SINGI®

SHANGHAI SINGI ELECTRICAL CO.,LTD.
ZHEJIANG SINGI ELECTRICAL L.L.C

Shanghai Add: No.7833, Hangnan Road, European Industrial Zone, Zhuanghang,Fengxian District, Shanghai
Tel: +86-021-37400111 37400222 Fax: +86-021-37400005
Zhejiang Add: No.148,Wershier Road,Yueqing Economical Development Zone, YueqingCity, Zhejiang Province, China
Tel: +86-577-62053322 Fax: +86-577-62668369 P.C.: 325600
http: //www.singi.com E-mail: singi99@singi.com

Home Security Cable

Switches And Sockets

Intelligent Building Electrical Products

SINGI®

Building Electrical & Intelligent Household Integrator

singi catalog (2017–2018 version)

Factoty of SINIG, Shanghai ∧

SINGI®

Building Electrical and
Intelligent Household Integrator

Factoty of SINIG, Zhejiang >

Zhe Jiang Singi Electric L L C. is a professional manufacture, We produce the wall switch, intelligent information boxes, lighting distribution box, miniature circuit breakers, molded case circuit breakers, sockets, surge protector, dual power switching devices, security converter, smart Air Circuit Breaker, American metal junction boxes and other building electrical wiring system products, We are a high-tech private joint-stock enterprises.

– Workshop –

– Workshop –

– Laboratory –

– Storehouse –

Our company is located in Yueqing Economic Development Zone, It covers an area of 20,000 square meters, construction area of 14,000 square meters with a total investment of more than 2000 million. We have more than 500 employees, more than 60 a variety of management and technical personnel, Our company Implement "people-oriented" management philosophy. Meritocracy, provide a broad space for development to all kinds of talents, We constantly enhance the comprehensive competitiveness of enterprises and also to improve their own quality of employees.

In the first peer through the ISO9001 quality system certification, the China Quality Certification Center "CCC" compulsory certification, the United States UL / CUL, ETL / CETL, CSA certification.

Our company has first–class testing equipment to ensure product quality more than the same industry and at the advanced level. We regards innovation as the development of our company, adhere to the purpose of "always been concerned about the intelligent building electrical ", committed to increase the input into new product development, we will use the advanced production technology and equipment to ensure our product innovation and to ensure a competitive industry market share ahead.

We warmly welcome domestic and foreign counterparts and customers to visit our company and to discuss cooperation.

Every day is a new beginning, Singi’ s workers will faith in man–made unremitting efforts to create an international brand!

Certificate

CCCI

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Registration No. U006612Q0117R2M

This is to certify that the quality management system of

SHANGHAI SINGI ELECTRICAL CO., LTD.

At: No.1253 Hangnan Rd., Europe Industrial Zone, Zhuanghang, Fengxian District, Shanghai, 325604, P.R. China
(Production Address: No.161 Jingqi Road, Yueqing Development Zone, Zhejiang)

is in conformity with

ISO 9001:2008

This certificate is valid for the following scope:

Design, Development, Manufacture and After-Sales Service of Low Voltage Circuit Breaker, Building Electrical Apparatus, Low Voltage Whole Set Equipment(The Products Which Need mandatory product Certification Shall Be According to the Certification), Proof-Thunder Electrical Apparatus Feeble Current Box.
The certification's condition of multi-sites organization refer to Appendix (1) & Sub-certificate (-1)

This certificate is valid from March 15, 2012 to March 14, 2015

It is valid within the term of validity of all the administration and qualification stipulated in accordance with the regulation of the country.
In the case that the organization regularly receives surveillance assessments, the certificate shall be valid when used together with the Notice for Maintenance of Use of Certificates and Logos.

China Certification Center, Inc.
At: No.1 Courtyard, No.211 Beishuan Zhonglu, Haidian District, Beijing, China
http://www.chinacertcn.com

General Manager:

Date of Issue: March 15, 2012

IAF

UKAS MANAGEMENT SYSTEMS
0066

CCCI

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Registration No. U006612Q0117R2M-1

This is to certify that the quality management system of

ZHEJIANG SINGI ELECTRICAL LLC

At: No.161, Jingqi Road, Yueqing Economical Development Zone, Zhejiang, 325604, P.R. China

is in conformity with

ISO 9001:2008

This certificate is valid for the following scope:

Design, Development, Manufacture and After-Sales Service of Low Voltage Circuit Breaker, Building Electrical Apparatus, Low Voltage Whole Set Equipment(The Products Which Need mandatory product Certification Shall Be According to the Certification), Proof-Thunder Electrical Apparatus Feeble Current Box.

This certificate is valid from March 15, 2012 to March 14, 2015

It is valid within the term of validity of all the administration and qualification stipulated in accordance with the regulation of the country.
In the case that the organization regularly receives surveillance assessments, the certificate shall be valid when used together with the Notice for Maintenance of Use of Certificates and Logos.

China Certification Center, Inc.
At: No.1 Courtyard, No.211 Beishuan Zhonglu, Haidian District, Beijing, China
http://www.chinacertcn.com

General Manager:

Date of Issue: March 15, 2012

IAF

UKAS MANAGEMENT SYSTEMS
0066

CCCI

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Registration No. U006613Q0016R0S

This is to certify that the quality management system of

Shanghai Singi Wire and Cable Co., Ltd

At: No.1253 Hangnan Road, European Industrial Park, Zhuanghang Town, Fengxian District, Shanghai, 201415, P.R. China

is in conformity with

ISO 9001:2008
(Exclude Clause 7.3)

This certificate is valid for the following scope:

Manufacture and After-sales Service of PVC Insulated Flexible Wire and Cable

This certificate is valid from January 8, 2013 to January 7, 2016

It is valid within the term of validity of all the administration and qualification stipulated in accordance with the regulation of the country.
In the case that the organization regularly receives surveillance assessments, the certificate shall be valid when used together with the Notice for Maintenance of Use of Certificates and Logos.

China Certification Center, Inc.
At: No.1 Courtyard, No.211 Beishuan Zhonglu, Haidian District, Beijing, China
http://www.chinacertcn.com

General Manager:

Date of Issue: January 8, 2013

IAF

UKAS MANAGEMENT SYSTEMS
0066

VOV CERTIFICATION & TESTING LABORATORY

VOV

CERTIFICATE OF CONFORMITY

EU ELECTRO MAGNETIC COMPATIBILITY -DIRECTIVE 2004/108/EC-
Registration NO.: VT08056836

Applicant:	SHANGHAI SINGI WIRE AND CABLE CO., LTD.
Applicant Address:	NO.1253, HANGNAN ROAD, EUROPEAN INDUSTRIAL ZONE, ZHUANGHANG, FENGXIAN DISTRICT, SHANGHAI
Product Description:	NETWORK CABLE
Model / Parameters:	UTP

Complies with the requirements of the European Community Directive 2004/108/EC. The submitted products have been tested by us with the listed standards and found in compliance with the following European Standards:

EN 50173-1 : 2002 EN 50288-5-1 : 2003

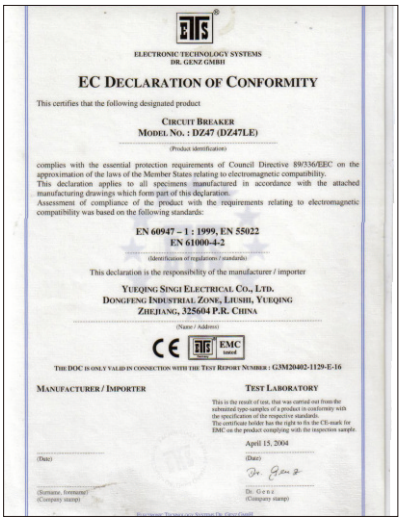
This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence applicant's disposal. This certificate does not imply assessment of the series-production of the product. The CE markings as shown below can be affixed on the product after preparation of necessary technical documentation.

