

## Meta-MEC Low Voltage Circuit Breakers



### Electric Equipment



# Adjustable MCCBs

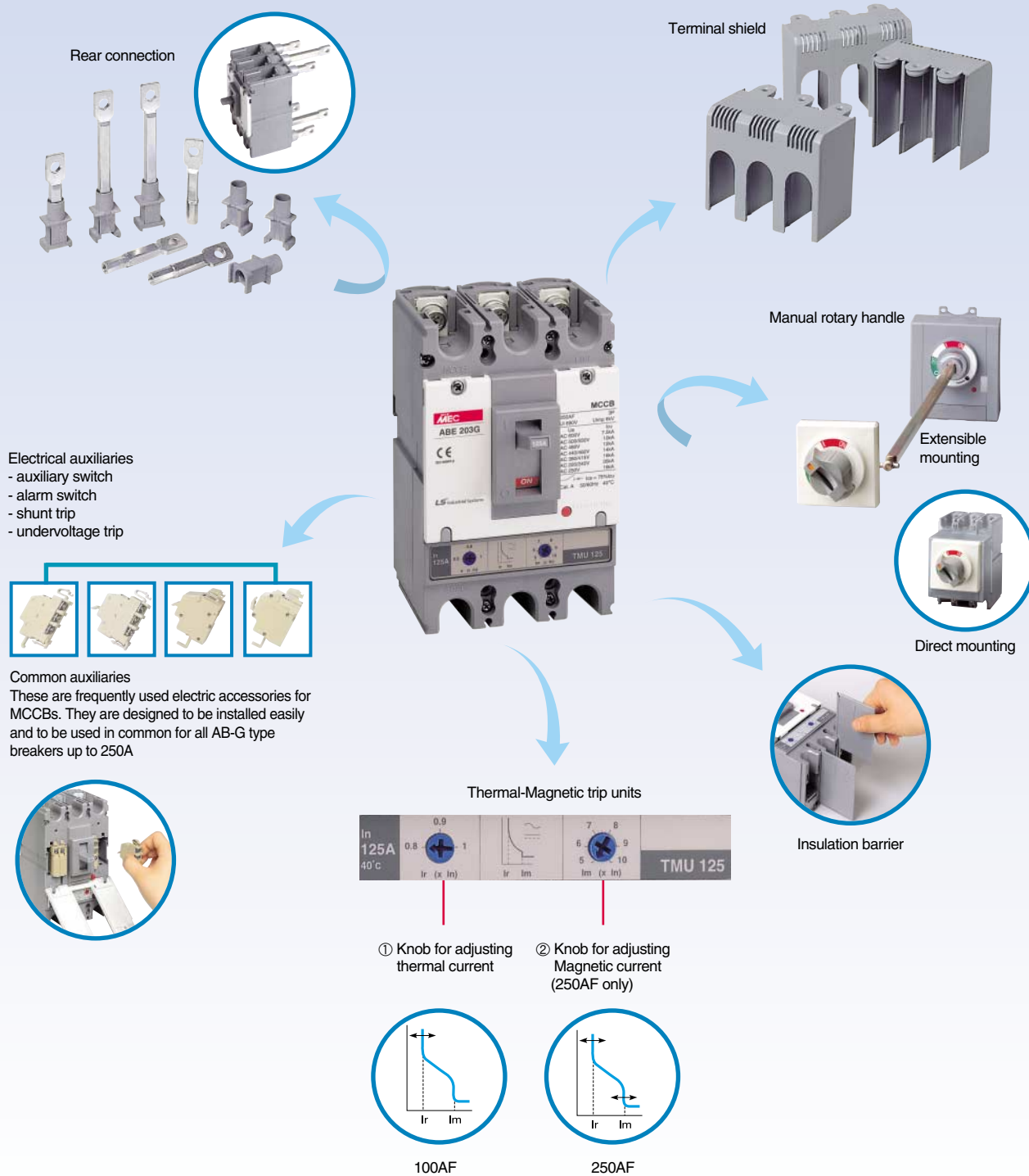
## AB-G type adjustable MCCBs up to 250A



### Suitable for use in the system where common fault currents

- Interrupting capacity...16 and 25kA
- Employing a adjustable trip unit
- Current adjustments are made by knobs on the front of the trip unit
- Electric auxiliaries are common use up to 250 amperes

