

LV Components Price List 2020

LV Circuit Breaker, Contactor & Overload Relay



Rev.10 09.02.2021

- Update price NCT
- Update price CU
- Update price RCBO

HG-SERIES

Advanced Breaking Performance and Various Selectivity

- Various Product Range: 30 - 800 AF, 10 Frames
- Standardized Size of Accessories, Compatible with MCCB and ELCB
- Standardized Height of Products by Frame: 30 - 250 AF (68 mm), 400 - 800 AF (110 mm)

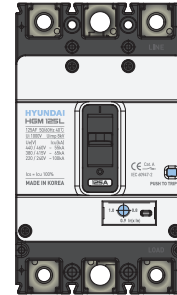
30, 50, 60, 100 AF

50, 125 AF

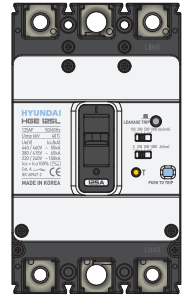
160, 250 AF



Size
Compatibility
Public Using
Accessories



MCCB



ELCB

400 AF

630, 800 AF

(unit: mm)



Standards and Certifications

Standards

Standards

KS C 8321

Molded case circuit breakers for industrial uses

KS C 4613

Circuit breaker incorporating residual current protection for industrial Uses (CBR)

International Standards

IEC 60947-1

Low voltage switchgear and controlgear, part 1 (General rules)

IEC 60947-2

Low voltage switchgear and controlgear, part 2 (Circuit breakers)



Approvals and Certifications

HG-Series MCCB has acquired the certification from the TEST agency registered in STL.

- CB certification (DEKRA)
- Safety certification scheme for electrical applications
- KS (Korean industrial standards)
- Marine approvals (8's classifications)



Vibration/Shock Withstand Test Certification Acquisition

HG Series MCCB has acquired the vibration/shock withstand test certification in accordance with IEC 60068-2-6 standard which is the required level of IACS, international vessel inspection institute.

- Vibration resistant: 2 - 13.2 Hz - ± 1 mm
- Shock resistant: 13.2 - 100 Hz - ± 0.7 g



Our services

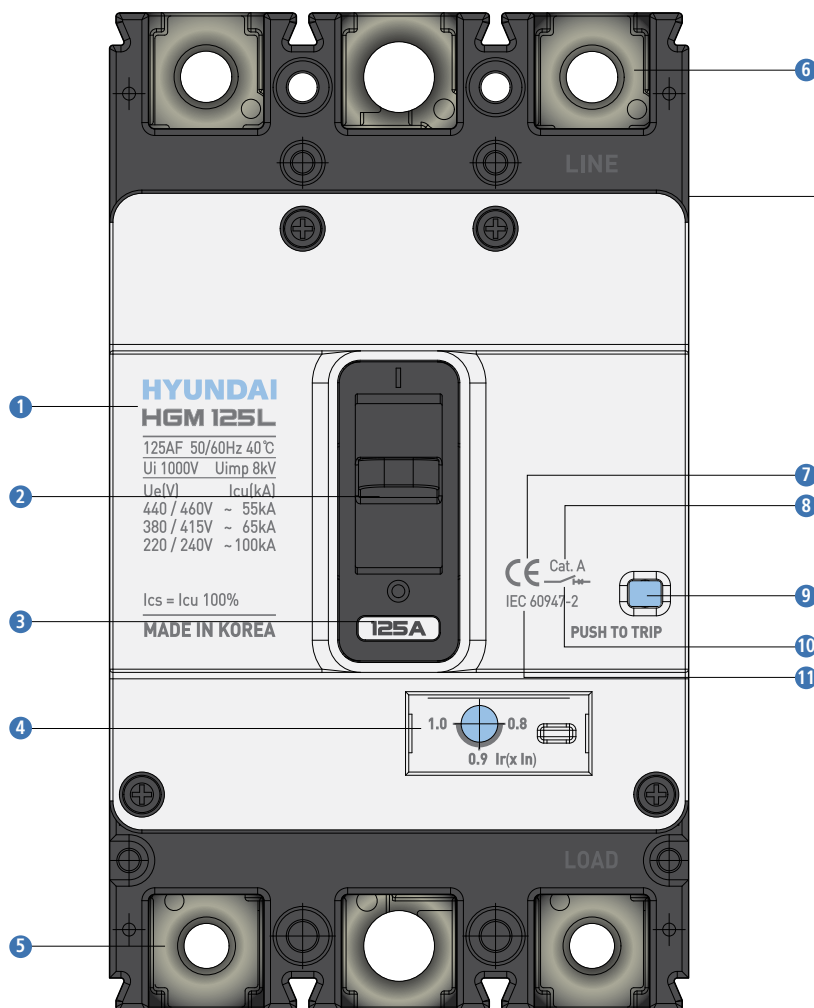
Testing, inspections, certification

DEKRA provides certification of management systems as well as technical support, testing and certification of a wide range of products throughout the life cycle.



External Structure and Contents of Nameplate

Molded Case Circuit Breakers



산업용 배선차단기			
HGM 125L			
MOLDED CASE CIRCUIT BREAKER			
125AF	3P	40°C	
Ue(V)	Icu(kA)	 HG05001-14349A	
440 / 460V ~ 55kA	220 / 240V ~ 100kA		
			
			
			
MADE IN KOREA			
 HYUNDAI			
HEAVY INDUSTRIES CO. LTD.			

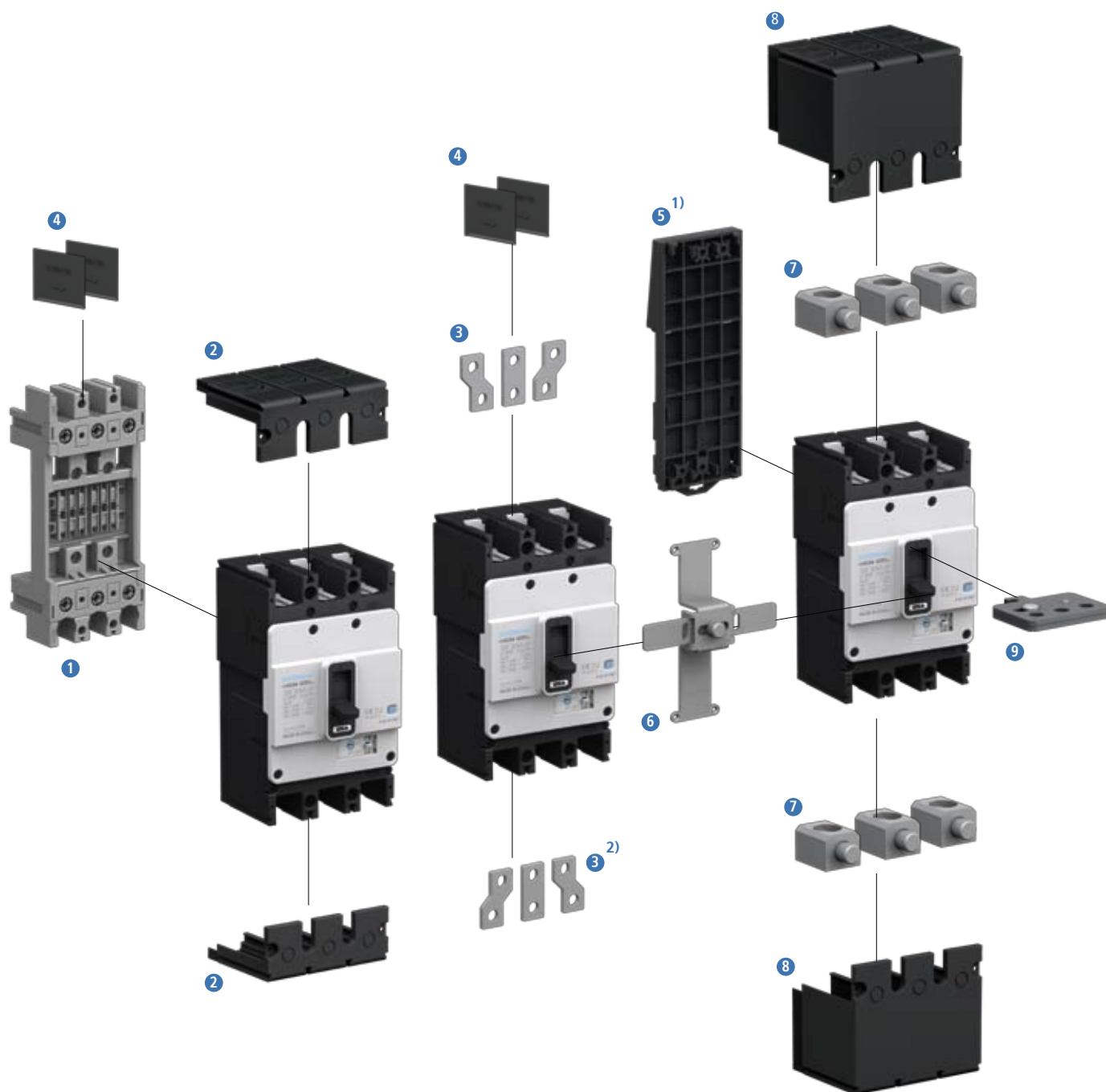
Contents of Nameplate

- **U_i**: Rated insulation voltage
- **U_{imp}**: Rated impulse withstand voltage
- **U_e**: Rated operational voltage
- **I_{cu}**: Rated short-circuit breaking capacity
- **I_{cs}**: Service short-circuit breaking capacity