CE

Authorized by: Ayvonot.
May 22, 2008 Chief Assessor

VOV CERTIFICATION & TESTING LABORATORY LIMITED

THIS CERTIFICATE REFLECTS THE FINDINGS OF THE TIME AND PLACE OF THE AUDIT.
THE CERTIFICATION IS ONLY VALID WITH THE TEST REPORT OR TECHNICAL CONSTRUCTION FILE
Internet site: www.vov.org.uk E-mail: vov@vov.org.uk



ETS

ELECTRONIC TECHNOLOGY SYSTEMS
DR. GENZ GMBH

EC DECLARATION OF CONFORMITY

This certifies that the following designated product

CIRCUIT BREAKER
MODEL NO. : DZ47 (DZ47LE)
(Product identification)

complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.
This declaration applies to all specimens manufactured in accordance with the attached manufacturing drawings which form part of this declaration.
Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards:

EN 60947 – 1 : 1999, EN 55022
EN 61000-4-2
(identification of regulations / standards)

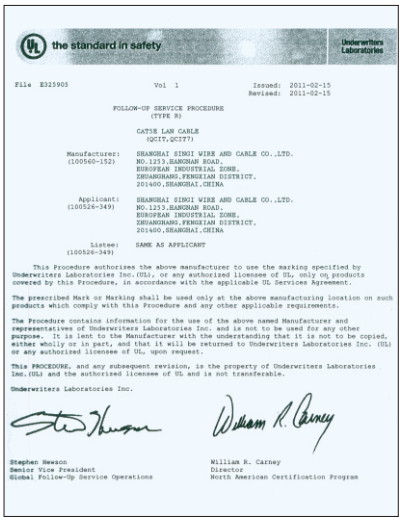
This declaration is the responsibility of the manufacturer / importer

YUEQING SINGI ELECTRICAL CO., LTD.
DONGFENG INDUSTRIAL ZONE, LIUSHI, YUEQING
ZHEJIANG, 325604 P.R. CHINA
(Name / Address)

CE EMC tested

THE DOC IS ONLY VALID IN CONNECTION WITH THE TEST REPORT NUMBER : G3M20402-1129-E-16

MANUFACTURER / IMPORTER	TEST LABORATORY
	This is the result of test, that was carried out from the submitted type-samples of a product in conformity with the specification of the respective standards. The certificate holder has the right to fix the CE-mark for EMC on the product complying with the inspection sample.
	April 15, 2004
(Date)	(Date)
(Surname, forename) (Company stamp)	Dr. Genz (Company stamp)



the standard in safety — Underwriters Laboratories

File E325905 Vol 1 Issued: 2011-02-15 Revised: 2011-02-15

FOLLOW-UP SERVICE PROCEDURE
(TYPE 8)

CAT5E LAN CABLE
(QCIT, QCT7)

Manufacturer: (100560-152)	SHANGHAI SINGI WIRE AND CABLE CO.,LTD. NO.1253,HANGNAN ROAD, EUROPEAN INDUSTRIAL ZONE, ZHUANGHANG,FENGXIAN DISTRICT, 201400,SHANGHAI,CHINA
Applicant: (100526-349)	SHANGHAI SINGI WIRE AND CABLE CO.,LTD. NO.1253,HANGNAN ROAD, EUROPEAN INDUSTRIAL ZONE, ZHUANGHANG,FENGXIAN DISTRICT, 201400,SHANGHAI,CHINA
Listee: (100526-349)	SAME AS APPLICANT

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

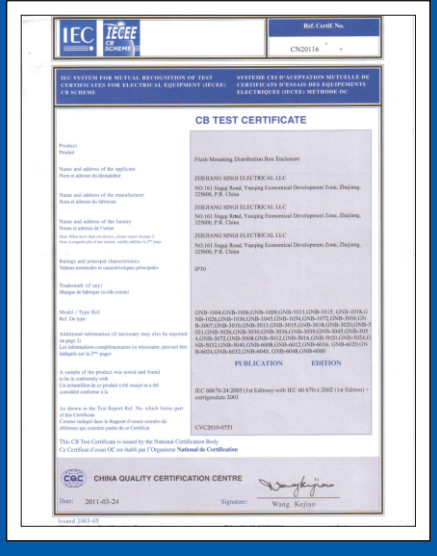
The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensees of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Newson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program



IEC IECEE CB SCHEME

Ref. Certif. No. CN20116

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product / Produit: Flush Mounting Distribution Box Enclosure

Name and address of the applicant / Nom et adresse du demandeur: ZHEJIANG SINGI ELECTRICAL LLC NO.161 Jingqi Road, Yueqing Economical Development Zone, Zhejiang, 325600, P.R. China

Name and address of the manufacturer / Nom et adresse du fabricant: ZHEJIANG SINGI ELECTRICAL LLC NO.161 Jingqi Road, Yueqing Economical Development Zone, Zhejiang, 325600, P.R. China

Name and address of the factory / Nom et adresse de l'usine: ZHEJIANG SINGI ELECTRICAL LLC NO.161 Jingqi Road, Yueqing Economical Development Zone, Zhejiang, 325600, P.R. China

Ratings and principal characteristics / Valeurs nominales et caractéristiques principales: IP30

Trademark (if any) / Marque de fabrique (si elle existe):

Model / Type Ref. / Réf. De type: GNB-100L(GNB-100H,GNB-100N,GNB-101L,GNB-101H, GNB-101N,GNB-102L(GNB-102H,GNB-102N,GNB-104L(GNB-104H,GNB-104N,GNB-3007,GNB-3010,GNB-3013,GNB-3015,GNB-3018,GNB-3020)(GNB-3051,GNB-3054,GNB-3058,GNB-3061,GNB-3064,GNB-3101,GNB-3104,GNB-3107,GNB-3110,GNB-3113,GNB-3115,GNB-3118,GNB-3120)(GNB-3054,GNB-3058,GNB-3061,GNB-3064,GNB-3101,GNB-3104,GNB-3107,GNB-3110,GNB-3113,GNB-3115,GNB-3118,GNB-3120)(GNB-3051,GNB-3054,GNB-3058,GNB-3061,GNB-3064,GNB-3101,GNB-3104,GNB-3107,GNB-3110,GNB-3113,GNB-3115,GNB-3118,GNB-3120)(GNB-3072,GNB-3075,GNB-3078,GNB-3081,GNB-3084,GNB-3087,GNB-3090,GNB-3093,GNB-3096,GNB-3099,GNB-3102,GNB-3105,GNB-3108,GNB-3111,GNB-3114,GNB-3117,GNB-3120)(GNB-3072,GNB-3075,GNB-3078,GNB-3081,GNB-3084,GNB-3087,GNB-3090,GNB-3093,GNB-3096,GNB-3099,GNB-3102,GNB-3105,GNB-3108,GNB-3111,GNB-3114,GNB-3117,GNB-3120)(GNB-3051,GNB-3054,GNB-3058,GNB-3061,GNB-3064,GNB-3101,GNB-3104,GNB-3107,GNB-3110,GNB-3113,GNB-3115,GNB-3118,GNB-3120)(GNB-3072,GNB-3075,GNB-3078,GNB-3081,GNB-3084,GNB-3087,GNB-3090,GNB-3093,GNB-3096,GNB-3099,GNB-3102,GNB-3105,GNB-3108,GNB-3111,GNB-3114,GNB-3117,GNB-3120)(GNB-3051,GNB-3054,GNB-3058,GNB-3061,GNB-3064,GNB-3101,GNB-3104,GNB-3107,GNB-3110,GNB-3113,GNB-3115,GNB-3118,GNB-3120)(GNB-3072,GNB-3075,GNB-3078,GNB-3081,GNB-3084,GNB-3087,GNB-3090,GNB-3093,GNB-3096,GNB-3099,GNB-3102,GNB-3105,GNB-3108,GNB-3111,GNB-3114,GNB-3117,GNB-3120)

Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page):

A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION	EDITION
IEC 60670-24:2005 (1st Edition) with IEC 60 670-1:2002 (1st Edition) + corrigendum 2003	