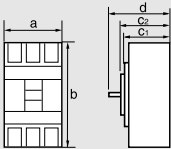
## Accessories



# Adjustable MCCBs

## Ratings 100AF

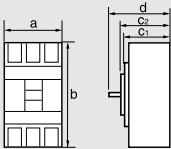


Frame size			100AF					
Type and Pole			ABE		ABS			
			3-pole		ABE103G		ABS103G	
			4-pole		ABE104G		ABS104G	
Rated current, In			16, 20, 25, 32, 40, 50, 63, 80, 100A Thermally adjustable : (0.8-0.9-1.0) × In					
Rated operational voltage, Ue			AC : 600V					
			DC : 250V					
Rated insulation voltage, Ui			690V					
Rated impulse withstand voltage, Uimp			6kV					
Rated short-circuit breaking capacity, Icu IEC60947-2(Icu) Ics=75%Icu	AC	600V	7.5kA		10kA			
		500/550V	10kA		12kA			
		480V	12kA		14kA			
		440/460V	14kA		22kA			
		380/415V	16kA		25kA			
		220/240V	35kA		50kA			
	DC	250V	10kA		14kA			
		125V	-		-			
Protective function			Overload, Short-circuit					
Type of trip unit			Thermal-Magnetic					
Magnetic trip range			10 × In (fixed )					
Endurance	Mechanical		20000 operations					
	Electrical		10000 operations					
Connection	Standard		Front connection					
	Optional		Rear connection					
Mounting	Standard		Screw fixing					
Dimensions(mm) 	Pole		3p	4p	3p	4p		
	a		90	120	90	120		
	b		140		140			
	c1 *		79		79			
	c2 *		86		86			
	d		115		115			
	Weight, kg	Standard		1.2	1.5	1.2	1.5	
Certification	CE marking		○		○			
	KEMA		○		○			