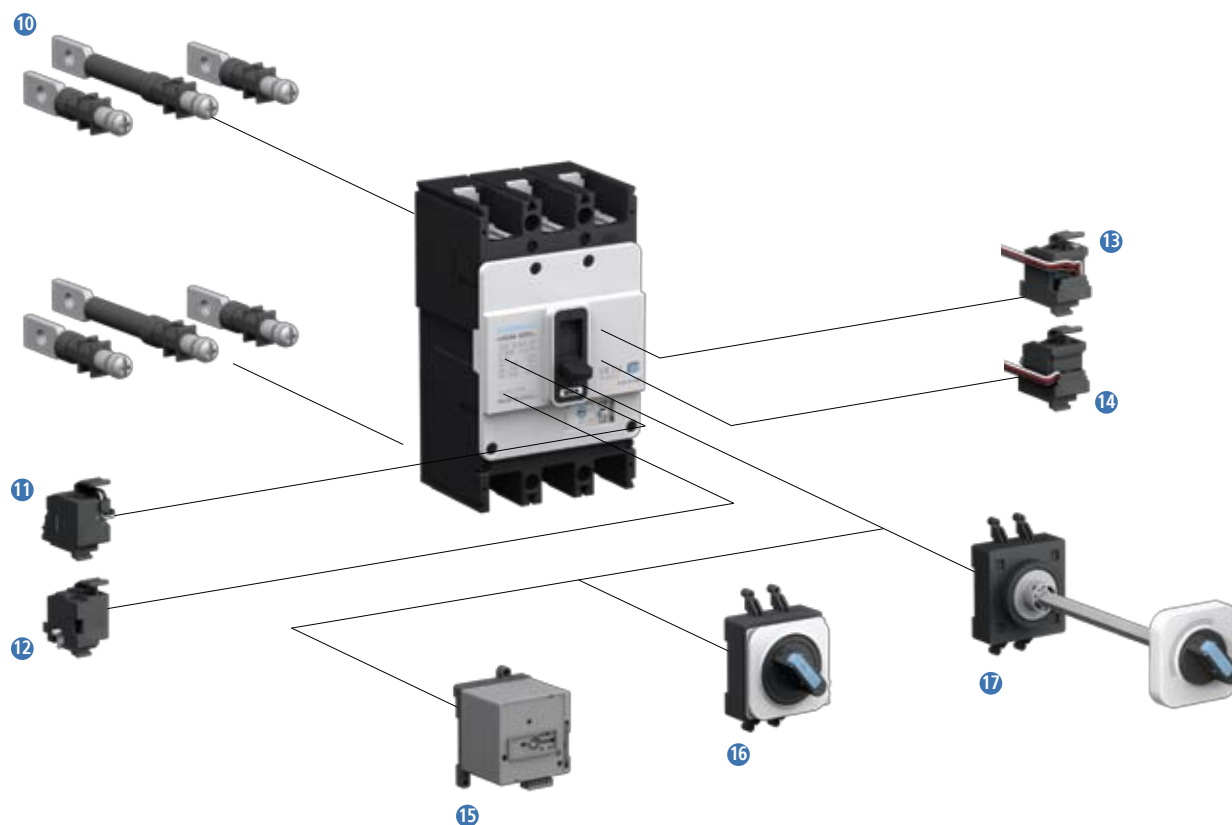
Molded Case Circuit Breakers (MCCB)

- | | | |
|--------------------|------------------------|--|
| ① Model Name | ⑤ Load Side Terminal | ⑨ Trip Button |
| ② Operating Handle | ⑥ Line Side Terminal | ⑩ Cable Insulation Performance Suitability |
| ③ Rated Current | ⑦ CE Marking | ⑪ Standards |
| ④ Adjusting Knob | ⑧ Utilization Category | |

Accessories



※ **1)** DIN rail adaptor (DRA): HGM/HGE100 only
2) Busbar (TBB): HGM/HGE250 only



HGM Type Molded Case Circuit Breakers

- | | | |
|-----------------------------------|-----------------------------|---------------------------|
| 1 Plug in Devices | 7 Lug Terminal | 13 Auxiliary Switch |
| 2 Terminal Cover for Plug-In Type | 8 Terminal Cover | 14 Trip Alarm Switch |
| 3 Busbar | 9 Padlock for Rotary Handle | 15 Motor Operator |
| 4 Insulation Barrier | 10 Rear Connection Terminal | 16 Direct Rotary Handle |
| 5 DIN Rail Adaptor | 11 Shunt Trip Coil | 17 Extended Rotary Handle |
| 6 Mechanical Interlock | 12 Undervoltage Trip Coil | |

Accessories For Molded Case Circuit Breaker (MCCB)		Code	Price (THB)
Auxiliary switch	Auxiliary 1Contact for HGM100,HGM125,HGM250	AUX 10GM C1	450
	Auxiliary 2Contact for HGM100,HGM125,HGM250	AUX 10GM C2	600
	Auxiliary 1Contact for HGM400,HGM630,HGM800	AUX 40GM C1	750
	Auxiliary 3Contact right-hand-side for UCB1000S,UCB1250S	AUX 80NE R3	2,000
Alarm switch	Alarm Switch 1Contact left-hand-side for HGM100,HGM125,HGM250	ALT 10GM L1	550
	Alarm Switch 1Contact right-hand-side for HGM100,HGM125,HGM250	ALT 10GM R1	400
	Alarm Switch 1Contact left-hand-side for HGM400,HGM630,HGM800	ALT 40GM L1	650
	Alarm Switch 1Contact right-hand-side for UCB1000S,UCB1250S	ALT 80NE R1	800
Shunt Trip	Shunt Trip AC200-250V for HGM100,HGM125,HGM250	SHT 10GM AC200-250V	800
	Shunt Trip AC200-230V for HGM400,HGM630,HGM800	SHT 40GM AC200-230V	1,600
	Shunt Trip AC200-230V for UCB1000S,UCB1250S	SHT 120NE H	1,800
Under Voltage Trip	Under Voltage Trip AC200-250V for HGM100,HGM125,HGM250	UVT 10GM AC200-250V	2,500
	Under Voltage Trip AC200-230V for HGM400,HGM630,HGM800	UVT 40GM AC200-230V	2,800
	Under Voltage Trip AC200-230V for UCB1000S,UCB1250S	UVT 120NE P	3,000
Extended Rotary Handle	Extended Rotary Handle for HGM100	TFH 10GM	1,700
	Extended Rotary Handle for HGM125	TFH 12GM	1,700
	Extended Rotary Handle for HGM250	TFH 25GM	1,700
	Extended Rotary Handle for HGM400	TFH 40GM	2,800
	Extended Rotary Handle for HGM630,HGM800	TFH 80GM	2,800
Direct Rotary Handle	Direct Rotary Handle for HGM100	TFG 10GM U	1,100
	Direct Rotary Handle for HGM125	TFG 12GM U	1,200
	Direct Rotary Handle for HGM250	TFG 25GM U	1,300
	Direct Rotary Handle for HGM400	TFG 40GM U	2,500
	Direct Rotary Handle for HGM630,HGM800	TFG 80GM U	2,500
Motor Operator	Motor Operator AC/DC240V for HGM100	MOT 10GM	15,000
	Motor Operator AC/DC240V for HGM125	MOT 12GM	15,000
	Motor Operator AC/DC240V for HGM250	MOT 25GM	15,000
	Motor Operator AC/DC240V for HGM400	MOT 40GM	18,500
	Motor Operator AC/DC240V for HGM630,HGM800	MOT 80GM	20,000
	Motor Operator AC/DC240V for UCB1000S,UCB1250S	MOT 80NE AC/DC220	23,000
Pad Lock	Pad Lock for HGM100,HGM125,HGM250	PLD 10 GM	500
	Pad Lock for HGM400,HGM630,HGM800	PLD 40 GM	500
	Pad Lock for UCB1000S,UCB1250S	PLD 120 NE	1000

Molded Case Circuit Breaker

MCCB 2 Pole

Ampere Frame	Model	Rated current (A)	kA 240VAC / 415VAC	Price (THB)	Dimension (mm) W x H x D
				Adjustable Type	
100	HGM100E	20,25,32,40,50,63,75,80,100	35 / 16	1,600	50 x 130 x 68
	HGM100S	20,25,32,40,50,63,75,80,100	50 / 20	2,200	
250	HGM250E	125,160,200,250	50 / 20	4,500	105 x 165 x 68

MCCB 3 Pole

Ampere Frame	Model	Rated current (A)	kA 415VAC	Price (THB)	Dimension (mm) W x H x D
				Adjustable Type	
100	HGM100E	20,25,32,40,50,63,75,80,100	16	2,000	75 x 130 x 68
	HGM100H	20,25,32,40,50,63,75,80,100	26	2,300	
125	HGM125H	20,25,32,40,50,63,75,80,100,125	38	3,400	90 x 155 x 68
	HGM125L	20,25,32,40,50,63,75,80,100,125	55	4,200	
250	HGM250S	125,160,200,250	26	4,300	105 x 165 x 68
	HGM250H	125,160,200,250	38	4,800	
	HGM250L	125,160,200,250	55	5,500	
400	HGM400E	300,400	45	11,000	140 x 257 x 110
	HGM400S	300,400	65	12,500	
630	HGM630E	500,630	45	15,000	210 x 280 x 110
	HGM630S	500,630	65	17,000	
800	HGM800S	700,800	65	24,000	210 x 280 x 110
1000	UCB1000S**	505-1000	100	54,000	210 x 370 x 110
1250	UCB1250S**	630-1250	100	64,000	
1600	UCB1600S **	640-1600	65	90,000	210 x 371 x 151

** Electronic Type

Remark : 1) Please contact us for the price of MCCB electronic type 400 - 800 AF.

2) Please contact us for the price of MCCB DC type.



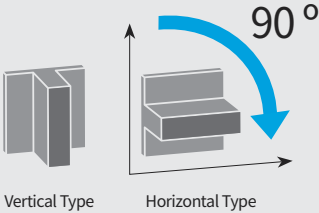
HGN, HGS

Air Circuit Breakers

Characteristics

Multi

Bus bar terminal can be changed to horizontal/vertical



Vertical Type Horizontal Type

Retrofit



Customized Retrofit ACB can be Provided

New products can be developed to be compatible/installed according to the distance of cradle phase/pole/land and terminal size of the ACB that has been installed previously

Certifications



Maximum Breaking Capacity

150 kA (At 500 V, HGN D Frame)

Type per Rating

2 Frames, HGS 1,600/3,200 A
4 Frames, HGN 2,000/4,000/5,000/6,300 A

Rated Impulse Withstand Voltage (Uimp) : 12 kV

100 % N Phase Current Flow Capacity for all Types



A Frame [85 kA]

630 ~ 1,600 A (HGS) / 630 ~ 2,000 A (HGN)



B Frame [100 kA]

2,000 ~ 3,200 A (HGS) / 630 ~ 4,000 A (HGN)



C Frame [100 kA]

3,200 ~ 5,000 A (HGN)