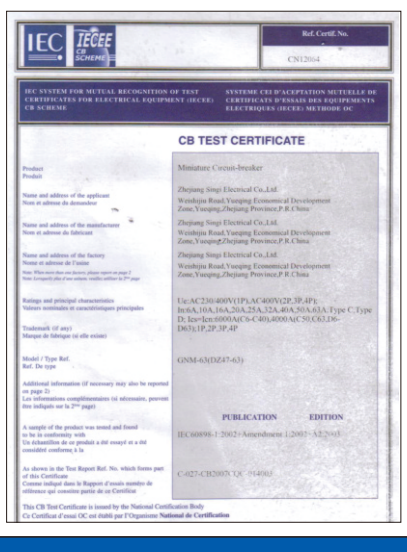
As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat: CVC2010-0751

This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme National de Certification

CQC CHINA QUALITY CERTIFICATION CENTRE

Date: 2011-03-24 Signature: Wang. Kejiao

Issued 2003-05



IEC IECEE CB SCHEME

Ref. Certif. No. CN12064

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product / Produit: Miniature Circuit-breaker

Name and address of the applicant / Nom et adresse du demandeur: Zhejiang Singi Electrical Co.,Ltd. Weishijiu Road,Yueqing Economical Development Zone,Yueqing,,Zhejiang Province,P.R.China

Name and address of the manufacturer / Nom et adresse du fabricant: Zhejiang Singi Electrical Co.,Ltd. Weishijiu Road,Yueqing Economical Development Zone,Yueqing,Zhejiang Province,P.R.China

Name and address of the factory / Nom et adresse de l'usine: Zhejiang Singi Electrical Co.,Ltd. Weishijiu Road,Yueqing Economical Development Zone,Yueqing,,Zhejiang Province,P.R.China

Ratings and principal characteristics / Valeurs nominales et caractéristiques principales: Uc:AC230/400V(1P),AC400V(2P,3P,4P); In:6A,10A,16A,20A,25A,32A,40A,50A,63A;Type C;Type D; Ics=Icn:6000A(C6-C40),4000A(C50,C63,D6-D63);1P,2P,3P,4P

Trademark (if any) / Marque de fabrique (si elle existe):

Model / Type Ref. / Réf. De type: GNM-63(DZ47-63)

Additional information (if necessary may also be reported on page 2) / Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page):

A sample of the product was tested and found to be in conformity with / Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION	EDITION
IEC 60898-1:2002+Amendment 1:2003+A2:2003	

As shown in the Test Report Ref. No. which forms part of this Certificate / Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat: C-027-CH20057, QA -014002

This CB Test Certificate is issued by the National Certification Body / Ce Certificat d'essai OC est établi par l'Organisme National de Certification

SGS

测试报告 No. SH8045209/CHEM Date: Apr. 9, 2008 Page 1 of 4

上海信基线缆有限公司
上海市奉贤区生与镇经济工业园区航海公路 1253 号

委托检验的样品及客户对样品的说明如下:

样品名称	: UTP 系列网线
SGS 样号	: 10839954
来源	: 上海信基线缆有限公司
型号	: PVC: SG0308 Cu: Φ2.6mm
主要成份	: PVC; Cu
样品收到日期	: 2008-04-03
样品试验日期	: 2008-04-03—2008-04-09
试验要求	: 参照 RoHS 指令 2002/95/EC 及后续修正指令.
试验方法	: 参照 IEC 62321/Cd CDV (111/95/CDV): 电子电器产品中限用物质含量的测定程序 (1) 用 ICP 测定铬的含量 (2) 用 ICP-AAS 测定铅的含量 (3) 用 ICP 测定汞的含量 (4) 用六溴联苯及多溴联苯醚测定六价铬的含量 (5) 用 GC-MS 测定 PBBs(多溴联苯)和 PBDEs(多溴联苯醚)的含量
试验结果	: 见后续页
试验结论	: 基于所送样品进行的测试, 测试结果与欧盟 RoHS 指令 2002/95/EC 以及后续修正指令的要求相符.

SGS-CSTC 化学实验室授权签字

SGS-CSTC 化学实验室授权签字

SHCHEM 1760564

SGS


智能建筑电气
Intelligent Building Electrical


开关插座
Switches & Sockets


家居安防线缆
Home Security Cable

CONTENTS

(NEW)

APPLICATION

SG65-63 high breaking miniature circuit breaker has the features of structure advanced, performance reliable, breaking capacity high, appearance elegant and its shell and parts are made of material with impact resistance, strong flame—retardant feature. It is suitable to power system of 50or 60 frequency ,Ue 400V and below, Ui63Aand below.It is mainly applied at office building, residence, for lighting, power distribution and overload and short circuit protection of equipment. Normally, it also can be used as the not frequent transfer of power system. Life more than 10,000 times(on-off)

It conforms to the standards IEC60898and GB10963.1.

TECHNICAL PARAMETER

Rated voltage(V)	Pole	Rated current(A)	Rated short circuit breaking capacity	
			Breaking capacityIcs(A)	Power factor
230	1	6,10,16,20,25, 32,40,50,63	6000	0.75
400	2,3,4		6000	0.75

1.Heat resistance: category 2 (temperature 55℃,relative humidity 95%).
2.Wiring is terminal with clamp, cable dia.:25mm^2

(NEW)

CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
3In(B Type)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
5In(B Type)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

(NEW)

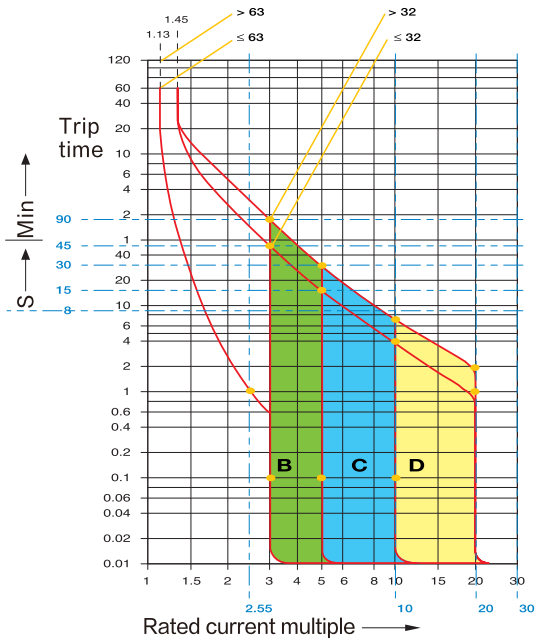
TYPE MEANING

SG65 -63 □

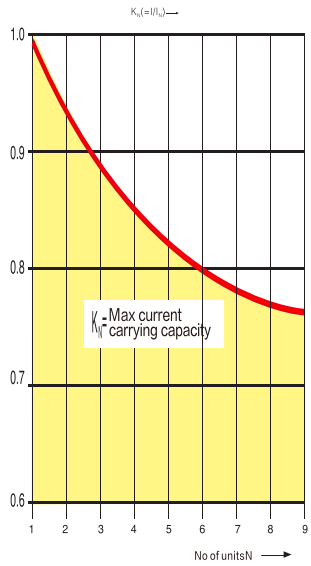
- Code of useing:B,C:distribution D:motor protection
- Shelllevel rated current
- Design no
- Company code(SINGI)

BREAKING CHARACTERISTIC CURVE

B,C,D type characteristic curve



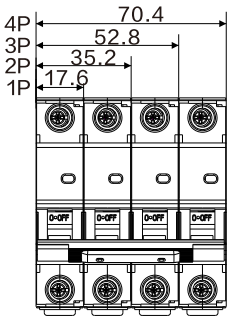
Current correction coefficient $K_N(=I/I_N)$

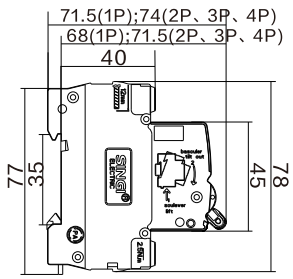


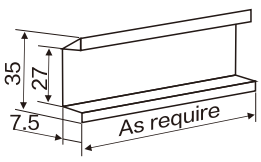
MULTI-MACHINE SIDE-BY-SIDE INSTALLATION CORRECTION FACTOR

Pole	1	2	3	4	5	6	7	8	9	> 9
Factor	1	0.95	0.9	0.86	0.82	0.795	0.78	0.77	0.76	0.76

DIMENSION







(NEW)

APPLICATION

SG65LE RCBO is applied in the power system of AC 50Hz,single phase 230V,three phases 400V.When somebody gets and electric shock or the residual current exceeds the default value, the RCBO can cut off the powerautomatically to protect the personal safety and prevent the equipmentfrom the fault resulted from the residual current.It also can protect the circuit against overload and short circuit or can be used for the unfrequent switch of the circuit under normal condition. And extra protection functions like over voltage, under voltage can be added according to customers' request.

