



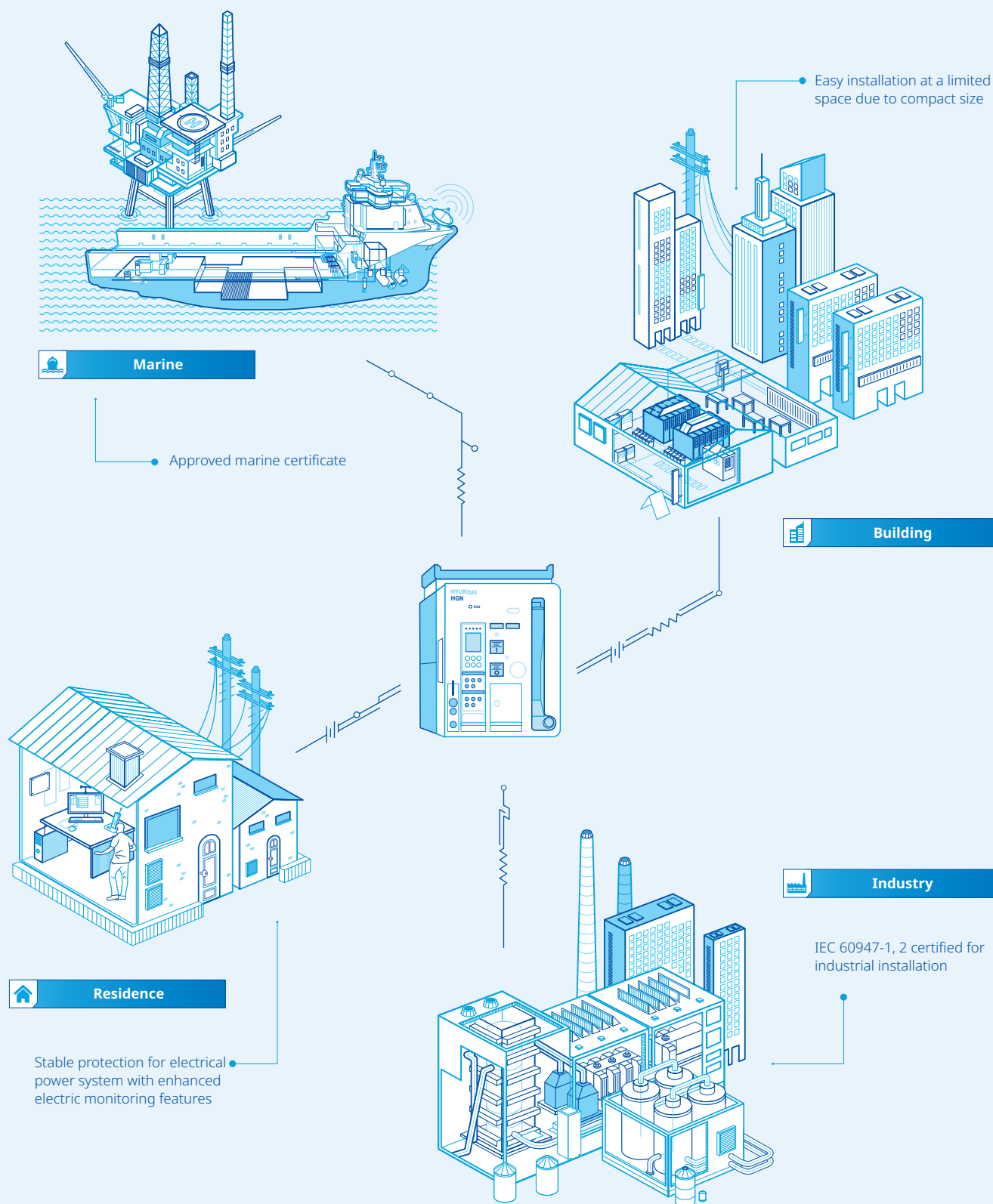
HGN, HGS

Air Circuit Breakers

HGN, HGS

Air Circuit Breakers

Applicable to Various Location



Product Features

In accordance with the changing trend, 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.