\* Depth by door cut size : C1 for large cut, C2 for small cut

## 250AF

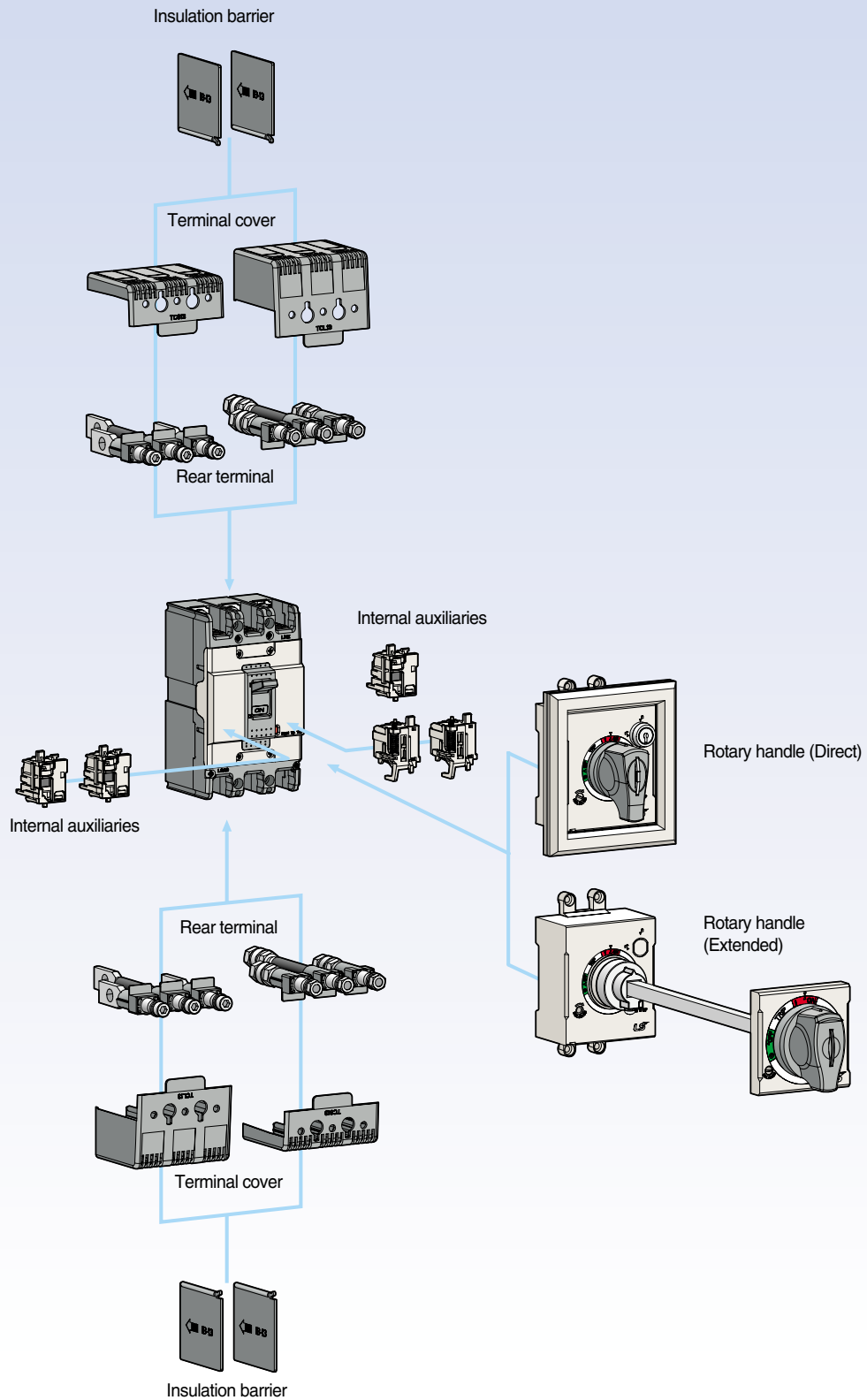


Frame size			250AF			
Type and Pole			ABE		ABS	
			3-pole		ABS203G	
			4-pole		ABS204G	
Rated current, In			125,160,200,250A Thermally adjustable : (0.8-0.9-1.0) × In			
Rated operational voltage, Ue			AC : 600V			
			DC : 250V			
Rated insulation voltage, Ui			690V			
Rated impulse withstand voltage, Uimp			6kV			
Rated short-circuit breaking capacity, Icu IEC60947-2(Icu) Ics=75%Icu	AC	600V	7.5kA		10kA	
		500/550V	10kA		12kA	
		480V	12kA		14kA	
		440/460V	14kA		22kA	
		380/415V	16kA		25kA	
		220/240V	35kA		50kA	
	DC	250V	10kA		14kA	
		125V	-		-	
Protective function			Overload, Short-circuit			
Type of trip unit			Thermal-Magnetic			
Magnetic trip range			(5, 6, 7, 8, 9, 10)×In			
Endurance	Mechanical		10000 operations			
	Electrical		5000 operations			
Connection	Standard		Front connection			
	Optional		Rear connection			
Mounting			Standard		Screw fixing	
Dimensions(mm) 	Pole		3p	4p	3p	4p
	a		105	140	105	140
	b		165		165	
	c1 *		79		79	
	c2 *		86		86	
	d		116		116	
	Weight, kg			1.7	2.1	1.7
Certification	CE marking		○		○	
	KEMA		○		○	

\* Depth by door cut size : C1 for large cut, C2 for small cut

# Adjustable MCCBs

## Accessories

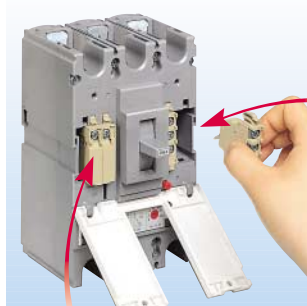




## Internal accessories

### Auxiliary switch, Alarm switch Shunt trip, Undervoltage trip

Common use for AB-G type breakers up to 250Amp.



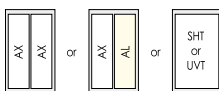
Left-hand seat

Right-hand seat

#### Maximum possibilities

##### Left-hand seat

Option of connecting 2AX or AX+AL or SHT or UVT

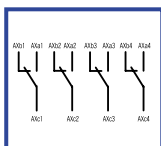


##### Right-hand seat

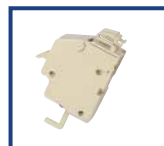
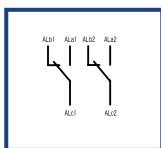
Option of connecting 2AX or AL+AX



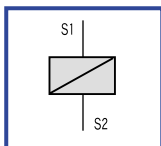
Auxiliary switch, AX



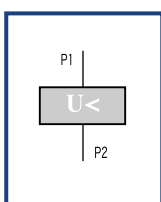
Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT



#### Model

##### Auxiliary switch, AX

Signals the contact position of the breaker  
- opening by manual or fault  
- closing

Consists of one change over switch per unit

**AX1G250** 1 auxiliary switch (1NO+NC)

##### Alarm switch, AL

Signals the contact position of the breaker  
- tripping by manual or fault

- not operated by normal opening or closing of a breaker Consists of one change over switch

**AL1G250** 1 alarm switch (1NO+NC)

##### Shunt trip, SHT

Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. This unit is fitted into the left-hand seat of a handle.