It conforms to the standard IEC1009-1.GB16917.1.

STRUCTURE

SG65LE-63 series RCBO is composed of SG65-63 high breaking MCB and residual current release.This RCBO is current operating electronic RCBO, the main parts including zero sequence current transformer, electronic panel, current leakage release and the circuit breaker with protection functions of overload, short circuit.

TECHNICAL PARAMETER

Shell level rated currentInm (A)	voltage (V)	Pole	Rated current In(A)	Rated short circuit breaking capacity		Rated residual current breaking current I△n(mA)	Rated residual current no breaking current I△n(mA)	Trip time
				Breaking capacity Ics(A)	COSΦ			
63	230	1P+N	6,10, 16,20, 25,32, 40,50, 63	6000	0.75	10	5	≤0.1S
	230	2P				30	15	
	400	3P				50	25	
	400	3P+N				75	37.5	
	400	4P				100	50	

(NEW)

CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
3In(B Type)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
5In(B Type)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

(NEW)

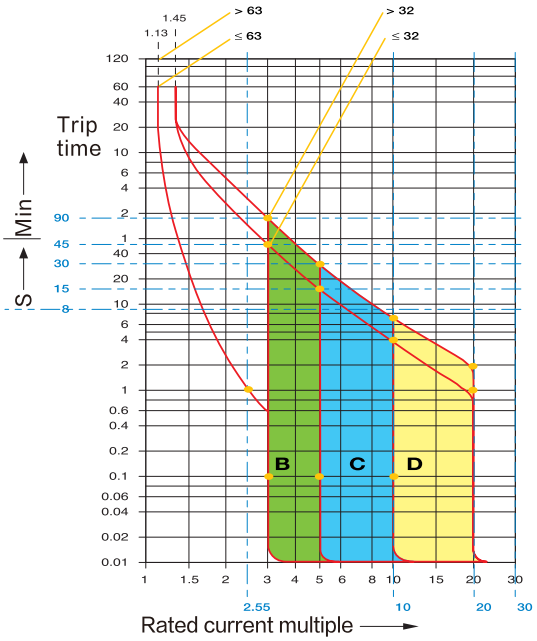
TYPE MEANING

SG 65 LE -63 / □ □ □

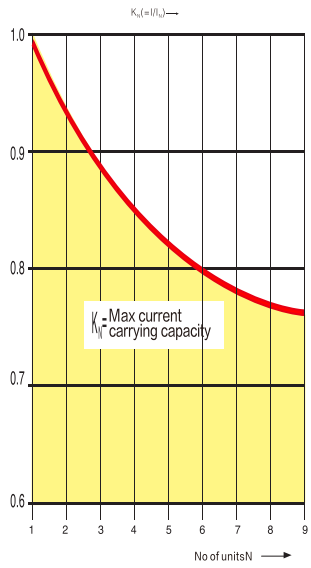
- Rated current residual breaking current
- Code of useing:B,C:distribution D:motor protection
- Pole
- Shelllevel rated current
- Electronic residual breaking type
- Design no
- Company code(SINGI)

BREAKING CHARACTERISTIC CURVE

B,C,D type characteristic curve



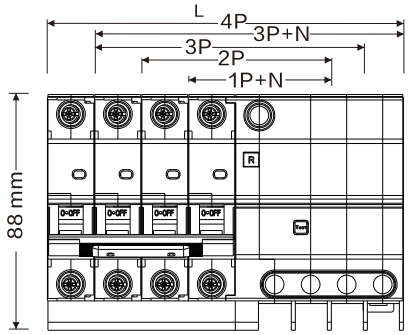
Current correction coefficient $K_N(=I/I_N)$

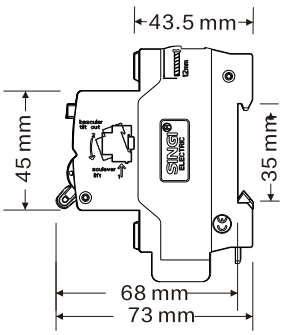


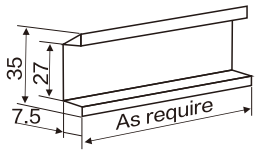
MULTI-MACHINE SIDE-BY-SIDE INSTALLATION CORRECTION FACTOR

Pole	1	2	3	4	5	6	7	8	9	> 9
Factor	1	0.95	0.9	0.86	0.82	0.795	0.78	0.77	0.76	0.76

DIMENSION







L size:

Pole	Big shell	Small shell
1P+N	54mm	45mm
2P	72mm	53mm
3P	104mm	90mm
3P+N	118mm	99mm
4P	136mm	117mm

APPLICATION

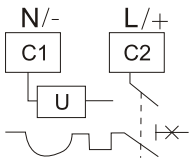
This series of circuit breaker accessory is auxiliary component,our company designed for the SG65 series circuit breakers, in the home, construction, fire, intelligent electrical and other electrical lines, can choose different electrical accessories by different requests and be used with S G65 series circuit breaker , In order to achieve undervoltage, overvoltage, over voltage, loss of pressure protection, remote control and other functions.

It conforms to the standard IEC60947-2.GB14048.2

(MV+MN)
over-under
voltage release

TECHNICAL PARAMETER

● Over-voltage,under-voltage,over-under voltage release technical parameter

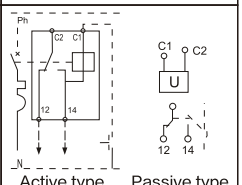
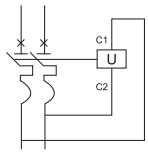
Accerssory name	Rated voltage Ue	Breaking voltage	Connenction image
MN under-voltage release	AC:230V	170V± 5%	
MV over-voltage release	AC:230V	280V± 5%	
MV+MN over-under voltage release	AC:230V	Under-voltage 170v± 5%	
		Over-voltage 270V± 5%	

● Auxiliary contact, alarm contact technical parameters

Accerssory name	Rated current(A)			Number of contacts per group	Connenction image
	AC：400V	AC：230V	DC：220V		
Auxiliary contact OF	3	6	1	one open one closed	
Alarm contact SD	3	6	1	one open one closed	

(MX+OF)
shunt release+
auxiliary contact

● Shunt release device, shunt release+auxiliary contact technical parameters

Accerssory name	Rated isolate voltage Ui	Rated contral power voltage Us	Trip power (W or VA)	Pull up voltage	Connenction image
MX+OF shunt release+ auxiliary contact	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1)	
MX shunt release	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1)	

TYPE MEANING

SG 65 □ □

- AC:230V
- MV+MN—Over-under voltage release MN—Under-voltage MV—Over-voltage MX+OF—Shunt release+auxiliary contact OF—Auxiliary contact SD—Alarm contact
- Design no
- Company code(SINGI)

OF
Shunt release device

CIRCUIT BREAKER ACCESSORY NAME,APPLICATION,STANDARD

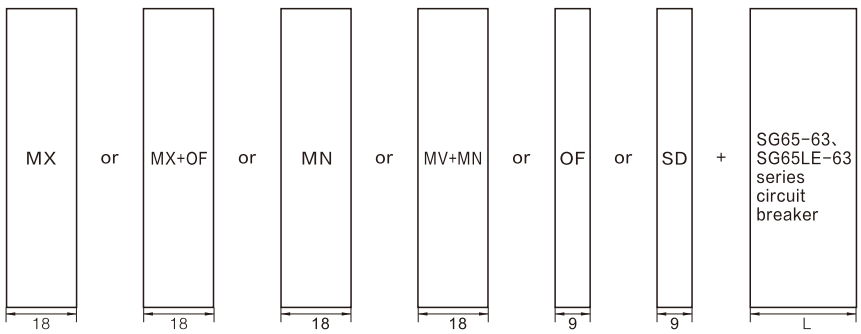
Accerssory name	Code	Application	Standard
Under-voltage release	MN	When the power supply voltage drops from 230V to 170V±5%, the circuit breaker trip, to achieve the line undervoltage protection	IEC60947-2 GB14048.2
Over-voltage release	MV	When the power supply voltage up from 230V to 270V±5%, the circuit breaker trip, to achieve the line overvoltage protection	IEC60947-2 GB14048.2
Over-under voltage release (220V)	MV+ MN	When the 220V rated voltage up to 270V ±5%,or drop to170V±5% the circuit breaker trip, to achieve line protection	IEC60947-2 GB14048.2

SD
Auxiliary contact

WORKING CONDITIONS AND INSTALLATION CONDITIONS

◎Ambient temperature: -5 ℃ ~+400C;
◎Altitude: no more than 2000m;
◎Environmental conditions: there should be no danger of explosion caused by the media, there is no corrosion and destruction of harmful gases and conductive dust;
◎Installation conditions: 35mm standard rail installation;

OUTLOOK AND MOUNTING SIZE



NOTE: The assembly accessories on the left side of the circuit breaker can be one or more.