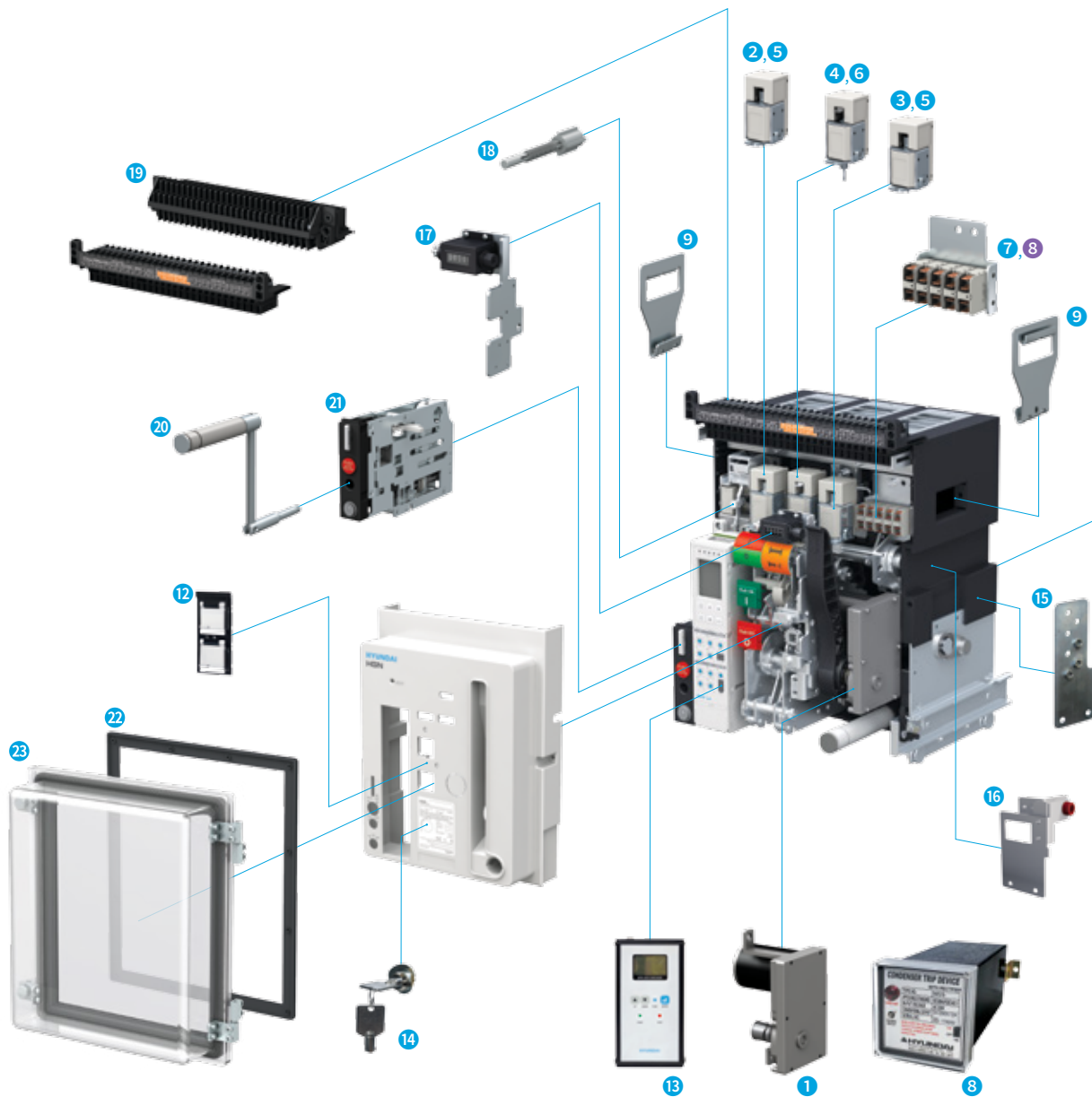


D Frame [150 kA]

4,000 ~ 6,300 A (HGN)

Technical Data

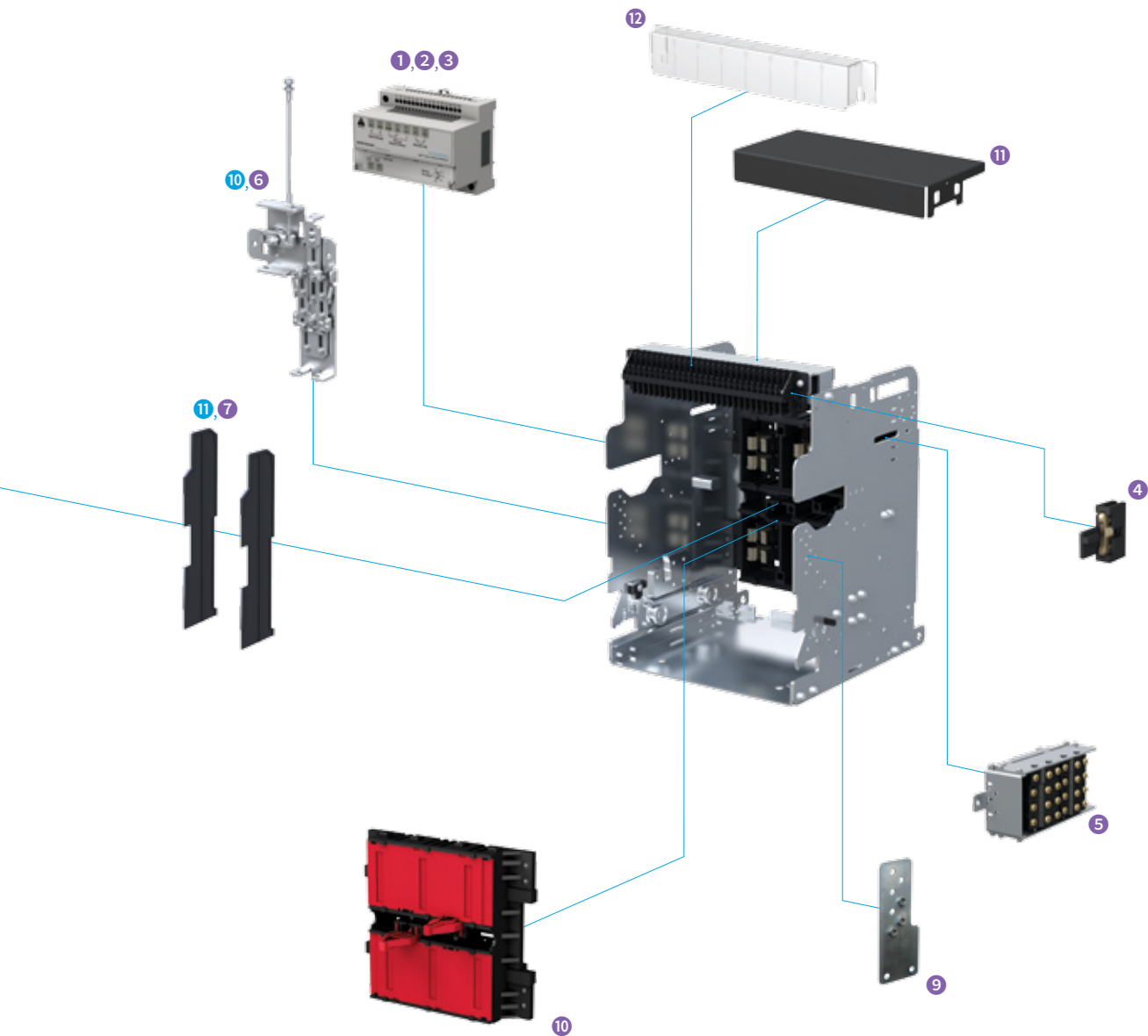
Various Accessories (Main Unit)



Accessories for Circuit Breaker

- | | | |
|-------------------------------|-----------------------------|---------------------------------|
| 1 Spring Charge Geared Motor | 9 Lifting Lug | 17 Counter |
| 2 Closing Coil | 10 Mechanical Interlock | 18 OCR & Alarm S/W Reset Button |
| 3 Trip Coil | 11 Phase Insulation Barrier | 19 Test Jumper |
| 4 Secondary Trip Coil | 12 On/Off Button Lock | 20 Draw-In/Out Handle |
| 5 Trip Coil Supervision | 13 OCR Portable Checker | 21 Position Pad Lock |
| 6 UVT Coil | 14 Key Lock | 22 Door Flange |
| 7 AUX Switch | 15 Miss-Insertion Preventer | 23 Dust Cover |
| 8 Condenser Trip Device (CTD) | 16 Fixing Block | |

Various Accessories (Cradle)

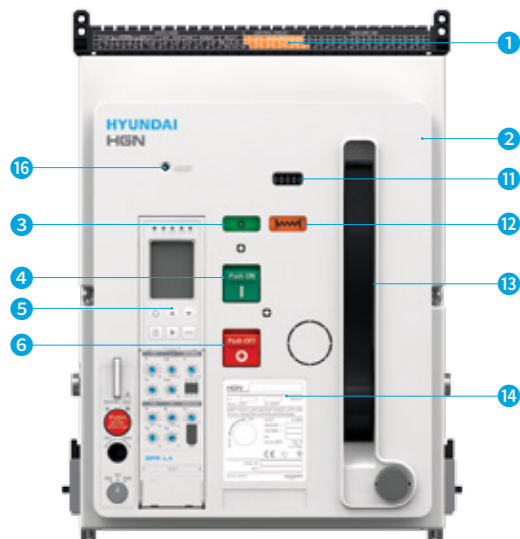


Accessories for Cradle

- | | | |
|--|-----------------------------------|-------------------------------------|
| ① UVT Time Delay Controller | ⑤ Position Switch | ⑩ Safety Shutter |
| ② Remote Closing Prevention Module | ⑥ Mechanical Interlock | ⑪ Arc Shield |
| ③ Temperature Monitoring Device Module | ⑦ Phase Insulation Barrier | ⑫ Control Terminal Protection Cover |
| ④ Short "b" Contact | ⑧ Mechanical Operated Cell Switch | |
| | ⑨ Miss-Insertion Preventer | |

Technical Data

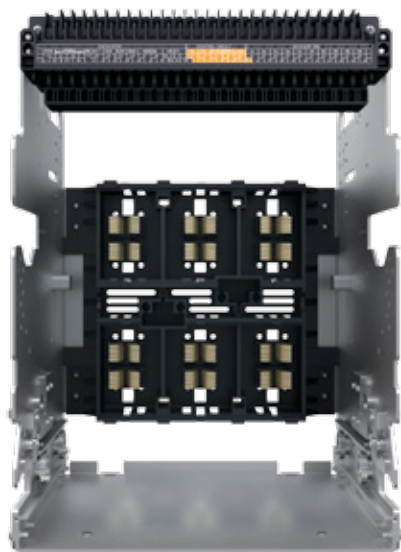
External Structure



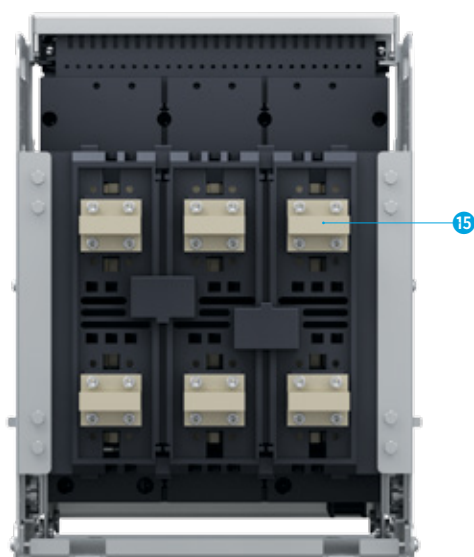
Fixed Type



Draw-In/Out Type (Including Cradle)



Cradle Front



Cradle Rear

- ① Control Circuit Terminal
- ② Front Cover
- ③ Close/Open Indicator
- ④ Close Button
- ⑤ Overcurrent Relay Device
- ⑥ Open Button

- ⑦ Position Padlock
- ⑧ Position Lock Release Button
- ⑨ Draw-In/Out Handle Insertion Hole
- ⑩ Position Indicator
- ⑪ Counter
- ⑫ Charged/Discharged Indicator

- ⑬ Manual Charging Handle
- ⑭ Rating Nameplate
- ⑮ Terminal Busbar
- ⑯ OCR & Alarm S/W Reset Button
- ⑰ Draw-In/Out Guide Rail

Accessories

Over Current Relay (OCR)

Enhancement of Over Current Relay (OCR) Functions

Over current relay (OCR) built in the HG Series air circuit breaker has reinforced power monitoring functions such as temperature monitoring, fault recording other than the basic protection function, ultimately enabling stable power supply.