**ST12CG250** For 12V AC/DC common use  
**ST24CG250** For 24V AC/DC common use  
**ST48CG250** For 48V AC/DC common use  
**ST60CG250** For 60V AC/DC common use  
**ST100CG250** For 100~125VAC / 100~110VDC  
**ST200CG250** For 200~240VAC / 200~220VDC  
**ST250CG250** For 250V AC/DC common use  
**ST380AG250** For 380~450V AC  
**ST440AG250** For 440~480V AC  
**ST500AG250** For 500~550V AC  
**ST125DG250** For 125V DC  
**ST240DG250** For 240V DC

##### Under voltage trip, UVT

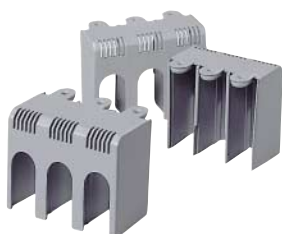
Trips the breaker when control voltage disappears or falls. This unit is fitted into the left-hand seat of a handle.

**UV24CG250** For 24V AC/DC common use  
**UV48CG250** For 48V AC/DC common use  
**UV100CG250** For 100~110V AC/DC common use  
**UV200CG250** For 200~220V AC/DC common use  
**UV380AG250** For 380~440V AC  
**UV440AG250** For 440~480V AC

# Adjustable MCCBs

## External accessories

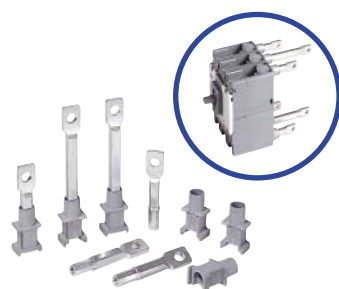
### Insulation barriers Terminal shields Rear connection kits



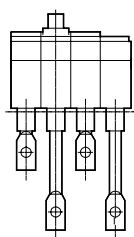
Terminal shield



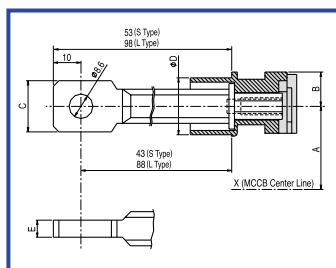
Insulation barriers



Rear connection kits



Bar type



#### Model

Insulation barriers	
IBG250	These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional. Common use for all AB-G type breakers up to 250Amp. One(1) barrier
	Terminal shields
	These are applied to the line/load side of the breaker to prevent accidental contact with live parts. Different by breaker dimensions. Use 3pole shield for 2pole breakers
	<p>TB-13T Long type shield for 3-p, 100AF</p> <p>TB-14T Long type shield for 4-p, 100AF</p> <p>TBS-13T Short type shield for 3-p, 100AF</p> <p>TBS-14T Short type shield for 4-p, 100AF</p> <p>TB-23T Long type shield for 3-p, 250AF</p> <p>TB-24T Long type shield for 4-p, 250AF</p> <p>TBS-23T Short type shield for 3-p, 250AF</p> <p>TBS-24T Short type shield for 4-p, 250AF</p>
Rear connection kits ... Bar type	
X-103	one set for 3-p, 100AF
X-104	one set for 4-p, 100AF
X-203	one set for 3-p, 250AF
X-204	one set for 4-p, 250AF



## Manual rotary handles



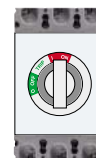
Direct mounting type



Extensible mounting type

### Model

Direct mounting	
	<i>Applicable for 100AF</i>
<b>D-30S</b>	Vertical type
<b>D-30L</b>	Horizontal (ON in left-hand) type
<b>D-30R</b>	Horizontal (ON in right-hand) type
	<i>Applicable for 250AF</i>
<b>D-60S</b>	Vertical type
<b>D-60L</b>	Horizontal (ON in left-hand) type
<b>D-60R</b>	Horizontal (ON in right-hand) type
Extensible mounting	
	<i>Applicable for 100AF</i>
<b>E-30S</b>	Vertical type
<b>E-30L</b>	Horizontal (ON in left-hand) type
<b>E-30R</b>	Horizontal (ON in right-hand) type
	<i>Applicable for 250AF</i>
<b>E-60S</b>	Vertical type
<b>E-60L</b>	Horizontal (ON in right-hand) type
<b>E-60R</b>	Horizontal (ON in right-hand) type