APPLICATION

SC65-63 is suitable to power system of AC50 or 60 frequency ,rated voltage 400V and below, rated current 63Aand below.In is mainly applied at office building, residence, for lighting, power distribution and overload and short circuit protection of equipment. Normally, it also can be used as the not frequent transfer of power system. Life more than 10,000 times(on-off)

It conforms to the standards IEC60898and GB10963.1.

(NEW)

TECHNICAL PARAMETER

Model	Rated voltage (V)	Pole	Rated current (A)	Rated short circuit breaking capacity	
				Breaking capacityIcs(A)	Power factor
SC65-63	230	1	6,10,16,20, 25,32,40, 50,63	6000	0.75
	400	2,3,4			
SC65-125	230	1	80,100,125		
	400	2,3,4			

1.Heat resistance: category 2 (temperature 55℃,relative humidity 95%).
2.Wiring is terminal with clamp, cable dia.:25mm^2

CURRENT RELEASE CHARACTER DIAGRAM

(NEW)

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
3In(B Type)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
5In(B Type)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

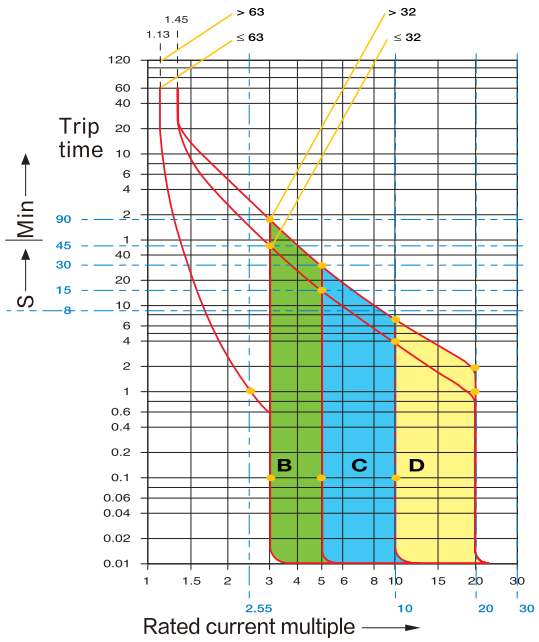
TYPE MEANING

S C 65 - 63 □

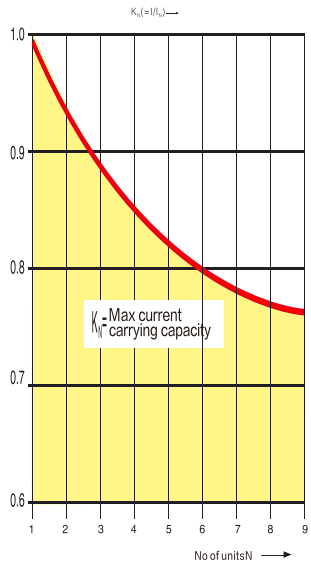
- Code of useing:B,C:distribution D:motor protection
- Shell level rated current
- Design no
- Mini circuit breaker
- Company code(SINGI)

BREAKING CHARACTERISTIC CURVE

B,C,D type characteristic curve



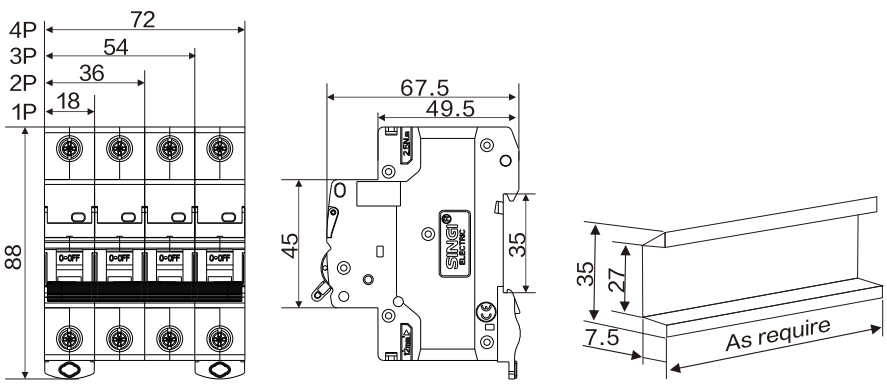
Current correction coefficient $K_N(=I/I_N)$



MULTI-MACHINE SIDE-BY-SIDE INSTALLATION CORRECTION FACTOR

Pole	1	2	3	4	5	6	7	8	9	> 9
Factor	1	0.95	0.9	0.86	0.82	0.795	0.78	0.77	0.76	0.76

DIMENSION



(NEW)

APPLICATION

SC65LE RCBO is applied in the power system of AC 50Hz,single phase 230V,three phases 400V.When somebody gets and electric shock or the residual current exceeds the default value, the RCBO can cut off the power automatically to protect the personal safety and prevent the equipmentfrom the fault resulted from the residual current.It also can protect the circuit against overload and short circuit or can be used for the unfrequent switch of the circuit under normal condition. And extra protection functions like over voltage, under voltage can be added according to customers' request.

It conforms to the standard IEC1009-1.GB16917.1.

STRUCTURE

SC65LE-63 series RCBO is composed of SG65-63 high breaking MCB and residual current release.This RCBO is current operating electronic RCBO, the main parts including zero sequence current transformer, electronic panel, current leakage release and the circuit breaker with protection functions of overload, short circuit.

TECHNICAL PARAMETER

Shell level rated currentInm (A)	voltage (V)	Pole	Rated current In(A)	Rated short circuit breaking capacity		Rated residual current breaking current I△n(mA)	Rated residual current no breaking current I△n(mA)	Trip time
				Breaking capacity Ics(A)	COSΦ			
63	230	1P+N	6,10, 16,20, 25,32, 40,50, 63	10000	0.75	10	5	≤0.1S
	230	2P				30	15	
	400	3P				50	25	
	400	3P+N				75	37.5	
	400	4P				100	50	

(NEW)

CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
3In(B Type)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
5In(B Type)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