GPR-LA (51, 61)

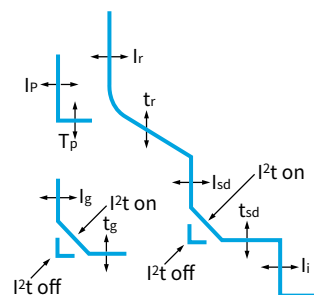


- **Overload Protection**
 - Long time delay
- **Short Circuit Protection**
 - Short time delay, instantaneous trip
 - I^2t On/Off optional (for STD)
- **Ground Fault Protection**
 - I^2t On/Off optional
- **Neutral Wire Protection**
 - 3 Pole : No protection
 - 4 Pole : Non, 50 %, 100 % ($\times I_r$, I_{sd} , I_i)
- **Measurement and Display**
 - 3 Phase current
- **Realization of Protective Coordination by ZSI (Zone Selective Interlocking)**
- **Fault Recording**
 - Records up to 256 fault information on fault type, fault phase, fault value, occurrence time of fault
- **Event Recording**
 - Records up to 200 events of devices, records changes in protection trip relay information
- **Pre-Trip Alarm**
 - Prevent unnecessary overload trip by setting according to rated current (I_n)
- **Field Test**
 - Simulation of long time, short time, instantaneous

- RS-485 Communication/Modbus-RTU
- 4a DO (Digital Output)
 - Contact specification

Rating	Nominal Switching Capacity (Resistive Load)	5 A 277 VAC
	Max. Switching Power (Resistive Load)	1,385 VA
	Max. Switching Voltage	277 VAC
	Max. Switching Current	5 A
	Max. Switching Capacity (Reference Value)	100 mA 5 VDC

- **Protection Features**



Protection Functions

Protection Function	Setting (A)	Setting (A)	Current Setting (A)											
			0.5	0.63	0.7	0.8	0.9	1	1.25	1.6	2	2.5	3.15	4
LTD Protection	Current Setting (A)	$I_n = I_{ct} \times \dots$	0.5	0.63	0.7	0.8	0.9	1	1.25	1.6	2	2.5	3.15	4
	Time Delay (sec)	$t_r @ (1.5 \times I_r)$	10.4	26.1	41.7	52	104	208	312	417	521	626	731	836
	Accuracy : $\pm 15\%$ or Below 100 ms	$t_r @ (6.0 \times I_r)$	0.5	1.25	2	2.5	5	10	15	20	25	30	35	40
		$t_r @ (7.2 \times I_r)$	0.35	0.86	1.38	1.73	3.45	6.9	10.4	13.8	17.3	20.7	24.1	27.5
STD Protection	Current Setting (A)	$I_{sd} = I_n \times \dots$	1	1.5	2	2.5	3	4	6	8	10	Non	Non	Non
	Time Delay (sec)	I^2t Off	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1
	@ $10 \times I_n$	I^2t On	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1
		(I^2t Off) Min. Trip Time (ms)	20	80	160	260	360	460	560	660	760	860	960	1060
Instantaneous Protection	Current Setting (A)	$I_i = I_n \times \dots$	2	3	4	6	8	10	12	15	Non	Non	Non	Non
	Tripping Time		Below 50 ms											
	Grounding Pick-Up Setting (A)	$I_g = I_{ct} \times \dots$	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Non	Non	Non
	Accuracy : $\pm 15\%$ ($I_g > 0.4 I_n$) $\pm 20\%$ ($I_g \leq 0.4 I_n$)													
Grounding Protection	Time Delay (sec)	I^2t Off	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1
	@ $1 \times I_{ct}$	I^2t On	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1
	Accuracy : $\pm 20\%$	(I^2t Off) Min. Trip Time (ms)	20	80	160	260	360	460	560	660	760	860	960	1060
		Max. Trip Time (ms)	80	140	240	340	440	540	640	740	840	940	1040	1140
Pre-Alarm	Current Setting (A)	$I_p = I_n \times \dots$	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	Non	Non	Non
	Time Delay (sec)	t_p	5	10	15	20	40	60	80	120	160	200	240	280

NCT (Neutral CT)

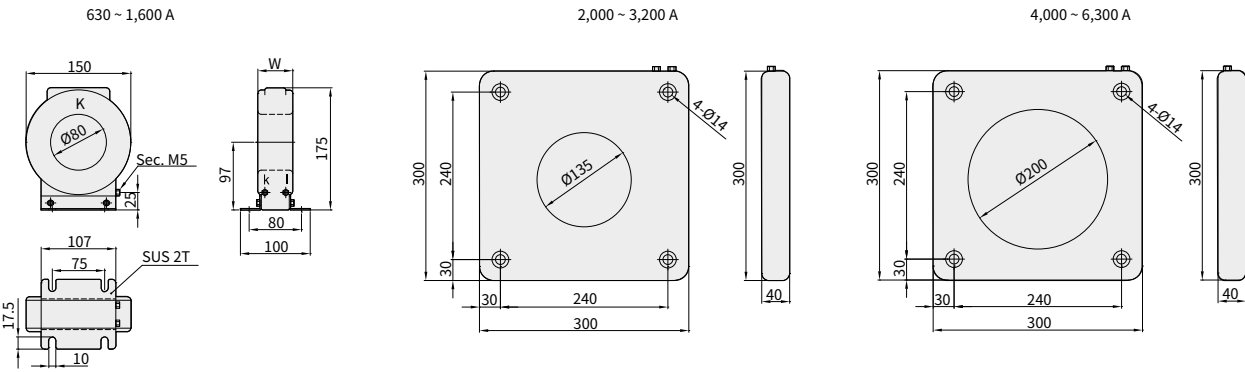
- It is a separate mounting type of current transform installed in the N phase in case of protecting the earth fault by using 3-pole air circuit breaker with earth fault protection features in a 3 phase 4 line circuit. It clarifies the GFT operation caused by earth fault by detecting currents flowing in the N phase.
- The phase is important for inserting the relay so connect properly to the designated terminal.
- As a product sold separately, place the order using the following form name per rated current.
- Switch the OCR's switch from 3P to 4P after connecting the NCT power (k), 30 (ℓ) to the 3-pole circuit breaker.

Ordering Method

Name of Accessory	Order Name for Separate Sales (HGNS-)	Detailed Specification
Neutral CT	HGNS NCT_T	NCT T = 630 A/Inner Diameter 80
	HGNS NCT_H	NCT H = 800 A/Inner Diameter 80
	HGNS NCT_J	NCT J = 1,000 A/Inner Diameter 80
	HGNS NCT_K	NCT K = 1,250 A/Inner Diameter 80
	HGNS NCT_L	NCT L = 1,600 A/Inner Diameter 80
	HGNS NCT_M	NCT M = 2,000 A/Inner Diameter 135
	HGNS NCT_N	NCT N = 2,500 A/Inner Diameter 135
	HGNS NCT_P	NCT P = 3,200 A/Inner Diameter 135
	HGNS NCT_Q	NCT Q = 4,000 A/Inner Diameter 200
	HGNS NCT_S	NCT S = 5,000 A/Inner Diameter 200
	HGNS NCT_X	NCT X = 6,300 A/Inner Diameter 200

Externals

Unit : mm



Air Circuit Breaker

NEW

HG Series



HG Series ACB is equipped with various accessories and advanced level of digital protection relay.

In addition, maximized customer's range of selection and level of satisfaction with model dualization and compact size.

Standard IEC 60947-2

Rated Current 630A ~ 6300A

Maximum Breaking Capacity[Icu] : 150kA at 500V, HGN D Frame

Ics = 100% Icu

Multi Bus Bar : · BUS Bar Terminal can be changed to horizontal/vertical



Model		HGS 08A	HGS 10A	HGS 12A	HGS 16A	HGS 20B	HGS 25B	HGN 32B	HGN 40B	HGN 50C	HGN 63D
Rated current (A)		800	1000	1250	1600	2000	2500	3200	4000	5000	6300
Number of pole		3 Poles and 4 Poles (option)									
Rated insulation voltage (Ui) (V)		AC1,000									
Rated operation voltage (Ue) (V)		AC690									
Rated frequency (Hz)		50Hz									
Rated breaking capacity [Icu, Ics] (kA sym)	AC690/600/550V	50	50	50	50	70	70	85	85	85	100
	AC500/480/460V	65	65	65	65	85	85	100	100	100	120
	AC415/380/220V	65	65	65	65	85	85	100	100	100	120
Dimensions (W x H x D, mm)	3P Fixed type	337.4 x 404.4 x 295.8					408.4 x 404.4 x 295.8			633.4 x 404.4 x 295.8	775.4x 404.4x 295.8
	3P Draw out type	328 x 460 x 368.4					399 x 460 x 368.4			624 x 460 x 368.4	766x 460 x 368.4
Unit price (3Poles Fixed type)		PRICE (THB)									
GPR-LA (LTD/STD/INST/GFT/PTA) Fault indication LED		90,000	95,000	100,000	110,000	125,000	150,000	180,000	250,000	450,000	650,000
Unit price (3Poles Draw-out type)		PRICE (THB)									
GPR-LA (LTD/STD/INST/GFT/PTA) Fault indication LED		112,000	115,000	128,000	140,000	155,000	190,000	225,000	320,000	550,000	750,000
Accessories (Option)		PRICE (THB)									
Charging Motor (HGNS M2U)		15,000									
Shunt trip (HGNS S2)		4,000									
Closing coil (HGNS C2)		4,000									
Under voltage with time delay controller + Under voltage coil (HGNS V2)		10,000									
Key lock for open position (HGNS AB)		2,500									
External Neutral Current Transformer		5,000				7,500			10,000		

Accessories (Standard)

- Auxiliary Contact (HGS: 3NO+3NC, HGN: 5NO+5NC)
- Spring Charging Switch
- Counter
- Door Flange

Standard Protection Relay

- LED Protection LTD/STD/INST/GFT
- Self Power
- Fail Safe
- Communication (Mod BUS)
- Contact Alarm LTD/STD/INST/GFT/PTA
- 256 Fault Recording

Remark : Please contact us for the price of ACB 4P.

