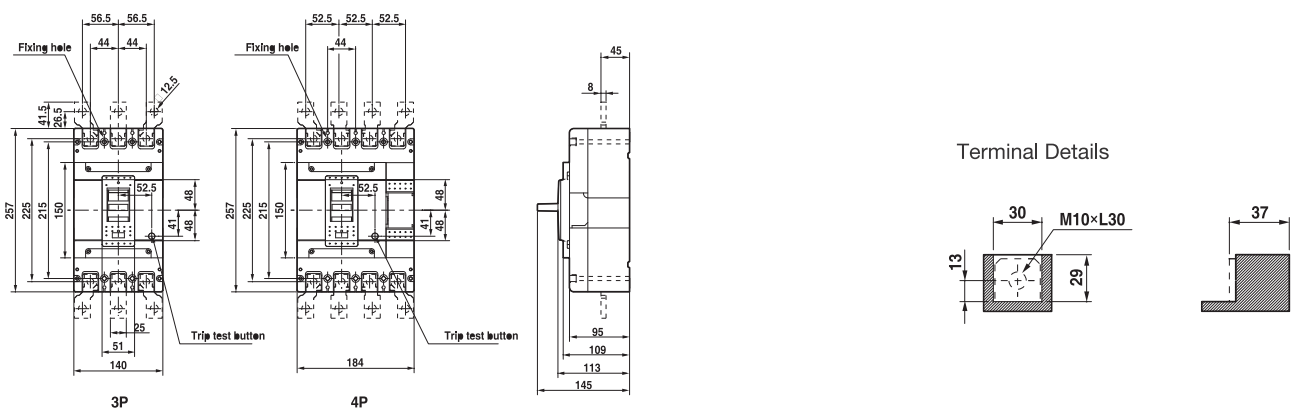
Panel drilling



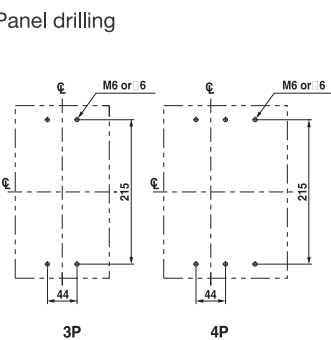
Front panel cutting



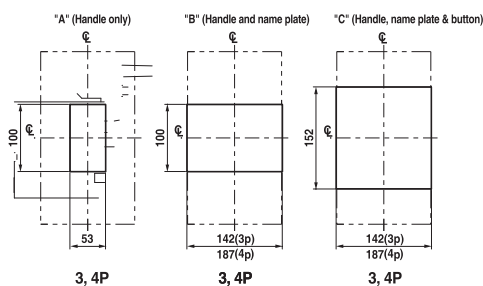
CSC5N, CSC5H, CSC5S & CSC5L



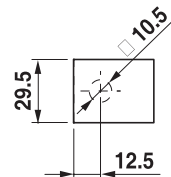
Panel drilling



Front panel cutting

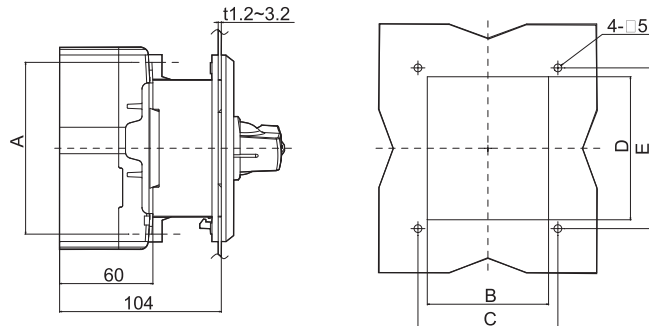


Conneting



Overall Dimensions

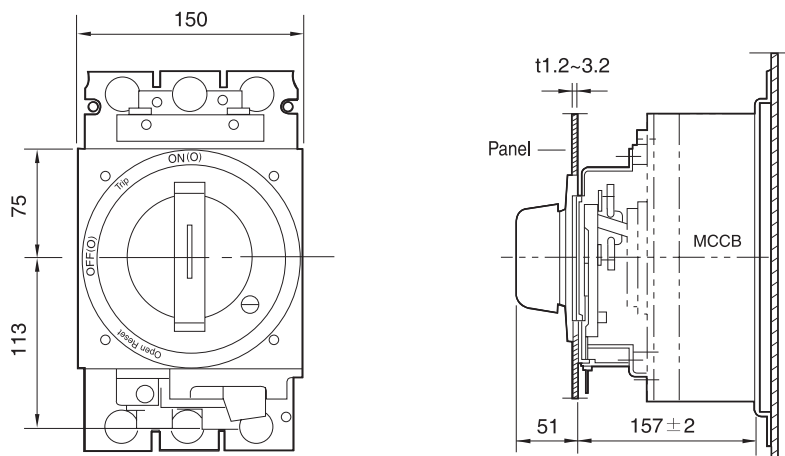
Rotary handle - Direct mounting type (D-handle 50~250AF)