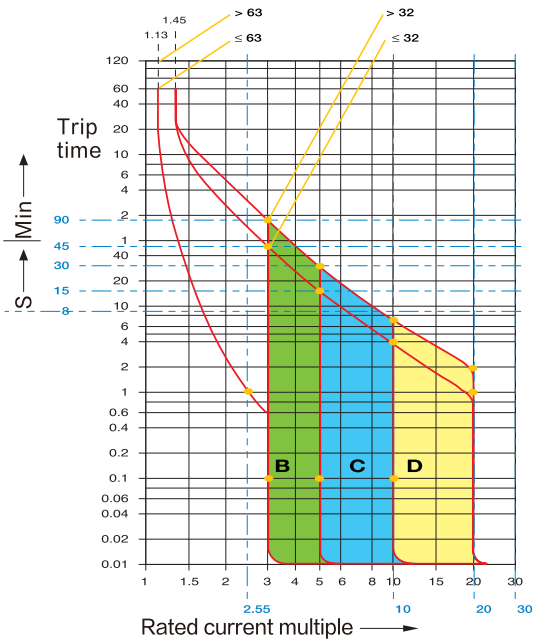
TYPE MEANING

SC 65 LE -63 / □ □ □

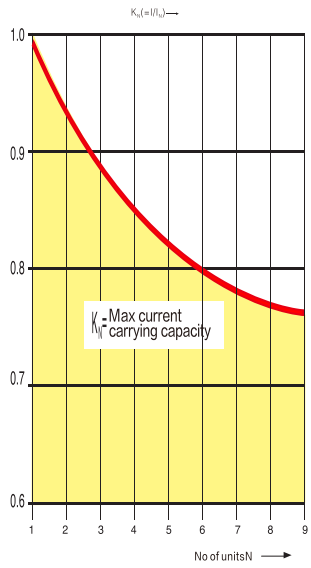
- Rated current residual breaking current
- Code of useing:B,C:distribution D:motor protection
- Pole
- Shelllevel rated current
- Electronic residual breaking type
- Design no
- Company code(SINGI)

BREAKING CHARACTERISTIC CURVE

B,C,D type characteristic curve



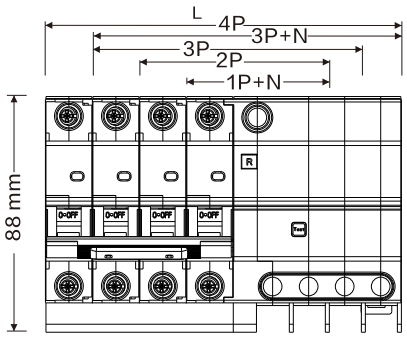
Current correction coefficient $K_N(=I/I_N)$

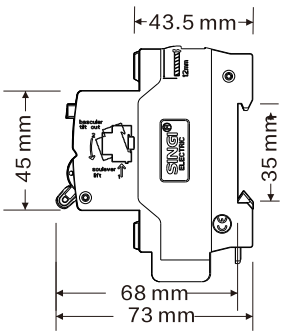


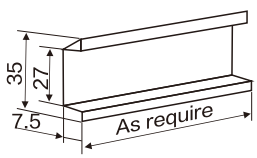
MULTI-MACHINE SIDE-BY-SIDE INSTALLATION CORRECTION FACTOR

Pole	1	2	3	4	5	6	7	8	9	> 9
Factor	1	0.95	0.9	0.86	0.82	0.795	0.78	0.77	0.76	0.76

DIMENSION







L size:

Pole	Big shell	Small shell
1P+N	54mm	45mm
2P	72mm	53mm
3P	104mm	90mm
3P+N	118mm	99mm
4P	136mm	117mm

APPLICATION

This series of circuit breaker accessory is auxiliary components,our company designed for the SC65 series circuit breakers, in the home, construction, fire, intelligent electrical and other electrical lines, can choose different electrical accessories by different requests and be used with SC65 series circuit breaker , To achieve the remote control of the circuit breaker, the separation of state instructions to provide alarm signals and other functions, protecti the lines, personal and property safety better control and other functions.

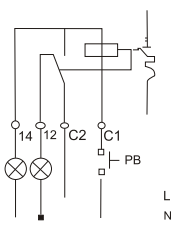
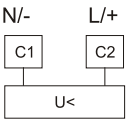
OF
Shunt release device

TECHNICAL PARAMETER

● Auxiliary contact, alarm contact technical parameters

Accerssory name	Rated current(A)			Number of contacts per group	Connenction image
	AC：400V	AC：230V	DC：220V		
Auxiliary contact OF	3	6	1	one open one closed	
Alarm contact SD	3	6	1	one open one closed	

● Shunt release device, shunt release+auxiliary contact technical parameters

Accerssory name	Rated isolate voltage Ui	Rated contral power voltage Us	Trip power (W or VA)	Pull up voltage	Connenction image
MX+OF shunt release+ auxiliary contact	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1)	
MX shunt release	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1)	

SD
Auxiliary contact

TYPE MEANING

OF ——— Auxiliary contact
SD ——— Alarm contact
MV ——— Over-voltage release
MN ——— Under-voltage release
MX ——— Shunt release device
MX+OF ——— Shunt release+auxiliary contact

(MX+OF)
shunt release+
auxiliary contact

OF SD MX+OF MV (MN、MV+MN) MCB

Note: Each assembly can add 3 instructions acessories at most(OF or SD),
2 release accessories

CIRCUIT BREAKER ACCESSORY NAME,APPLICATION,STANDARD

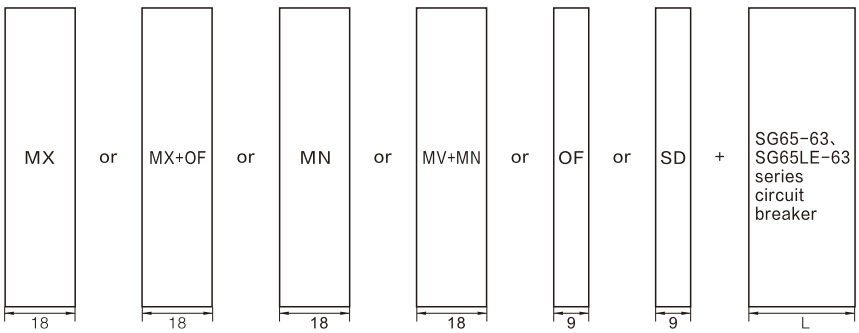
Accerssory name	Code	Application	Standard
Auxiliary contact	OF	Auxiliary contact:Provide auxiliary signal, control auxiliary circuit	IEC60947-5-1 GB14048.5-2008
Alarm contact	SD	Alarm contact:When the circuit breaker is breaking due to broken of the protection line,offer an alarm signal	IEC60947-2 GB14048.2-2008
Shunt release device	MX	When the control voltage beyond rated voltage by 70% to 110%, make circuit breaker tripping, to achieve circuit protection	IEC60947-1 GB14048.1-2008
Shunt release+ auxiliary contact	MX+OF	Long-distance breaking circuit, and through the auxiliary contact to achieve auxiliary circuit control	IEC60947-1 GB14048.1-2008

MN
under-loss
voltage release

WORKING CONDITIONS AND INSTALLATION CONDITIONS

◎Ambient temperature: -5 ℃ ~+400C;
◎Altitude: no more than 2000m;
◎Environmental conditions: there should be no danger of explosion caused by the media, there is no corrosion and destruction of harmful gases and conductive dust;
◎Installation conditions: 35mm standard rail installation;

OUTLOOK AND MOUNTING SIZE



NOTE: The assembly on the left side of the circuit breaker can be one or more.

(NEW)

APPLICATION

DZ30-32N series (phase line + neutral) circuit breaker for AC 50Hz or 60Hz, rated voltage 230V single-phase residential lines, can protect electrical circuit overload and short circuit. The product has breaking capacity high,smal size, N,L Wire cut off on one time, put an end to the wrong connenction between N wire and L wire,or N line connect with ground potential caused to personal and fire hazards, is ideal protection switch in the field of residential. This product compliespassed IEC60898-1 and G B 10963.1.