Type per Rating

- **HGN**
Frame 4 Type
- 2,000/4,000/5,000/6,300 A
- **HGS**
Frame 2 Type
- 1,600/3,200 A



Outstanding Breaking Capacity

- Maximum Breaking Capacity :
150 kA (at 500 V, HGN D Frame)
- Rated Impulse Withstand Voltage (Uimp) :
12 kV



Multi Busbar

- BUS Bar Terminal can be changed to
horizontal/vertical



Customized Retrofit ACB can be Provided

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



Accurate Accident Detection System

- Accident information can be received
by smart phone using NFC android app
(information can be saved up to 10 times)



Overview

Product Type



A Frame [85 kA]

HGS 630 ~ 1,600 A
HGN 630 ~ 2,000 A



B Frame [100 kA]

HGS 2,000 ~ 3,200 A
HGN 630 ~ 4,000 A



C Frame [100 kA]

HGN 3,200 ~ 5,000 A



D Frame [150 kA]

HGN 4,000 ~ 6,300 A

Capable of Responding to Various Customer Applications

HG-Series ACB can satisfy needs of various customers by allowing applications on commercial buildings, data center, instruments industries with its high breaking capacity and advanced OCR. With a 100 % capacity design of the N phase for all models, it will also protect facilities safely from abnormality such as harmonic wave.



Building

- Multipurpose Building
- Great Hospital
- Commercial Building
- Hotel



Computer Center

- Broadcasting Station
- Information/Computer Center



Industrial Facility

- Steelworks
- Petrochemistry
- Paper-mill



Power Utility

- Power Plant
- Substation
- Micro Grid
- ESS

Acquired Standards and Certifications

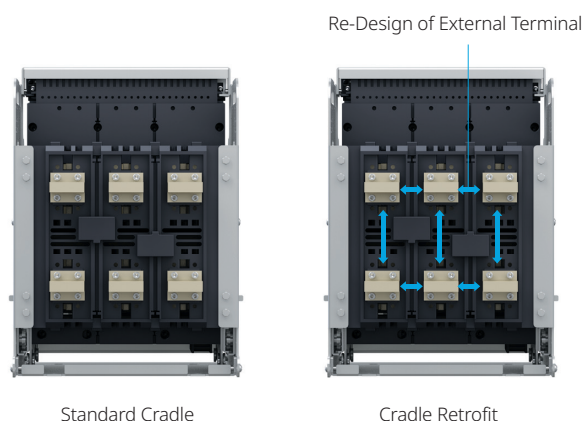
- KS Certification : KS C 4620
- CB Certification (DEKRA, KERI) : IEC 60947-1, 2
- CE Mark
- CCC Certification
- Vessel Certification : LR, ABS, KR, BV, DNV-GL, NK, RINA, RS



Customized Retrofit ACB

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

Economic	No need for busbar and external box replacement, minimum construction period, uninterruptable replacement in case of body retrofit
Stability	Lifespan can be extended through the latest relay performance and by providing breaking performance of high breaking product
Compatibility	Stable usage through control terminal bar, bus bar structure and plug-in compatible devices
Technical Support	Customer satisfaction through inspection of various accessories of old panels



Highly Functional Protection Relay (OCR)

Apart from the basic protection functions, OCR(Over Current Relay(Trip Relay)) has reinforced power monitoring functions such as temperature monitoring, fault recording and storage etc., enabling stable power supply.

Model Name	N Type	A Type	P Type	H Type
Externals				
Main Functions	<ul style="list-style-type: none"> · Overcurrent Protection (L/S/I/G) · World's First NFC Function Applied · Fault Recording (10) and Waveform (4 Cycles, Check Via Communication) can be Transmitted to Mobile Phone App 	<ul style="list-style-type: none"> · Overcurrent Protection (L/S/I/G) · Self Power · Individual Continuous Power Contact · Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) · Communication (MODBUS), External Grounding CT/Earth Leakage ZCT can be used 	<ul style="list-style-type: none"> · Overcurrent Protection (L/S/I/G) · External Power · Individual Continuous Power Contact · Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) · Over-Voltage/Under-Voltage, Power, Power Factor, Energy Display 	<ul style="list-style-type: none"> · L/S/I/G Functions · External Power · Individual Continuous Power Contact · Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) · L/S/I/G Minute Current Adjustment · Voltage/Current Harmonics (1 st ~ 63 th) Analysis · View 3 Phase Waveform