HG-SERIES

Magnetic Contactor HGC 9 – 800 AF

Thermal Overload Relays HGT 9 – 800 AF

**Contactor
(HGC)**

**Overload
Relay
(HGT)**



18 AF

40 AF

65 AF

100 AF

HGC
Rated Current
Rated Insulation
Voltage

9, 12, 18 A
750 V

25, 32, 40 A
750 V

50, 65 A
1,000 V

75, 85, 100 A
1,000 V

HGT
Setting Current
Protection Grade

0.12 – 18 A
Class 10A

7 – 40 A
Class 10A

7 – 65 A
Class 10A

17 – 100 A
Class 10A



150 AF

115, 130, 150 A
1,000 V

48 - 150 A
Class 10A

265 AF

185, 225, 265 A
1,000 V

48 - 265 A
Class 10A

500 AF

300, 400, 500 A
1,000 V

90 - 500 A
Class 10A

800 AF

630, 800 A
1,000 V

378 - 800 A
Class 10A

Magnetic Contactor

HGC - Compact type

NEW


HGC9B-18B



HGC - Standard type



HGC9-800

Model	Rated Capacity		พิกัดมอเตอร์ kW@400V	Auxiliary	PRICE (THB)	Dimension (mm) W x H x D
	AC1(A)	AC3(A)				
HGC 9B	25	9	4	1NO	500	45 x 75 x 86
HGC 12B	30	12	5.5			
HGC 18B	40	18	7.5			
HGC 9	25	9	4	1NO+1NC	550	45 x 94.2 x 91.1
HGC 12	30	12	5.5		650	
HGC 18	40	18	7.5		750	
HGC 25	45	25	11		850	
HGC 32	55	32	15	2NO+2NC	1,000	45 x 99.6 x 96.6
HGC 40	60	40	18.5		1,300	
HGC 50	70	50	22		2,200	55 x 123.6 x 129.1
HGC 65	85	65	30		3,000	
HGC 75	115	75	37		3,300	70 x 146 x 153
HGC 85	125	85	45		3,800	
HGC 100	145	100	55		5,000	
HGC 115	160	115	60		6,500	103 x 155 x 145.1
HGC 130	180	130	65		7,000	
HGC 150	210	150	75		10,000	138 x 204 x 174.2
HGC 185	275	185	90		11,000	
HGC 225	315	225	132		14,000	
HGC 265	350	265	147		20,000	163 x 243 x 203
HGC 300	400	300	160		22,000	
HGC 400	500	400	220		28,000	
HGC500	550	500	250		35,000	276 x 314 x 255.3
HGC630	750	630	330		40,000	
HGC800	900	800	440		50,000	



Thermal Overload Relay

Model	ช่วงปรับตั้งกระแส Over load (Amp)	Price (THB)	Applicable Contactor	Dimension (mm) W x H x D
HGT18KB A0P26S	0.18-0.26	700	HGC9B HGC12B HGC18B	45 x 78.2 x 82.7
HGT18KB A0P35S	0.25-0.35			
HGT18KB A0P50S	0.34-0.50			
HGT18KB A0P70S	0.5-0.7			
HGT18KB A0P90S	0.6-0.9			
HGT18KB A1P20S	0.8-1.2			
HGT18KB A1P60S	1.1-1.6			
HGT18KB A2P10S	1.5-2.1			
HGT18KB A0003S	2~3			
HGT18KB A4P20S	2.8-4.2			
HGT18KB A0005S	3~5			
HGT18KB A0006S	4~6			
HGT18KB A0008S	5.6~8			
HGT18KB A0009S	6~9			
HGT18KB A0012S	8~12			
HGT18KB A0018S	12~18			
HGT18K A0P26S	0.18-0.26	750	HGC9 HGC12 HGC18	45 x 78.2 x 82.7
HGT18K A0P35S	0.25-0.35			
HGT18K A0P50S	0.34-0.50			
HGT18K A0P70S	0.5-0.7			
HGT18K A0P90S	0.6-0.9			
HGT18K A1P60S	1.1-1.6			
HGT18K A2P10S	1.5-2.1			
HGT18K A0003S	2~3			
HGT18K A4P20S	2.8-4.2			
HGT18K A0006S	4~6			
HGT18K A0008S	5.6~8			
HGT18K A0009S	6~9			
HGT18K A0012S	8~12			
HGT18K A0018S	12~18			
HGT40K A0012S	8~12	800	HGC25 HGC32 HGC40	45 x 69.4 x 95.5
HGT40K A0018S	12~18			
HGT40K A0022S	15-22			
HGT40K A0025S	17-25			
HGT40K A0032S	22-32			
HGT65K A0040S	28-40	1,000	HGC50 HGC65	55 x 89.3 x 110.7
HGT65K A0050S	34-50			
HGT65K A0065S	45-65			
HGT100K A0085S	59-85	1,700	HGC75, HGC85, HGC100	70 x 105 x 128.1
HGT100K A0100S	70-100			
HGT150K A0130S	78-130	3,800	HGC115 , HGC130, HGC150	180 x 159 x 179.3
HGT150K A0150S	90-150			
HGT265K A0225S	135-225	5,500	HGC185 , HGC225, HGC265	180 x 185 x 179.3
HGT265K A0265S	159-265			
HGT500K A0400S	240-400	12,000	HGC300,400,500	180 x 205.2 x 179.3
HGT800K A0630S	378-630	14,000	HGC630 , HGC800	245 x 197 x 209.9
HGT800K A0800S	480-800			

Accessories

Auxiliary Contact Block

Item	Model	Code	Auxiliary contact	Applicable product	Mounting position	Price (THB)
	HGC TB02	HGC TB02NS	0NO+2NC	HGC9-18B HGC9-100 HGR	 FRONT	160
	HGC TB11	HGC TB11NS	1NO+1NC			160
	HGC TB20	HGC TB20NS	2NO+0NC			160
	HGC TB04	HGC TB04NS	0NO+4NC			400
	HGC TB13	HGC TB13NS	1NO+3NC			400
	HGC TB22	HGC TB22NS	2NO+2NC			400
	HGC TB31	HGC TB31NS	3NO+1NC			400
	HGC TB40	HGC TB40NS	4NO+0NC			400
	HGC SB40	HGC SB40 11NS	1NO+1NC	HGC9-18B HGC9-40	 SIDE	320
	HGC SB100	HGC SB100 11NS	1NO+1NC	HGC50-100		320
	HGC SB800	HGC SB800 11NS	1NO+1NC	HGC115-800		450

Front Auxiliary Contacts



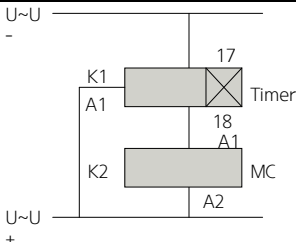
※ Maximum combination of b auxiliary contacts is 4NC.

Side Auxiliary Contacts



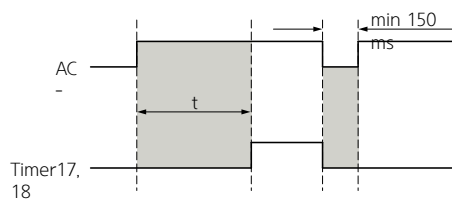
※ Maximum combination of b auxiliary contacts is 4NC.

Electronic Timer

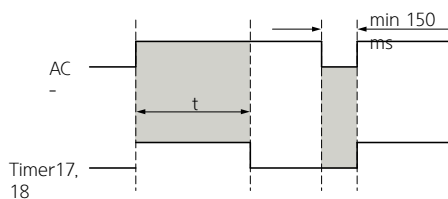
Item	Model	Operation Voltage	Applicable product	Wiring Diagram	Price (THB)
	HGC ET1	AC/DC 90-240	HGC9-100 HGR		1,500
	HGC ET2	AC/DC 24-60			1,500

Operation Concept Map

※ After power is off, reoperation delay time is 150 ms.



• Position 1: On-Delay / t: Control Time 0.15...220 sec



• Position 2: Interval Timer

Accessories

Control Coil

Product	Operational Voltage		Order Code	Applicable Product	Price (THB)
	Frequency AC 50 Hz	V 220	HGCOL18X220	HGC9 - 18	250
			HGCOL40X220	HGC25 - 40	380
			HGCOL65X220	HGC50 - 65	500
			HGCOL100X220	HGC75 - 100	750
	Normal Voltage 220	V AC100~240 DC100~220	HGCOL150F220	HGC115 - 150	1,980
			HGCOL265F220	HGC185 - 265	3,080
			HGCOL500F220	HGC300 - 500	4,800
		AC200~240 DC200~220	HGCOL800F220	HGC630 - 800	6,180

※ When ordering
HGC115 ~ 800,
it is provided in Ass'y
including the AD
converter is provided

※ Relay coils are marked as HGRCOL A220, D110 and others and P type is not sold separately.

Capacitor Switching Contactor

Making & Breaking Frequency and Lifetime

Making & Breaking Frequency		240 Cycles/h
Electrical Lifetime (AC-6b)	$U_e \leq 440 \text{ Vac}$	250,000
	$500 \text{ Vac} \leq U_e \leq 690 \text{ Vac}$	100,000



HGC contactor for capacitor switching is designed according to IEC 60947-1 and provides the best solution for the switching of your power factor correction capacitors

Model	Power in kvar (at ambient temperature 55°C)				Price (THB)
	400/415 V	440V	500/550V	690V	
HGC 9C	9.7	9.7	14	14	1,700
HGC 12C	12	12	15	15	1,800
HGC 18C	16.7	16.7	24	24	2,000
HGC 25C	20	20	26	26	2,200
HGC 32C	25	25	30	30	2,300
HGC 40C	29	29	35	35	2,800
HGC 50C	40	40	45	45	3,500
HGC 65C	43.5	43.5	54	54	4,000
HGC 75C	52	52	60	60	4,500
HGC 85C	56	56	70	70	5,000
HGC 100C	62	62	80	80	6,000

- Capacitor switching contactor is combined with magnetic contactor
- Contactor is assembled with damping resistors which limit the high in-rush current when the capacitors are switched on. They are assembled with early-make contact block, which is switched on before the main contacts, thus, limiting the in-rush current.
- Capacitor switching unit is composed of 3 NO main contacts and 1 auxilliary contact (1NO or 1NC).
- When power is supplied, capacitor creates oscillation frequency (1~15KHZ) and generates transient current (over 180 In). Capacitor switching unit limits the transient current, thus, protects main contacts.
- When power is supplied to magnetic contactor, the value of maximum current is reduced as following cases.
 - Inductance of main power supply is too high.
 - Rating of line transformer is too low.
 - Short circuit of transformer is too high.