TECHNICAL PARAMETER

Rated voltage (V)	Pole	Shelllevel rated current (A)	Rated current (A)	Rated short circuit breaking capacity		Power factor life(time)
				Breaking capacity Ics(A)	Power factor	
230	1P+N	32	3,6,10,16, 20,25,32	4500	0.65-0.70	10000

1.Heat resistance: (temperature 55℃,relative humidity 95%.
2.Using the connection terminal with clamps to wiring, DZ30-32 using the hard wire 10mm² or below

CURRENT RELEASE CHARACTER DIAGRAM

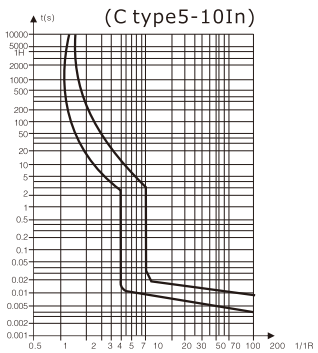
Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
5In	All	t<0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

TYPE MEANING

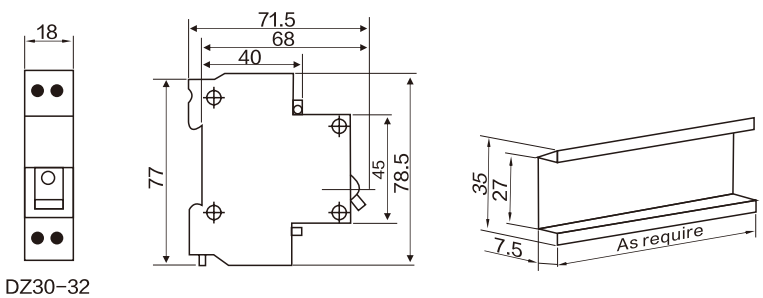
DZ 30-32 N

- N — Degin code
- 32 — Shelllevel rated current
- 30 — Design no
- DZ — Plastic case type circuit breakers

BREAKING CHARACTERISTIC CURVE



DIMENSION



DZ30-32

(NEW)

APPLICATION

DZ30LE-80 series residual current circuit breaker is applied in the power system of AC 50 or 60Hz,single phase 230V. protecting the circuit from over load and short circuit. The product has high breaking capacity, volume small, live wire ,null wire are cut at the same time to avoid the inversed grafting of live and null wire or danger caused by the voltage between zero wire and earth. It is the ideal power distribution switch for the present residence.It conforms to the standards IEC61009-1and GB16917.1

TECHNICAL PARAMETER

Shell level rated currentInm (A)	voltage (V)	Pole	Rated current In(A)	Rated short circuit breaking capacity		Rated residual current breaking current I△n(mA)	Rated residual current no breaking current I△n(mA)	Trip time
				Breaking capacity Ics(A)	COSΦ			
80	230	2P	6,10, 16,20, 25,32, 40,50, 63,80	6000	0.75	10	5	≤0.1S
	230					30	15	
	400					50	25	
	400					75	37.5	
	400					100	50	

CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
3In(B Type)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
5In(B Type)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

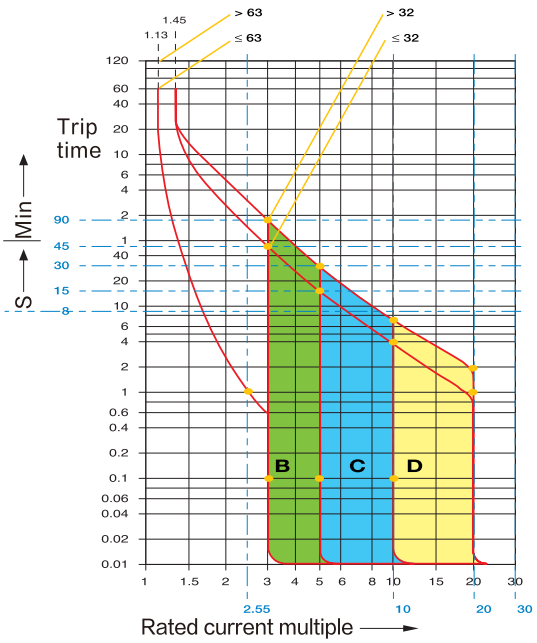
TYPE MEANING

DZ 30 LE – 80

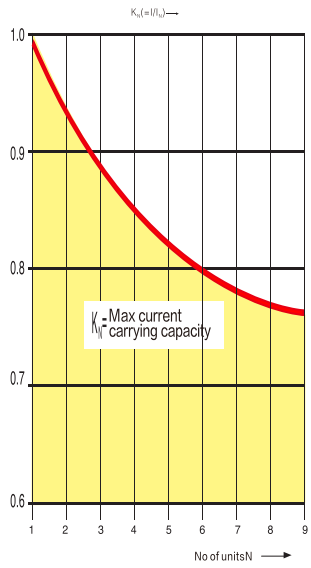
- 80 — Shelllevel rated current
- LE — Electronic residual breaking type
- 30 — Design no
- DZ — Plastic case type circuit breakers

BREAKING CHARACTERISTIC CURVE

B,C,D type characteristic curve



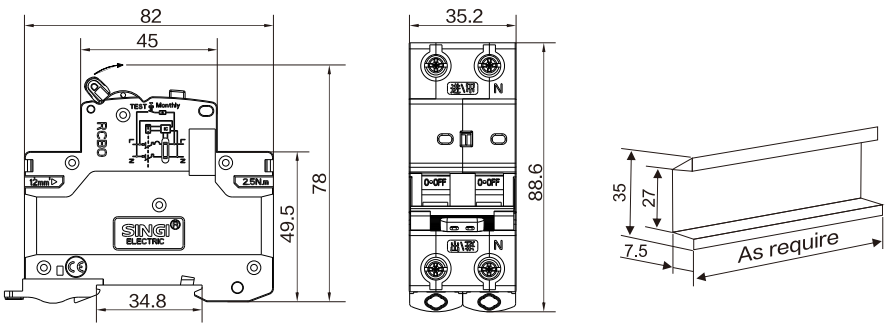
Current correction coefficient $K_N(=I/I_N)$



MULTI-MACHINE SIDE-BY-SIDE INSTALLATION CORRECTION FACTOR

Pole	1	2	3	4	5	6	7	8	9	> 9
Factor	1	0.9	0.85	0.8	0.75	0.73	0.7	0.68	0.65	0.65

DIMENSION



(NEW)

(NEW)

(NEW)

(NEW)

APPLICATION

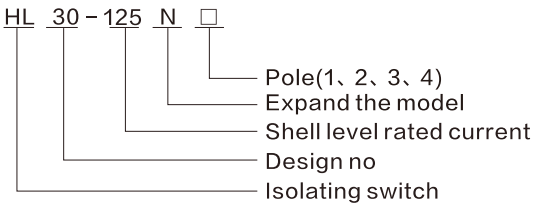
HL30-125N Series isolation switch is suitable for AC 50Hz or 60Hz,rated voltage 400V and below ,rate current 125A and below, to be the main switch of the terminal appliance, as well as control the electromotor ,small-power appliance and illumination etc. It conforms to the standards GB14048.3 and IEC60947-3

TECHNICAL PARAMETER

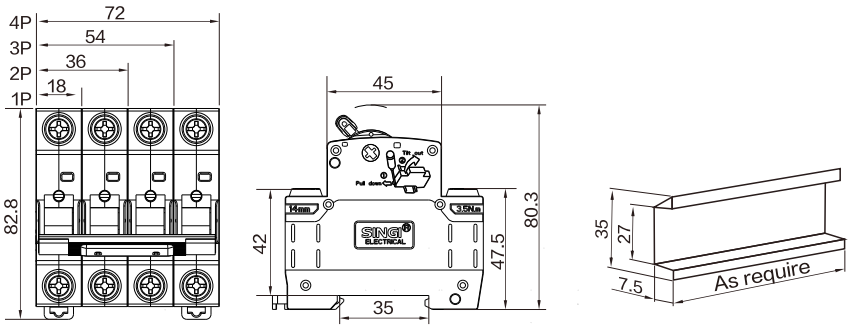
Rated Voltage(V)	230/400V
Rated current(A)	32,63,80,100,125
Rated breaking capacity	3Ie、1.05Ue COSΦ=0.65
Rated short circuit switched capacity(A)	1500
Rated short circuit fuse capacity (A/s)	2000

NOTE:
Poles:1,2,3,4
Installation: On nomal din rail TH35 mm²
With wire connecting capacity 50mm² and below

TYPE MEANING



DIMENSION



APPLICATION

GQ series automatic reset recover over and under vol tage time delay protector called over-under voltage protector suitable is for AC 50Hz or 60Hz, single 230V Three phase 400V ,rate current 125A and below, to be the over and under protector voltage of the terminal appliance, . It is widely used in the lineof power , post and telecommunications, transportation, coal mine.Special for industry and business lighting distrubution system

(NEW)
GQ-63 1P+N

WORKING CONDITIONS AND INSTALLATION CONDITIONS

1.Ambient temperature: -5 ℃ ~+40℃
2.Altitude: no more than 2000m;
3.Atmospheric relative humidity not more than 50% when the max temperature is +40℃ , at lower temperatures can have a higher temperature, such as the mounthly temperature is +25 ℃, the monthly relative humidity not more than 90% And concerning occurs on the surface of the product due to the temperature change

MAIN STRUCTURE AND WORKING PRINCIPLE

Automatic over and under voltage time delay protector is new developed product. The components are from foreign and national famous company and the production process is advanced. The product can swiftly cut off power when the power system is under situation of over voltage and under voltage to protect home appliance. When the voltage returns normal, after time duration ,it can automatically conduct the circuit and power is supplied and it can effectively protect the appliance from impacting cause of the instant power. All function are automatic.The indicator light on the panel indicates the working status of the protector, the normal power supply when the green light is issued, the protection function is working and cut off when the red lamp lighting.With a simple and convenient, stable and reliable performance characteristics.Has simple and convenient, stable and reliable performance characteristics.