Model Selection Table

Rating and Specification

Model Name				HGS		HGN									
Item				A Frame		B Frame		A Frame		B Frame		C Frame		D Frame	
Rated Current [In max]	Based on 40 °C	A		06 : 630		20 : 2,000		06 : 630		06 : 630		32 : 3,200		40 : 4,000	
				08 : 800		25 : 2,500		08 : 800		08 : 800		40 : 4,000		50 : 5,000	
				10 : 1,000		32 : 3,200		10 : 1,000		10 : 1,000		50 : 5,000		63 : 6,300	
				12 : 1,250				12 : 1,250		12 : 1,250					
				16 : 1,600				16 : 1,600		16 : 1,600					
								20 : 2,000		20 : 2,000					
										25 : 2,500					
										32 : 3,200					
										40 : 4,000					
Rated Operational Voltage [Ue]		V		690		690		690		690		690		690	
Rated Insulation Voltage [Ui]		V		1,000		1,000		1,000		1,000		1,000		1,000	
Frequency		Hz		50/60		50/60		50/60		50/60		50/60		50/60	
No. of Poles		P		3, 4		3, 4		3, 4		3, 4		3, 4		3, 4	
Current Setting Range (...× In max)		A		0.4 ~ 1.0		0.4 ~ 1.0		0.4 ~ 1.0		0.4 ~ 1.0		0.4 ~ 1.0		0.4 ~ 1.0	
Rated Current of Neutral Pole (N) (... %×In)		A		100 %		100 %		100 %		100 %		100 %		100 %	
Rated Breaking Capacity [Icu] [Sym]															
IEC 60947-2 Category "B" KS C 4620	AC	690/600/550 V		50		70 ¹⁾ (KS : 65)		65		85		85		100	
		500/480/460 V		65		85		85		100		100		150	
		415/380/230/220 V		65		85		85		100		100		150	
Rated Service Short-Circuit Breaking Capacity [Ics] ...%×Icu		kA		100 %		100 %		100 %		100 %		100 %		100 %	
Rated Closing Current [Icm] [Peak]															
IEC 60947-2 Category "B" KS C 4620	AC	690/600/550 V		105		154		143		187		187		220	
		500/480/460 V		143		187		187		220		220		330	
		415/380/230/220 V		143		187		187		220		220		330	
Rated Short-Time withstand Voltage [Icw] (Without Inst)															
1 Second				50		70		65		85		85		100	
2 Seconds		kA		35		65		42		75		75		85	
3 Seconds				28		50		35		65		65		75	
Rated Impulse withstand Voltage [Uimp]		kV		12		12		12		12		12		12	
Total Breaking-Time		ms		40 ³⁾		40 ³⁾		40 ³⁾		40 ³⁾		40 ³⁾		40 ³⁾	
Closing Operational Time															
Motor Charging Time (sec) max.				10		10		10		10		10		10	
Rated Trip Time (ms) max.				80		80		80		80		80		80	
Lifecycle (Cycles)															
Mechanical	Without Maintenance			20,000		20,000		20,000		20,000		10,000		5,000	
	With Maintenance			30,000		30,000		30,000		30,000		15,000		10,000	
Electrical	Without Maintenance			5,000		5,000		5,000		20 : 5,000 25 ~ 40 : 3,000		2,000		2,000	
	With Maintenance			10,000		10,000		10,000		20 : 10,000 25 ~ 40 : 8,000		5,000		5,000	
Weight															
3 Pole	Draw-Out Type			63		87		63		87 (107) ²⁾		145		169	
	Fixed Type			34		44		34		44 (61) ²⁾		76		108	
4 Pole	Draw-Out Type			74		103		74		103 (140) ²⁾		173		214	
	Fixed Type			44		55		44		55 (80) ²⁾		81		137	
Dimensions (W×H×D)															
3 Pole	Draw-Out Type			328×460×368.4		399×460×368.4		328×460×368.4		399×460×368.4		624×460×368.4		766×460×368.4	
	Fixed Type			337.4×404.4×295.8		408.4×404.4×295.8		337.4×404.4×295.8		408.4×404.4×295.8		633.4×404.4×295.8		775.4×404.4×295.8	
4 Pole	Draw-Out Type			413×460×368.4		514×460×368.4		413×460×368.4		514×460×368.4		794×460×368.4		996×460×368.4	
	Fixed Type			422.4×404.4×295.8		523.4×404.4×295.8		422.4×404.4×295.8		523.4×404.4×295.8		803.4×404.4×295.8		1,005×404.4×295.8	