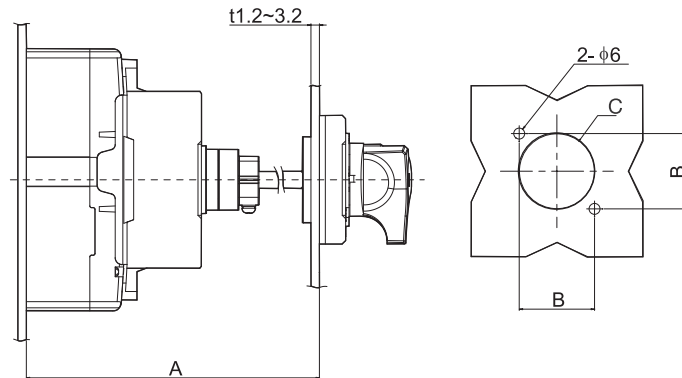
Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Remarks
DHC100	110.5	78	90	92	103.4	100AF
DHC125	132	94	105	108	120	125AF
DHC250	126	108	121	110	122	250AF

Direct mounting type (N-handle 400~800AF)

N-70S, N-70M



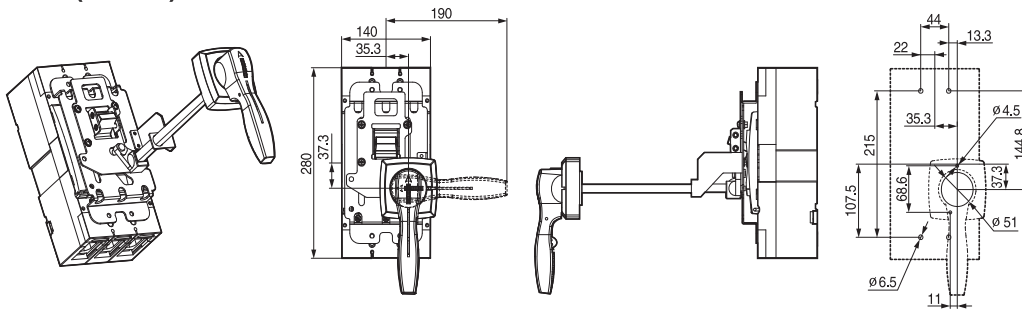
Rotary handle - Direct mounting type (E-handle 50~250AF)



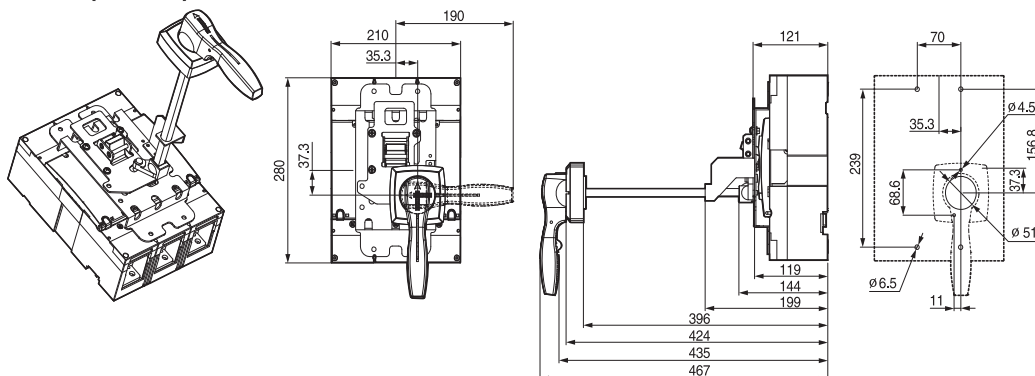
Type	A (mm)	B (mm)	C (mm)	Remarks
EHC100	min 150, max 573.5 (SHAFT469mm)	47	53	100AF
EHC125	min 150, max 573.5 (SHAFT469mm)	47	53	125AF
EHC250	min 150, max 571.5 (SHAFT469mm)	47	53	250AF

Extended mounting type (N-handle, 400~800AF)

E-70U (400AF)



E-80U (800AF)





Marketing Offices spread all over India

CENTRAL MARKETING OFFICE

222, Okhla Industrial Estate, Phase - III, New Delhi - 110 020

Ph. : (+91 11) 3384 9000 - 09 • Fax : (+91 11) 26847342 • E-Mail : cmo@cselectric.co.in