Control Relay (HGR)

- ◆ HYUNDAI control relay is the best solution where quick response time is required such as in control circuit and factory automation.
- ◆ HGR-N is for AC operation, and HGR-P is for DC operation.
- ◆ Both HGR-N and HGR-P have five contact arrangements; 4NC, 1NO+3NC, 2NO+2NC, 3NO+1NC, 4NO.
- ◆ The protection degree is IP20.
- ◆ Accessories can be attached by one-touch method.
 - Auxiliary contact block • Electronic timer • Latching block • Surge absorber
- ◆ Maximum NC contact

4NC is the maximum contact combination of control relay including auxiliary contact block.
Front mounting auxiliary contact block (HGC TB) can be attached on control relay; however, side mounting auxiliary contact block (HGC SB) is not applicable.



HGR-N (AC)

HGR-P (DC)

Item	Model Code	Order Code	Operation Voltage (V)	Auxiliary Contact		Price (THB)
				NO	NC	
	HGR-N04	HGR 04NS X220	AC220V, 50Hz	-	4NC	850
	HGR-N13	HGR 13NS X220		1NO	3NC	850
	HGR-N22	HGR 22NS X220		2NO	2NC	850
	HGR-N31	HGR 31NS X220		3NO	1NC	850
	HGR-N40	HGR 40NS X220		4NO	-	850
			DC110V Permanent Magnetic	-	4NC	1,300
	HGR-P04	HGR 04PS D110		1NO	3NC	1,300
	HGR-P13	HGR 13PS D110		2NO	2NC	1,300
	HGR-P31	HGR 31PS D110		3NO	1NC	1,300
	HGR-P40	HGR 40PS D110		4NO	-	1,300

Note: Operating voltage

AC 24V,48V,100V,110V,220V,240V,380V 50Hz, DC 24V,48V,100V,125V
Non-specified voltage can be available on request.

Accessories

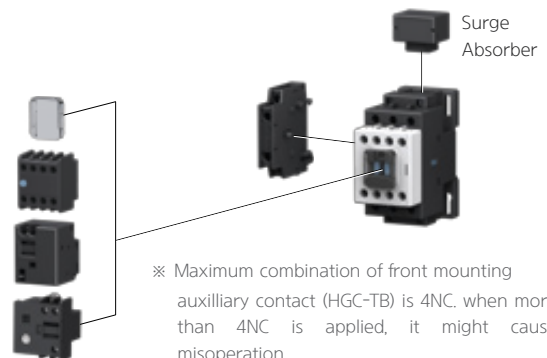
- HGR has DC and AC types, and 5 types of possible contact configurations.
- HGR follows IEC 60947 and protection degree is IP20.
- Usable temperature range is -25 ~ 40 °C.
- HGR which has fast response time is appropriate for application of control circuit and factory automation.
- Applicable standard
IEC 60947-5-1, VDE0660, CENELEC-EN50011

Contact arrangement

Model	Contacts	Contact Arrangement
HGR04	4NC	
HGR13	1NO + 3NC	
HGR22	2NO + 2NC	
HGR31	3NO + 1NC	
HGR40	4NO	

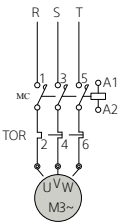
Accessories

Front Safety Cover
Auxiliary Contact Block (Front Mounting)
Mechanical Latching Block
Electronic Timer



※ Maximum combination of front mounting auxiliary contact (HGC-TB) is 4NC. when more than 4NC is applied, it might cause misoperation.

Main Circuit Diagram



Application for DOL Starting

Contactor and Thermal Overload Relay for Normal DOL Starter							
Motor 3Phase Output			Direct On Line (DOL)				
KW	HP	FLC (A)	Contactor (MC)	Price (THB)	Overload Relay	Price (THB)	Total (THB)
0.06	1/12	0.22	HGC 9-11	550	HGT18K 0.22A (0.18-0.26)	750	1,300
0.09	1/8	0.33	HGC 9-11	550	HGT18K 0.33A (0.25-0.35)	750	1,300
0.12	1/6	0.42	HGC 9-11	550	HGT18K 0.42A (0.34-0.50)	750	1,300
0.18	1/4	0.64	HGC 9-11	550	HGT18K 0.64A (0.50-0.70)	750	1,300
0.25	1/3	0.88	HGC 9-11	550	HGT18K 0.88A (0.60-0.90)	750	1,300
0.37	1/2	1.22	HGC 9-11	550	HGT18K 1.22A (1.1-1.6)	750	1,300
0.55	3/4	1.5	HGC 9-11	550	HGT18K 1.5A (1.1-1.6)	750	1,300
0.75	1	2	HGC 9-11	550	HGT18K 2A (1.5-2.1)	750	1,300
1.1	1.5	2.6	HGC 9-11	550	HGT18K 2.6A (2-3)	750	1,300
1.5	2	3.5	HGC 9-11	550	HGT18K 3.5A (2.8-4.2)	750	1,300
2.2	3	5	HGC 9-11	550	HGT18K 5A (4-6)	750	1,300
2.5	3.4	5.7	HGC 9-11	550	HGT18K 5.7A (5.6-8)	750	1,300
3.0	4	6.6	HGC 9-11	550	HGT18K 6.6A (5.6-8)	750	1,300
3.7	5	8.2	HGC 9-11	550	HGT18K 8.2A (6-9)	750	1,300
4.0	5.5	8.5	HGC 9-11	550	HGT18K 8.5A (8-12)	750	1,300
5.0	6.8	10.5	HGC 12-11	650	HGT18K 10.5A (8-12)	750	1,400
5.5	7.5	11.5	HGC 12-11	650	HGT18K 11.5A (8-12)	750	1,400
7.5	10	15.5	HGC 18-11	750	HGT18K 15.5A (12-18)	750	1,500
8.0	11	16.7	HGC 18-11	750	HGT18K 16.7A (12-18)	750	1,500
11.0	15	22	HGC 25-11	850	HGT40K 22A (17-25)	800	1,650
12.5	17	25	HGC 25-11	850	HGT40K 25A (22-32)	800	1,650
15.0	20	30	HGC 32-22	1,000	HGT40K 30A (22-32)	800	1,800
18.5	25	37	HGC 40-22	1,300	HGT65K 37A (28-40)	1,000	2,300

Application for Y- D Starting

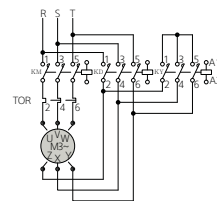
Motor starting condition:

* Six times the full load current : within 10sec.

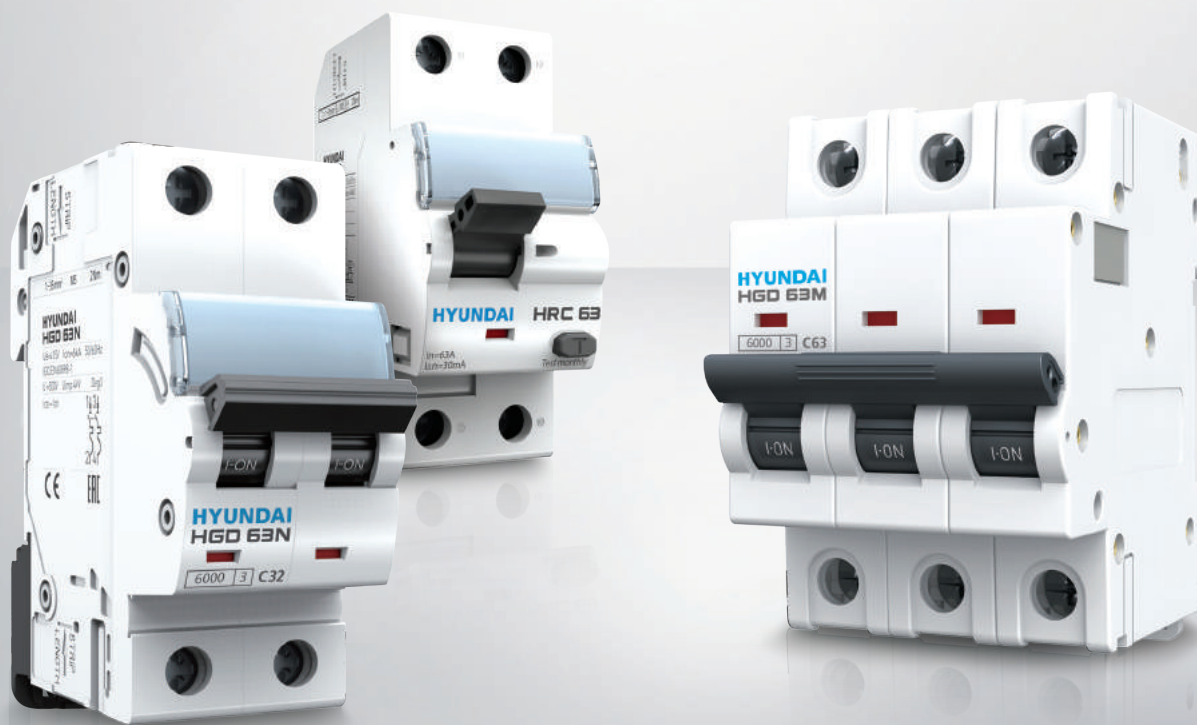
- Motor full load current : Indicate the full load current for standard type.

-"The motor having the largest output" Includes motor simultaneously being started with this motor.