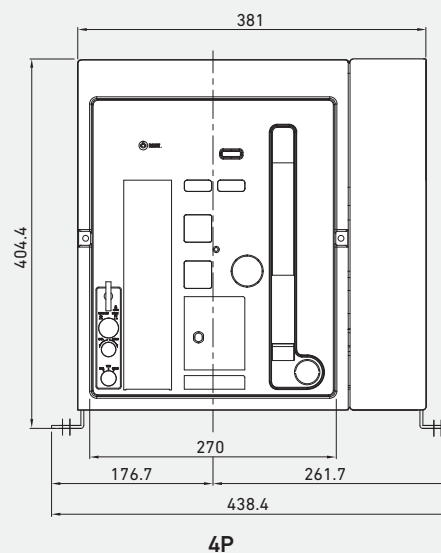
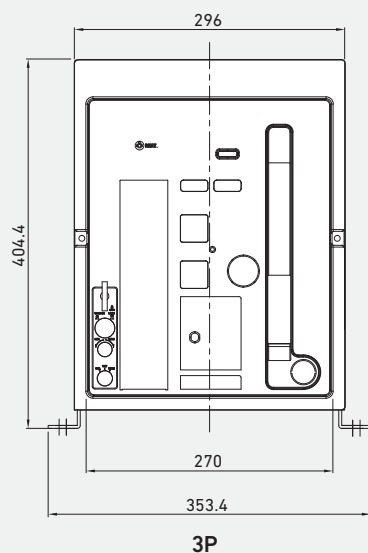
※ 1) 70 kA is DEKRA certified
2) 4,000 AF
3) In case of MCR and override setting, INST is 50 ms.

Life time is the limit lifespan and is not the guaranteed lifespan. In case of maintenance, it is charged. In the event of abnormalities in accessories during use, it can be replaced.
Quality Assurance : Based on IEC 60947-2's number of opening/closing within the warranty period.

Dimensions

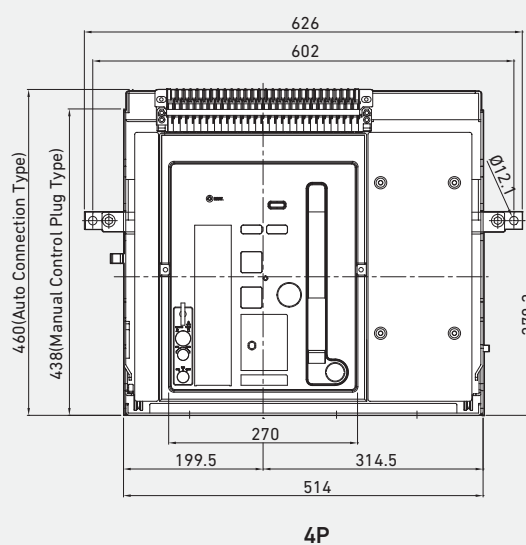
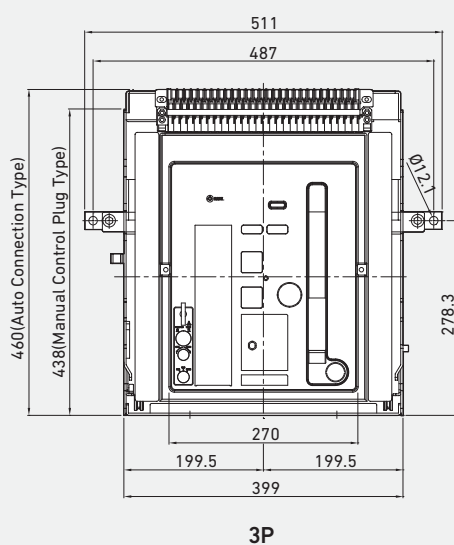
HGS/HGN Fixed Type 630 ~ 2,000 A HGS06 ~ 16/HGN06 ~ 20 A Frame