Vertical type



Horizontal type  
ON in right-hand



Horizontal type  
ON in left-hand

# Adjustable MCCBs

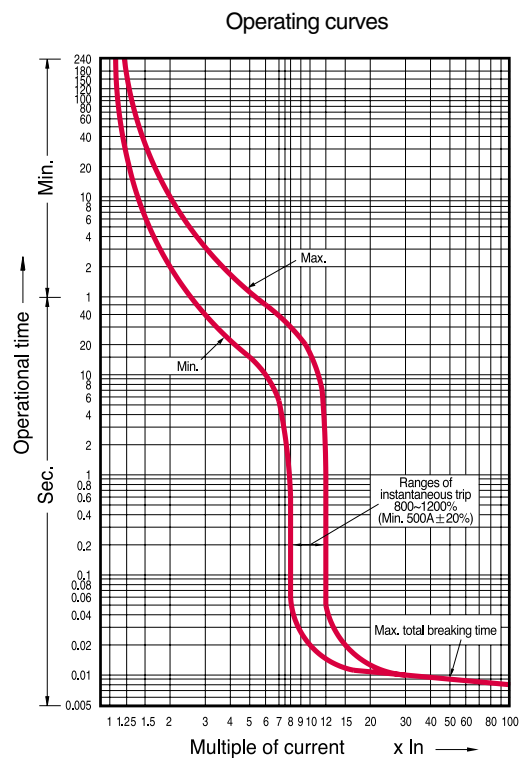
## Operating curves

ABE103G

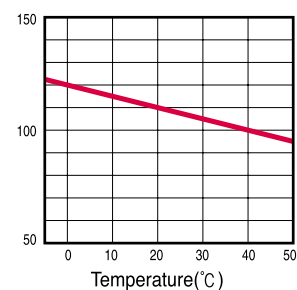
ABE104G

ABS103G

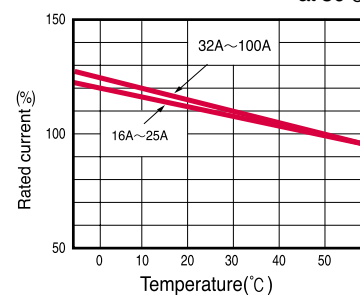
ABS104G



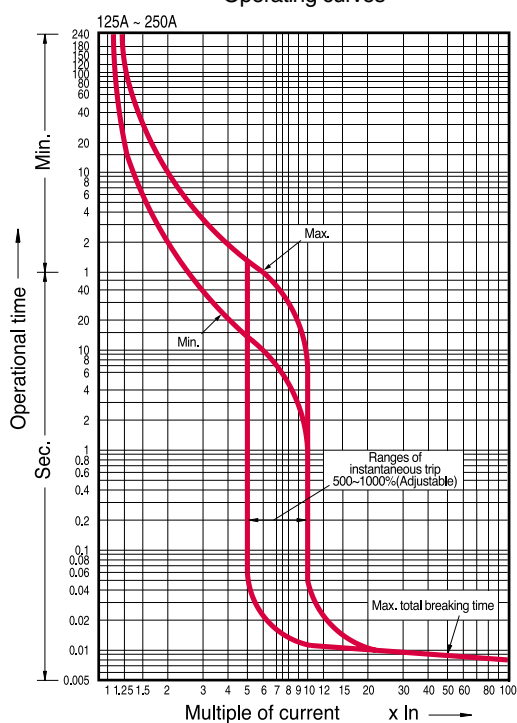
Compensation curves



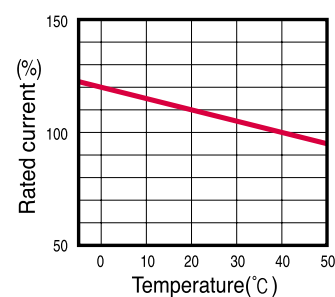
at 50°C



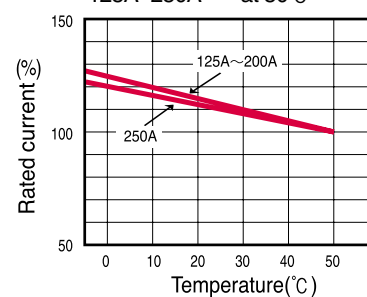
Operating curves



Compensation curves



125A~250A at 50°C

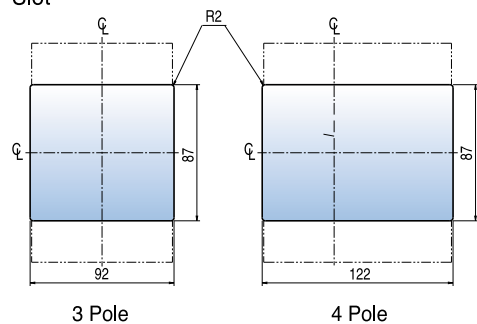
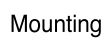
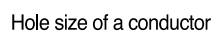
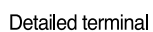


ABE103G

ABE104G

ABS103G