Main Circuit Diagram



Motor 3Phase Output			Star-Delta (Y-D)					
KW	HP	FLC (A)	Main Contactor (KM)	Delta Contactor (KD)	Star Contactor (KY)	Thermal O/L	Electronic Time	Price (THB)
4.0	5.5	8.5	HGC 9-11	HGC 9-11	HGC 9-11	HGT18K 4.9A (4-6)	N/A	2,400
5.0	6.8	10.5	HGC 9-11	HGC 9-11	HGC 9-11	HGT18K 6A (5.6-8)	N/A	2,400
5.5	7.5	11.5	HGC 12-11	HGC 12-11	HGC 9-11	HGT18K 6.6A (5.6-8)	N/A	2,600
7.5	10	15.5	HGC 12-11	HGC 12-11	HGC 9-11	HGT18K 9A (8-12)	N/A	2,600
8.0	11	16.7	HGC 12-11	HGC 12-11	HGC 9-11	HGT18K 9.6A (8-12)	N/A	2,600
11.0	15	22	HGC 18-11	HGC 18-11	HGC 12-11	HGT18K 12.7A (12-18)	N/A	2,900
12.5	17	25	HGC 18-11	HGC 18-11	HGC 12-11	HGT18K 14.5A (12-18)	N/A	2,900
15.0	20	30	HGC 18-11	HGC 18-11	HGC 12-11	HGT18K 17.4A (12-18)	N/A	2,900
18.5	25	37	HGC 25-11	HGC 25-11	HGC 18-11	HGT40K 21.4A (17-25)	N/A	3,250
20	27	40	HGC 25-11	HGC 25-11	HGC 18-11	HGT40K 23.2A (22-32)	N/A	3,250
22	30	44	HGC 32-22	HGC 32-22	HGC 18-11	HGT40K 25.5A (22-32)	N/A	3,550
25	34	50	HGC 32-22	HGC 32-22	HGC 18-11	HGT40K 29A (22-32)	N/A	3,550
30	40	60	HGC 40-22	HGC 40-22	HGC 25-11	HGT40K 34.8A (28-40)	N/A	4,450
37	50	72	HGC 50-22	HGC 50-22	HGC 25-11	HGT65K 41.7A (34-50)	N/A	6,250
40	54	79	HGC 50-22	HGC 50-22	HGC 32-22	HGT65K 45.8A (34-50)	N/A	6,400
45	60	85	HGC 50-22	HGC 50-22	HGC 32-22	HGT65K 49.3A (45-65)	N/A	6,400
55	75	105	HGC 65-22	HGC 65-22	HGC 40-22	HGT65K 60.9A (45-65)	N/A	8,300
60	81	120	HGC 75-22	HGC 75-22	HGC 40-22	HGT100K 69.6A (59-85)	N/A	9,600
65	87	130	HGC 75-22	HGC 75-22	HGC 50-22	HGT100K 75.4A (59-85)	N/A	10,500
75	100	140	HGC 85-22	HGC 85-22	HGC 50-22	HGT100K 81.2A (70-100)	N/A	11,500
90	125	170	HGC 100-22	HGC 100-22	HGC 65-22	HGT100K 98.6A (70-100)	N/A	14,700
110	150	205	HGC 130-22	HGC 130-22	HGC 75-22	HGT150K 118.9A (78-130)	N/A	21,100
132	180	245	HGC 150-22	HGC 150-22	HGC 85-22	HGT150K 142.1A (90-150)	N/A	27,600
140	190	260	HGC 150-22	HGC 150-22	HGC 100-22	HGT150K 150.8A (90-150)	N/A	28,800
160	220	295	HGC 185-22	HGC 185-22	HGC 100-22	HGT265K 171.1A (135-225)	N/A	32,500
184	250	340	HGC 225-22	HGC 225-22	HGC 115-22	HGT265K 197.2A (135-225)	N/A	40,000
200	270	370	HGC 225-22	HGC 225-22	HGC 130-22	HGT265K 214.6A (135-225)	N/A	40,500
220	300	408	HGC 265-22	HGC 265-22	HGC 150-22	HGT265K 236.6A (159-265)	N/A	55,500
250	340	460	HGC 300-22	HGC 300-22	HGC 185-22	HGT500K 266.8A (240-400)	N/A	67,000
257	350	475	HGC 300-22	HGC 300-22	HGC 185-22	HGT500K 275.5A (240-400)	N/A	67,000
295	400	546	HGC 400-22	HGC 400-22	HGC 185-22	HGT500K 316.7A (240-400)	N/A	79,000
315	430	580	HGC 400-22	HGC 400-22	HGC 225-22	HGT500K 336.5A (240-400)	N/A	82,000
355	480	636	HGC 400-22	HGC 400-22	HGC 225-22	HGT500K 368.9A (240-400)	N/A	82,000
400	545	710	HGC 630-22	HGC 630-22	HGC 265-22	HGT800K 411.8A (378-630)	N/A	114,000
440	545	780	HGC 630-22	HGC 630-22	HGC 265-22	HGT800K 454.5A (378-630)	N/A	114,000
500	680	890	HGC 630-22	HGC 630-22	HGC 300-22	HGT800K 516.2A (378-630)	N/A	116,000
670	910	1200	HGC 800-22	HGC 800-22	HGC 400-22	HGT800K 696A (480-800)	N/A	142,000



HG Modular Devices

HGD / HRC / HRO

Technical Data

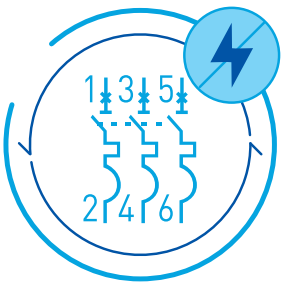
Description

Construction

Miniature circuit breakers have precisely formed molded case & cover of flame retardant high strength thermoplastic material having high melting point, low water absorption, high dielectric strength and temperature withstand.

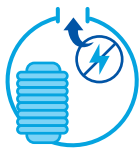
The switching mechanism is independent, manual and trip free, i.e., the breaker trips internally even if the operating knob is held in ON position.

The contact mechanism comprises of fixed & moving contacts specially designed for reliability, long life and anti-weld properties. The arc extinguishing device comprises of 13 plates arc chute. The arc under the influence of the magnetic field and arc guide is moved into the arc chute where it is rapidly split and quenched. The tripping mechanism is thermal magnetic type.



Thermal Operation

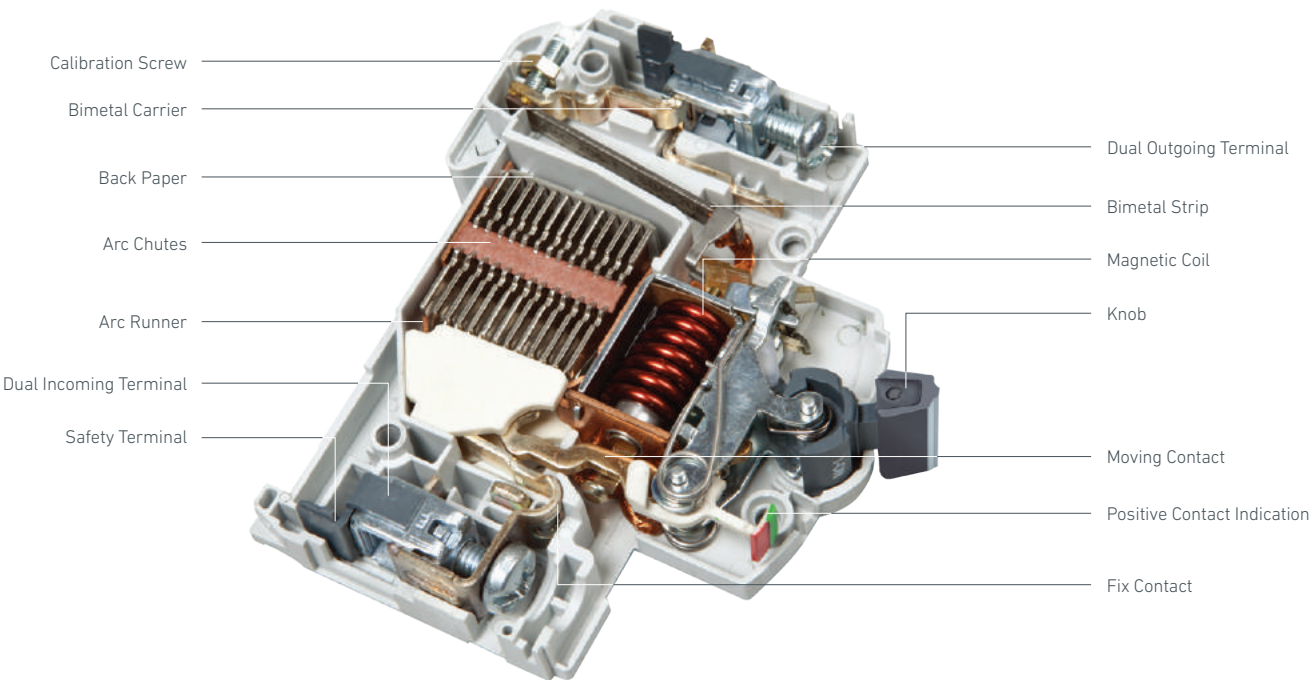
The thermal operation provides protection from moderate overloads. Under overload condition, a thermo-metallic element (bimetallic strip) deflects until it operates a latching mechanism allowing the main contacts to open.



Magnetic Operation

In magnetic operation, large overloads or short circuit current actuates a solenoid causing a plunger to strike the latching mechanism rapidly opening the main contacts.

Internal View



HGD63M, 63 AF, 6 kA



- Standard

Protection

Specification
- IEC/EN 60898-1

Overload, Short-Circuit

6kA at AC240/415V

- 1P, 1P+N, 2P, 3P, 3P+N, 4P

- Ics = 100% Icu

- Energy Limit Class 3

- Characteristics Curves C, Curves D

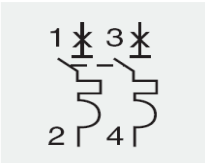
- IP20
- Accessory

Auxiliary contact

Alarm trip

Shunt trip

Under voltage trip

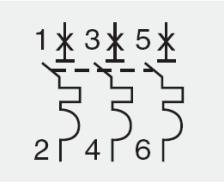
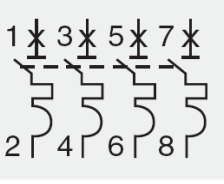
Item	Diagram	Rated current In (A)	Order Code	Price (THB)
		6A,10A,16A,20A,25A,32A	HGD63M 1PMxS0000C 000 xx	150
		40A,50A,63A	HGD63M 1PMxS0000C 000 xx	170
		16A,20A,25A,32A	HGD63M 2PMxS0000C 000 xx	300
		40A,50A,63A	HGD63M 2PMxS0000C 000 xx	320
		16A,20A,25A,32A	HGD63M 3PMxS0000C 000 xx	450
		40A,50A,63A	HGD63M 3PMxS0000C 000 xx	500
		16A,20A,25A,32A	HGD63M 4PMxS0000C 000 xx	600
		40A,50A,63A	HGD63M 4PMxS0000C 000 xx	700

Remark : Please contact us for the price of MCB rated current 1-5A (1P,2P,3P,4P).