CUSTOMER CARE

Toll Free Number: 1800 3010 2012

NORTHERN REGION

DELHI

Ph. : (+91 11) 3384 9000 - 09

Fax : (+91 11) 26847342

E-Mail : cmo@cselectric.co.in

CHANDIGARH

Ph. : (+91 172) 3021144

Fax : (+91 172) 2631059-3201144

E-Mail : chandigarh@cselectric.co.in

LUDHIANA

Ph. : (+91 161) 2541900, 2541800

Fax : (+91 161) 2541900, 2541800

E-Mail : ludhiana@cselectric.co.in

LUCKNOW

Ph. : (+91 522) 3917843, 4102044

E-Mail : lucknow@cselectric.co.in

KANPUR

Ph. : (+91 522) 3917843, 4102044

E-Mail : kanpur@cselectric.co.in

INDORE

Ph. : (+91 731) 4035761, 3918020

E-Mail : indore@cselectric.co.in

RAIPUR

Ph. : (+91 771) 4061404

E-Mail : raipur@cselectric.co.in

NAGPUR

Ph. : (+91 712) 2565215 , 2547295

Fax : (+91 712) 2528923

E-Mail : nagpur@cselectric.co.in

EASTERN REGION

KOLKATA

Ph. : (+91 33) 39212100-01

Fax : (+91 33) 22275849

E-Mail : kolkata@cselectric.co.in

GUWAHATI

Ph. : (+91 361) 2469950

E-Mail : guwahati@cselectric.co.in

RANCHI

Ph. : (+91 651) 2242202, 2242224

E-Mail : ranchi@cselectric.co.in

BHUBANESWAR

Ph. : (+91 674) 2580788, 9778070465

E-Mail : bhubaneswar@cselectric.co.in

WESTERN REGION

MUMBAI

Ph. : (+91 22) 24114727-28, 30484071-73

Fax : (+91 22) 24126631

E-Mail : mumbai@cselectric.co.in

AHMEDABAD

Ph. : (+91 79) 30653015

Fax : (+91 79) 30074519

E-Mail : ahmedabad@cselectric.co.in

BARODA

Ph. : (+91 265) 2339479, 2356293

Fax : (+91 265) 2338754

E-Mail : baroda@cselectric.co.in

PUNE

Ph. : (+91 20) 30283239 - 40

Fax : (+91 20) 30283239

E-Mail : pune@cselectric.co.in

SURAT

Ph. : (+91 261) 6544024-28

E-Mail : surat@cselectric.co.in

JAIPUR

Ph. : (+91 141) 4037651

Fax : (+91 141) 4033954

E-Mail : jaipur@cselectric.co.in

SOUTHERN REGION

CHENNAI

Ph. : (+91 44) 33534500-01

Fax : (+91 44) 39180514

E-Mail : chennai@cselectric.co.in

COIMBATORE

Ph. : (+91 422) 3048406 - 20

Fax : (+91 422) 3048412

E-Mail : coimbatore@cselectric.co.in

KOCHI

Ph. : (+91 484) 3071715 (10 LINES)

Fax : (+91 484) 3071716

E-Mail : cochin@cselectric.co.in

MADURAI

E-Mail : commercial.madurai@cselectric.co.in

BENGALURU

Ph. : (+91 80) 3065 9400

Fax : (+91 80) 25594939

E-Mail : bangalore@cselectric.co.in

SECUNDERABAD

Ph. : (+91 40) 48534080

Fax : (+91 40) 27812987

E-Mail : hyderabad@cselectric.co.in

VIJAYAWADA

Ph. : (+91 866) 2496265 / 67

E-Mail : vijayawada@cselectric.co.in

RESIDENT ENGINEERS

Agra | Allahabad | Aurangabad | Bareilly | Bhopal | Dehradun | Goa | Gorakhpur | Haridwar | Hubli | Jabalpur | Jammu | Kolhapur | Kollam | Mangalore | Mehsana | Nashik | Patna | Rajkot | Rourkela | Siliguri | Srinagar | Tirupathi | Trichy | Udaipur | Una | Vapi | Visakhapatnam

WAREHOUSES

NATIONAL WAREHOUSE

NOIDA - A-7 & 8, Sector-VIII, Noida -201 301, Distt. Gautam Budh Nagar, (UP) Ph.: (+91 120) 3914301-02 Fax: (+ 91 120) 3914303

REGIONAL WAREHOUSES

DELHI Khasra No. 915 & 916, 2nd Floor, Near Rice Mill, Village Rithala, Delhi-85 Ph.: (+91 11) 27049211

LUCKNOW 3rd Floor, E-143, Phase-I, Transport Nagar, Kanpur Road, Lucknow - 17 Ph.: (+91 522) 4103460

INDORE Liberty Agencies 53, Udyog Nagar, Near Musakhedi Square, Ring Road, Indore-452001 Ph.: (+91) 88780-62000 / 64000

KOLKATA 113, Chetla Road, New Alipur, Kolkata - 700 053, Ph.: (+91 33) 22275849 - 51

RANCHI Plot No. 145/C, Mandir Marg-D, Road No. 4, Ashok Nagar, Distt. Ranchi, Jharkhand - 834002 Ph.: (91 651) 2242202, 2242224

BHUBANESWAR Rasharaj Geetikunj, Plot No. 224/A, Sec-A, Zone-B, Mancheswar Industrial Estate, Bhubaneswar-751 010 Ph.: (+91 674) 2580788

MUMBAI E-5, Parasnath Complex. Gala No.8, Village 'VAL' Dapode Road, Taluka Bhiwandi, District, Thane - 421302 Ph.: (+91 2522) 314830

AHMEDABAD B-25-B/C Meldi Industrial Estate, Opp. West Coast Pharmaceutical, Nr. Gota Over Bridge, Gota, Ahmedabad - 382481 Ph.: (+91 79) 65453044

BENGALURU No. 17, 1st Main Road, Sampangiram Nagar, Bengaluru - 560 027 Ph.: (+91 80) 41125467

