

LV & MV CIRCUIT BREAKERS



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MV		LV					
VC	VCB	MMS	TOR	MC	ACB	MCCB	MCB

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کلید هوایی سری HGS و HGN

HGS



استانداردها: IEC/EN60947-2
مفاظت ها: اضافه بار، اتصال کوتاه آنی، اتصال کوتاه تأخیری، فضای زمین
نمونه قرارگیری: ثابت، کشویی
کاربری: عمومی، ژنراتوری
تعداد پل: ۳، ۴
ولتاژ عملکرد: ۲۲۰ تا ۶۹۰ ولت
جریان نامی: ۶۳۰ تا ۳۲۰۰ آمپر
قدرت قطع: ۴۵، ۸۵ کیلو آمپر
زمان ایستادگی در برابر جریان اتصال کوتاه: ۳ ثانیه

HGN



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HG-SERIES

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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				
Rated Insulation Voltage [Ui]		V	1,000		1,000				
Frequency		Hz	50/60		50/60				
No. of Poles		P	3, 4		3, 4				
Current Setting Range (... × In max)		A	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		kA	50	70	65	85	85	100	
2 Seconds			35	65	42	75	75	85	
3 Seconds			28	50	35	65	65	75	
Rated Impulse withstand Voltage [Uimp]		kV	12		12				
Total Breaking-Time		ms	40 ³⁾		40 ³⁾				
Closing Operational Time									
Motor Charging Time (sec) max.			10		10				
Rated Trip Time (ms) max.			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		kg	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
(W×H×D)									
3 Pole	Draw-Out Type		mm	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



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)

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Over Current Relay (OCR)

Function	General Feeder					Generator (Marine Type)			
Model Name	N Type	A Type			P Type	H Type	N Type	A Type	P Type
	GPR-LN	GPR-LA	GPR-LAG	GPR-LAZ	GPR-LP	GPR-LH	GPR-SN	GPR-SA	GPR-SP
Frequency									
50 Hz	50	51	52	53	54	55	57	58	59
60 Hz	60	61	62	63	64	65	67	68	69
Control Power									
External Power	—	●	●	●	●	●	—	●	●
Self-Power	●	●	●	●	●	●	●	●	●
Protection Function									
LTD (Long Time)	●	●	●	●	●	●	●	●	●
STD (Short Time)	●	●	●	●	●	●	●	●	●
INST (Instantaneous)	●	●	●	●	●	●	●	●	●
Pre-Trip Alarm	—	●	—	—	●	●	—	●	●
Ground Fault Trip	●	●	—	—	●	●	—	—	—
ELT Function	—	—	● Outer CT Ground ²⁾ (Ground fault at more than 30 A)	● ZCT Earth Leakage ³⁾ (Below 30 A)	—	—	—	—	—
Thermal Function	●	●	●	●	●	●	●	●	●
Field Test	—	●	●	●	●	●	—	●	●
Fail Safe	●	●	●	●	●	●	●	●	●
Indication									
True RMS Detection Method	●	●	●	●	●	●	●	●	●
LED Indication per Trip Type	—	●	●	●	●	●	—	●	●
Fault LED	L ¹⁾	PTA, L, S/I, G	PTA, L, S/I, leakage	PTA, L, S/I, leakage	PTA, L, S/I, G	PTA, L, S/I, G	L ¹⁾	PTA, L, S/I	PTA, L, S/I
Real-Time LCD Indication of Load Rate per Phase	—	●	●	●	●	●	—	●	●
Measurement LCD	—	●	●	●	●	●	—	●	●
Output Contact									
Integrated Instantaneous Contact (1a)	●	—	—	—	—	—	—	—	—
Individual Continuous Contact (4a)	—	●	●	●	●	●	—	● ⁴⁾	● ⁴⁾
Operation									
MCR	—	○	○	○	○	○	—	○	○
Communication	NFC	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	Modbus-RTU	NFC	Modbus-RTU	Modbus-RTU
Event/Fault Recording	●	●	●	●	●	●	●	●	●

※ ● : Standard, ○ : Option

¹⁾ Indicates reserve before operation during long time delay.

²⁾ ZCT designated by the customer is used.

³⁾ ZCT designated by our company is used.

⁴⁾ As for marine type, individual continuous contact is 3a.

Standard

- ▶ IIEC 60947-1, 2
- ▶ EN 60947-2
- ▶ AS 3972-2
- ▶ NEMA PUB NO. SG3
- ▶ ANSI C37.13
- ▶ VDE 0660
- ▶ GOST-R 50030.2-99 9
- ▶ GOST-R 50030.1-2000
- ▶ KS C 4620

Approval

- ▶ ISO 18001, 14001, 9001
- ▶ CE (Community European / TUV Rheinland)
- ▶ KS (KOREA)
- ▶ GOST-R (RUSSIA)
- ▶ CCC (CHINA)
- ▶ KR, GL, LR, ABS, BV, NK, DNV, RINA, RS

CB Type Test

- ▶ DEKRA
- ▶ KERI

تاییدیه ها

HG-SERIES