ABS104G



# Adjustable MCCBs

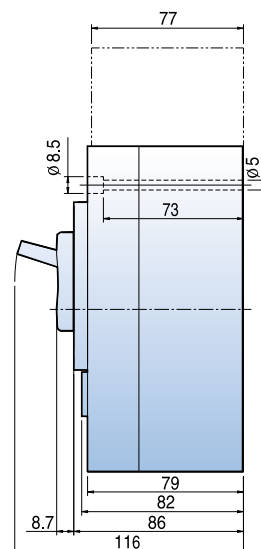
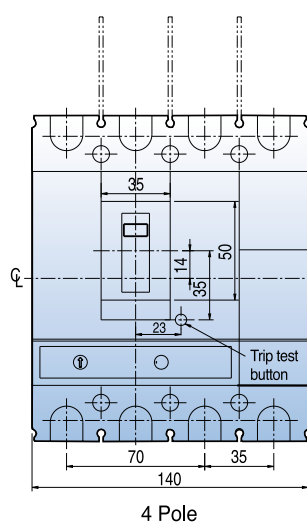
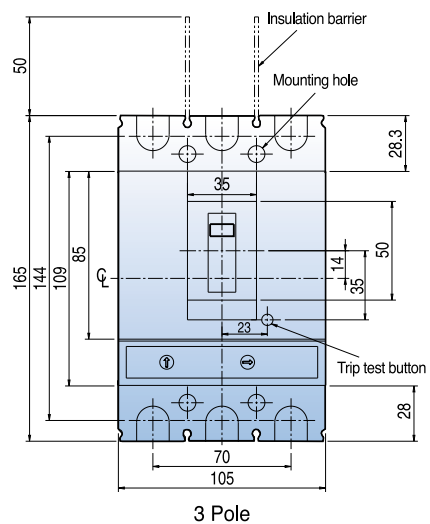
## Dimensions

ABE203G

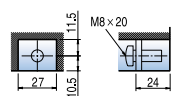
ABE204G

ABS203G

ABS204G



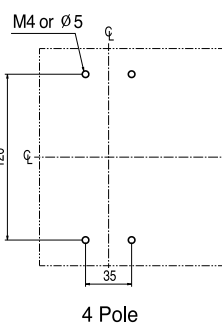
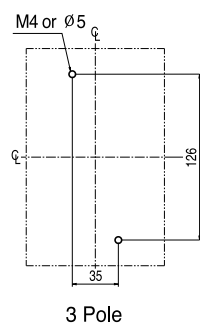
Detailed terminal



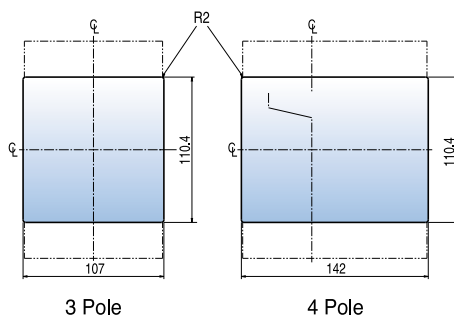
Hole size of a conductor



Mounting



Slot





## Memo

---





Leading Innovation, Creating Tomorrow 



**Safety Instructions**

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance.  
Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

© 2010.3 LS Industrial Systems Co.,Ltd. All rights reserved.