Unit : mm



HGS/HGN Draw-Out Type 2,000 (630) ~ 3,200 A HGS/HGN20 (06) ~ 32 B Frame

Unit : mm



※ Please refer to HGN catalog for Order codes and additional Dimensions.



Korea

Head Office	477, Bundang Suseo-ro, Bundang-gu, Seongnam-si, Korea	Tel: +82-2-479-9180	Fax: +82-2-500-4958
Ulsan Factory	700 Bangeojinsunhwan-doro, Dong-gu, Ulsan, Korea	Tel: +82-52-202-8114	Fax: +82-52-202-8010
Reliability Center	17-10, Mabuk-ro 240beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do, Korea	Tel: +82-31-289-5000	Fax: +82-31-289-5040

Overseas Subsidiaries

Atlanta	2405 Satellite Blvd, Duluth GA 30096, U.S.A.	Tel: +1-678-789-1885	
Alabama	215 Folmar Parkway, Montgomery, AL 36105, U.S.A	Tel: +1-334-481-2000	Fax: +1-334-386-8994
Arabia	Office No. 529, 5th floor Akaria-3 Building, Olaya Street, PO Box 9187, Riyadh 11413, Kingdom of Saudi Arabia	Tel: +966-11-419-0168	Fax: +966-11-419-0220
Yangzhong	No.9, Xiandai Road, Xinba Scientific and Technologic Zone, Yangzhong, Jiangsu, P.R.C. Zip:212212, China	Tel: +86-511-8842-0510	Fax: +86-511-8842-0388

Branch Offices

London	50-68 High Street, Weybridge, KT13 8BL, United Kingdom	Tel: +44-7979-125051	
Frankfurt	Eschborner Landstrasse 55, 60489 Frankfurt am Main, Germany	Tel: +49-69-7490-3934	
Moscow	World Trade Center, Ent.6, #412, Krasnopresnenskaya Nab.12, Moscow, 123610, Russia	Tel: +7-495-258-1381	
Riyadh	Office No. 530A, 5th Floor Akaria-2 Bldg., Olaya St., Short Address RHOB6847, Riyadh 12244, Kingdom of Saudi Arabia	Tel: +966-11-210-1107	Fax: +966-11-210-1107
Dubai	Unit 205, Emaar Square Building NO.4 Sheikh Zayed Road, Pobox 252458, Dubai, U.A.E	Tel: +971-50-321-8154	Fax: +971-4-425-7996
Bangkok	19th Floor, Unit 1908, Sathorn Square Office Tower, 98 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand	Tel: +66-02-115-7920	Fax: +66-2-115-7898
Ho Chi Minh	Room 1405, 14th Floor Centec Tower, 72-74 Nguyen Thi Minh Khai Street Vo Thi Sau Ward, District 3, Ho Chi Minh City, Vietnam	Tel: +84-28-3535-0465	
Osaka	1-Room 5th Floor Nagahori Plaza Bldg. 2-4-8 Minami Senba, chuo-ku, Osaka 542-0081, Japan	Tel: +81-6-6261-5766~7	Fax: +81-6-6261-5818

R&D Centers

Switzerland	Hardturmstrasse 135, CH-8005, Zurich, Switzerland	Tel: +41-76-241-6707	
Hungary	H-1145 Bacsikai utca 29/a, Budapest, Hungary	Tel: +36-1-273-3733	
China	Room 10102, Building 10, 498 Guoshoujing Road, Pudong, Shanghai, China(201203)	Tel: +86-21-5013-3393 #139	

Customer Service	service@hd.com
------------------	----------------