HGD63P, 63 AF, 10 kA



Standard	IEC/EN 60898-1
Protection	Overload, Short-Circuit
Specification	10kA at AC240/415V
	- 1P, 1P+N, 2P, 3P, 3P+N, 4P
	- Ics = 75% Icu
	- Energy Limit Class 3
	- Characteristics Curves C, Curves D
	- IP20
Accessory	Auxiliary contact
	Alarm trip
	Shunt trip
	Under voltage trip

Item	Diagram	Rated current In (A)	Order Code	Price (THB)
		6A,10A,16A,20A,25A,32A 40A,50A,63A	HGD63P 1PMXS0000C 000 xx	250
		16A,20A,25A,32A, 40A,50A,63A	HGD63P 2PMXS0000C 000 xx	500
		16A,20A,25A,32A, 40A,50A,63A	HGD63P 3PMXS 0000C 000xx	750
		16A,20A,25A,32A, 40A,50A,63A	HGD63P 4PMXS0000C 000 xx	1,000

Remark : Please contact us for the price of MCB rated current 1-5A (1P,2P,3P,4P).

HGD100S, 100 AF, 10 kA



Standard IEC/EN 60898-1
Protection Overload, Short-Circuit
Specification 10kA at AC240/415V
- 1P, 1P+N, 2P, 3P, 3P+N, 4P
- Ics = 75% Icu
- Energy Limit Class 3
- Characteristics Curves C
- IP20
Accessory Auxiliary contact
Alarm trip
Shunt trip
Under voltage trip

Item	Pole	Rated current In (A) C curve	Order Code	Price (THB)
HGD100S, 100AF, 10kA	1P	63A	HGD100S 1PMCS0000C 00063	600
		80A	HGD100S 1PMCS0000C 00080	
		100A	HGD100S 1PMCS0000C 00100	
	2P	63A	HGD100S 2PMCS0000C 00063	1,200
		80A	HGD100S 2PMCS0000C 00080	
		100A	HGD100S 2PMCS0000C 00100	
	3P	63A	HGD100S 3PMCS0000C 00063	1,800
		80A	HGD100S 3PMCS0000C 00080	
		100A	HGD100S 3PMCS0000C 00100	
	4P	63A	HGD100S 4PMCS0000C 00063	2,400
		80A	HGD100S 4PMCS0000C 00080	
		100A	HGD100S 4PMCS0000C 00100	
	1+N	63A	HGD100S 1NMCS0000C 00063	1,100
		80A	HGD100S 1NMCS0000C 00080	
		100A	HGD100S 1NMCS0000C 00100	
	3+N	63A	HGD100S 3NMCS0000C 00063	2,200
		80A	HGD100S 3NMCS0000C 00080	
		100A	HGD100S 3NMCS0000C 00100	

Features

HRC Residual Current Circuit Breaker

RCCB (also popularly known as ELCB) is a mechanical switching device designed to make, carry and break currents under normal service conditions and to cause the opening of the contacts when the leakage current attains a given value under specified conditions. Hyundai offers a wide range of RCCBs for protecting human life against fatal electric shocks as well as for providing protection against fire caused by earth faults.

HRC Deluxe Type



HRC63S, 63 AF/30mA

HRC100S, 100 AF/30mA

Residual Current Circuit Breaker

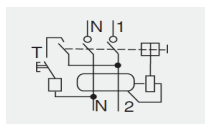
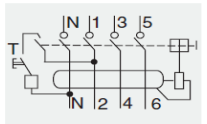
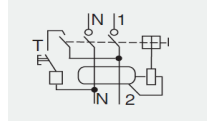
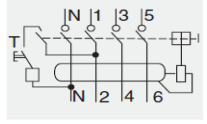


Standard IEC/EN61008
Protection earth leakage
Specification 6kA at AC240/415V
HRC63S : 16, 25, 32, 40, 50, 63A
HRC100S : 63, 80, 100A
- 30mA
- 2P (N+1P), 4P (N+3P)
- AC, A type



เลขที่ มอก /2425-2552

มอก.2425-2552

Item	Diagram	Rated current In (A)	Order Code	Price (THB)
 63 AF 2P (N+1P) 30mA		16, 25, 32, 40, 50, 63A	HRC63S 2PG4S0000C 000xx	1,450
 63 AF 4P (N+3P) 30mA		16, 25, 32, 40, 50, 63A	HRC63S 4PG4S0000C 000xx	1,850
 100 AF 2P (N+1P) 30mA		63, 80, 100A	HRC100S 2PG4S0000C 00xxx	2,250
 100 AF 4P (N+3P) 30mA		63, 80, 100A	HRC100S 4PG4S0000C 00xxx	3,300

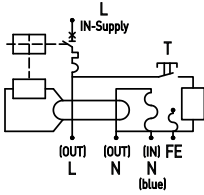
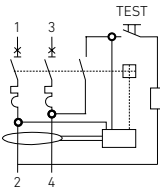
HRO40hT, 40 AF, 10kA (with Cable) HRO63B, 63 AF, 10kA

Residual Current Circuit Breaker with Overcurrent Protection

Standard	IEC/EN 61009-1
Protection	Earth leakage , Over current
Specification	10 kA at AC240V
	- 10, 16, 20, 25, 32, 40, 50, 63A
	- HRO40hT : 1P+N (1 module)
	- HRO63B : 2P (2 module)
	- 10 kA (Ics = 75% Icu)
	- 30mA
	- AC type
	- C Curve
	- IP20



มือถือ. 909-2548

Item	Diagram	Rated current In (A)	Order Code	Price (THB)
For feeder  1P + N (1module)		10, 16, 20, 25, 32, 40	HRO40HT 1NG4C0000C 000xxG	1,850
For main  2P (2module)		16, 20, 25, 32, 40, 50, 63	HRO63B 2PG4C0000C 000xxG	2,100



General Specification Panel Board

IEC 61439-3

Busbar ทำจากทองแดงชุบเป็นชั้นเดียวไม่มีรอยต่อ

แท่ง N,G ทำจากทองเหลือง

Grounding ระหว่างตัวตู้กับฝาตู้

ติดตั้งบนราง Dinrail EN50022 แบบ Snap On ขนาด 35x7.5 mm

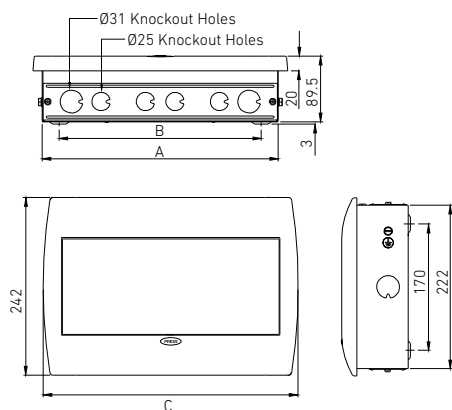
การพันสี 60 Micro และอบด้วยความร้อน 200 องศาเซลเซียส



Panel Board : Main.CB 100A	MODEL	Dimension (WxHxD)	Price (THB)
- 12 Modules	PB12MB100	400x600x125	6,800
- 18 Modules	PB18MB100	400x650x125	7,600
- 24 Modules	PB24MB100	400x650x125	8,400
- 30 Modules	PB30MB100	400x700x125	9,300
- 36 Modules	PB36MB100	400x800x125	10,500
- 42 Modules	PB42MB100	400x800x125	11,000
Panel Board : Main.CB 250A	MODEL	Dimension (WxHxD)	Price (THB)
- 24 Modules	PB24MB250	400x650x125	11,000
- 30 Modules	PB30MB250	400x700x125	12,000
- 36 Modules	PB36MB250	400x800x125	13,000
- 42 Modules	PB42MB250	400x800x125	14,000
Panel Board : Main.Lug 250A	MODEL	Dimension (WxHxD)	Price (THB)
- 18 Modules	PB18ML250	400x500x125	7,200
- 24 Modules	PB24ML250	400x500x125	8,000
- 30 Modules	PB30ML250	400x600x125	8,800
- 36 Modules	PB36ML250	400x650x125	9,500
- 42 Modules	PB42ML250	400x650x125	10,500
Technical Specification :			
Maximum busbar rated :	250A		
Rate Voltage :	240/415V 50Hz		
Material :	Electro Galvanized Steel		
Thickness :	1.0 mm		
Degree Of Protection (IP):	IP 4x		
Neutral terminal capacity	Incoming up to 95 mm ² / Outgoing up to 16 mm ²		
Ground terminal capacity	Incoming up to 95 mm ² / Outgoing up to 16 mm ²		
Color:	C130132A (Ice Wool) Epoxy Powder Paint Coating		



Consumer Unit	Standard Type		Split bus Type	
Model	HRDB06W	HRDB10W	HRSB14W	HRSB19W
Description	8Ch (Main+6 Ways)	12Ch (Main+10 Ways)	16Ch (Main+14 Ways)	21Ch (Main+19 Ways)
Price (THB)	1,400	1,650	1,900	2,200
Technical Specification				
Dimension (WxHxD) mm.	260x220x90	320x220x90	359x210x88.7	450x210x88.7
Maximum busbar rated :	160A			
Rate Voltage :	240/415V 50Hz			
Material :	Electro Galvanized Steel			
Thickness :	0.8 mm		1.2 mm	
Degree of Protection (IP) :	IP 42		IP 40	
Neutral terminal capacity	Incoming up to 16 Sq.mm / Outgoing up to 10 Sq.mm			
Ground terminal capacity	Incoming up to 16 Sq.mm / Outgoing up to 10 Sq.mm			
Color :	Peal white Epoxy Powder Paint Coating		White (RAL9003)	



Standard Type

No. of Ways	A	B	C	Top		Bottom		Side
				Ø25	Ø31	Ø25	Ø31	
8	247	195	272	2	2	2	2	1
12	319	267	344	4	2	4	2	1

Specification

- IEC61439-3
- These are most elegantly designed DBs, to suit the décor of homes
- Raised neutral link for easy wiring
- Spring loaded outer cover swings open by just pressing the lock button
- Supplied with masking sheets to protect components from cement during plastering
- Supplied with neutral & earth link, top & bottom detachable plates
- Din rail EN50022 Snap On type 35x7.5 mm
- Bus Bar link : Tin plated copper
- Powder coating 60 Micro and heat treatment 200°C

Authorized Dealer :



Authorized Dealer :



Head Office **T & D POWER TECH (THAILAND) CO ., LTD**
H-Cape Biz Sector Onnut
22/28-29 Sukaphiban 2 Road.,
Kwaeng Prawet, Khet Prawet, Bangkok, 10250
Tel : +66-(0)2-002-4395-7Fax : +66-(0)2-002-4398
INFO@TDPOWERTECH.COM