**LS Industrial Systems Co., Ltd.**

**www.lsis.biz**

■ **HEAD OFFICE**

LS Tower, 1026-6 Hokyeh 1dong, Dongan-gu, Anyang,  
Kyonggi-Do, 431-848, Korea  
Tel. (82-2)2034-4887, 4873, 4918, 4148  
Fax. (82-2)2034-4648

■ **CHEONG-JU PLANT**

Cheong-Ju Plant #1, Song Jung Dong, Hung Duk Ku,  
Cheong Ju, 361-720, Korea

■ **Global Network**

- **LS Industrial Systems (Middle East) FZE >> Dubai, U.A.E.**  
Address: LOB 19 JAFZA VIEW TOWER Room 205, Jebel Ali Freezone P.O. Box 114216, Dubai, United Arab Emirates  
Tel: 971-4-886-5360 Fax: 971-4-886-5361 e-mail: hwyim@lsis.biz
- **Dalian LS Industrial Systems Co., Ltd. >> Dalian, China**  
Address: No.15, Liaohexi 3-Road, Economic and Technical Development zone, Dalian 116600, China  
Tel: 86-411-8273-7777 Fax: 86-411-8730-7560 e-mail: lixk@lsis.com.cn
- **LS Industrial Systems (Wuxi) Co., Ltd. >> Wuxi, China**  
Address: 102-A, National High & New Tech Industrial Development Area, Wuxi, Jiangsu, 214028, P.R.China  
Tel: 86-510-8534-6666 Fax: 86-510-522-4078 e-mail: xuhg@lsis.com.cn
- **LS-VINA Industrial Systems Co., Ltd. >> Hanoi, Vietnam**  
Address: Nguyen Khe - Dong Anh - Ha Noi - Viet Nam  
Tel: 84-4-882-0222 Fax: 84-4-882-0220 e-mail: srjo@lsisvina.com
- **LS-VINA Industrial Systems Co., Ltd. >> Hochiminh, Vietnam**  
Address: 41 Nguyen Thi Minh Khai Str. Yoco Bldg 4th Floor, Hochiminh City, Vietnam  
Tel: 84-8-3822-7941 Fax: 84-8-3822-7942 e-mail: sbpark@lsisvina.com
- **LS Industrial Systems Tokyo Office >> Tokyo, Japan**  
Address: 16FL, Higashi-Kan, Akasaka Twin Tower 17-22, 2-chome, Akasaka, Minato-ku Tokyo 107-8470, Japan  
Tel: 81-3-3582-9128 Fax: 81-3-3582-2667 e-mail: jschuna@lsis.biz
- **LS Industrial Systems Shanghai Office >> Shanghai, China**  
Address: Room E-G, 12th Floor Huamin Empire Plaza, No.726, West Yan'an Road Shanghai 200050, P.R. China  
Tel: 86-21-5237-9977 (609) Fax: 89-21-5237-7191 e-mail: jinhk@lsis.com.cn
- **LS Industrial Systems Beijing Office >> Beijing, China**  
Address: B-Tower 17FL Beijing Global Trade Center B/D. No.36, BeiSanHuanDong-Lu, DongCheng-District, Beijing 100013, P.R. China  
Tel: 86-10-5825-6025,7 Fax: 86-10-5825-6026 e-mail: cuixiaorong@lsis.com.cn
- **LS Industrial Systems Guangzhou Office >> Guangzhou, China**  
Address: Room 1403,14F, New Poly Tower, 2 Zhongshan Liu Road, Guangzhou, P.R. China  
Tel: 86-20-8326-6764 Fax: 86-20-8326-6287 e-mail: linsz@lsis.biz
- **LS Industrial Systems Chengdu Office >> Chengdu, China**  
Address: Room 1701 17Floor, huanminhanjun international Building, No1 Fuxing Road Chengdu, 610041, P.R. China  
Tel: 86-28-8670-3101 Fax: 86-28-8670-3203 e-mail: yangcf@lsis.com.cn
- **LS Industrial Systems Qingdao Office >> Qingdao, China**  
Address: 7B40, Haixin Guangchang Shenye Building B, No.9, Shandong Road Qingdao 26600, P.R. China  
Tel: 86-532-8501-6568 Fax: 86-532-583-3793 e-mail: liirj@lsis.com.cn

Specifications in this catalog are subject to change without notice due to continuous product development and improvement.