TECHNICAL PARAMETER

Model	Pole	Rated current In(A)	Power transmission daly after power failure	Action delay	Self power consume	Over-voltage value(V)	Under-voltage value(V)	life
GQ-63	1P+N	32,40, 50,63A	60s-120s	1-5s	≤6W	270V±5%	150V±5%	≥50,000 times
	3P+N					460V±5%	300V±5%	
GQ-125	1P+N	80,100, 125A				270V±5%	150V±5%	
	3P+N					460V±5%	300V±5%	

GQ-63 3P+N

INSTALLATION USE THE WIRE SECTION TO SELECT FROM THE TABLE BELOW

Rated current	25A	32A	40A	50A	63A	80A	100A	125A
Wire cross section square	2.5	4	6	10	16	25	35	35

Note:Choosing wire must follow the table

TYPE MEANING

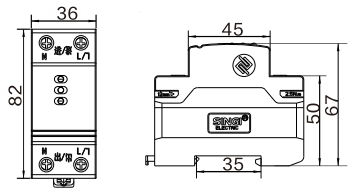
GQ - □

Shell Rated(63-125)

G: over voltage protector
Q: under voltage protector

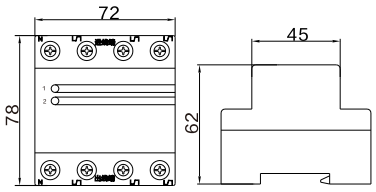
DIMENSION

GQ-125 1P+N



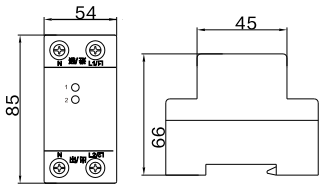
GQ-63 1P+N

Indicator light:
1.Power indicator,green means work, red means power on
2.trouble lamp,lighting means under-voltage
3.trouble lamp,lighting means over-voltage

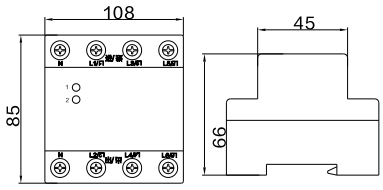


GQ-63 3P+N

Indicator light:
1.Power indicator, lighting means power on
2.trouble lamp,lighting means over -voltage or under-voltage

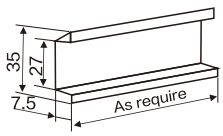


GQ-125 1P+N



GQ-125 3P+N

Indicator light:
1.Power indicator, lighting means power on
2.trouble lamp,lighting means over -voltage or under-voltage



GQ-125 3P+N

NOTES AND ORDERING INSTRUCTIONS

1.Transport can not be affected by rain and snow
2 Must be connected to the end of the product marked N word identification
3 Must note product type size,working voltage,rated current,poles and quantity.
e.g. order GQ-63 230V 1P+N 63A 50pcs

DIMENSION

SN-63 high breaking miniature circuit breaker has the features of structure advanced, performance reliable, breaking capacity high, appearance elegant and its shell and parts are made of material with impact resistance, strong flame-retardant feature. It is suitable to power system of 50or 60 frequency,Ue 400V and below, Ui 63A and below. It is mainly applied at office building, residence, for lighting, power distribution and overload and short circuit protection of equipment. Normally, it also can be used as the not frequent transfer of power system. It conforms to the standards IEC60898and GB10963.1.

TECHNICAL PARAMETER

Rated voltage(V)	Pole	Rated current(A)	Rated short circuit breaking capacity	
			Breaking capacitylcs(A)	Power factor
230	1	6,10,16,20,25, 32,40	6000	0.65~0.70
400	2,3,4		6000	0.65~0.70
230	1,2	50,63	4000	0.75~0.80
400	2,3,4		4000	0.75~0.80

1.Heat resistance: category 2 (temperature 55℃,relative humidity 95%).
2.Wiring is terminal with clamp, cable dia.:25mm^2

CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	1s<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	1s<t<120s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

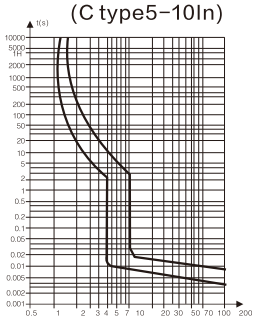
TYPE MEANING

SN－63□

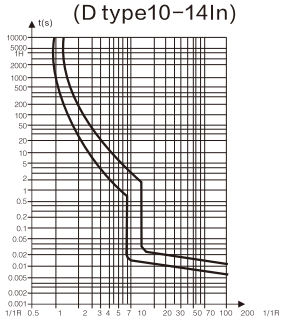
- Application type C－ :communication type D for motive industry power distribution protection
- Shelllevel rated current
- Mould case circuit breaker

BREAKING CHARACTERISTIC CURVE

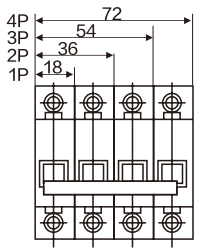
(C type5-10In)

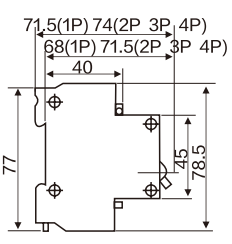


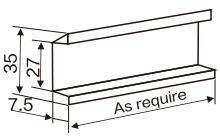
(D type10-14In)



DIMENSION







APPLICATION

SN LE-50 RCBO is suitable to the single phase residual circuit of 50/60Hz, rated voltage 230V, as the current leakage protection and protect the civil electrical circuit from over load and short circuit and it has the features of volume small, breaking capacity high. Null/live wire is cut at the same time, and even the wire is reverse connection , it still have current leakage Protection.
The product conforms to standards IEC1009.1,GB16917.1etc.

TECHNICAL PARAMETER

Model	Rated voltage (V)	Poles	Shell-level rated current(A)	Rated Current In(A)	Rated breaking residual current (mA)	Rated not breaking residual current (mA)	Breaking time of rated residul current(s)	Breaking Capacity (A)	Breaking value of over-under voltage(V)
SNLE-63	230	1P+N	63A	6,10, 16,20, 25,32 50,63	30	15	≤0.1	4000 – 6000	/
									280V ± 5V
									170V ± 5V

Remark:wiring is terminal with clamp, cable dia.:10mm²below available for hard cable.

TRIPPING CHARACTERISTICS

Test current(A)	Rated current(A)	Requested time	Result	Start station	Remark
1.13In	All	t≧1h	Don't trip	Cool	
1.45In	All	t＜1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is＜t＜60S	Trip	Cool	Auxiliary switch closed, power is on
5In	All	t≧0.1S	Don't trip	Cool	Auxiliary switch closed, power is on
10In	All	t＜0.1S	Trip	Cool	Auxiliary switch closed, power is on

TYPE MEANING

SN LE-63 □

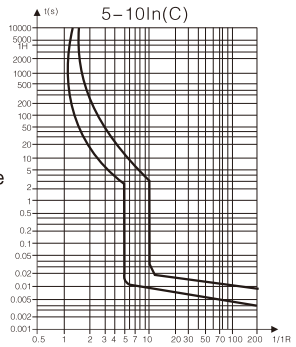
- G:over voltage protect
- Q:under-voltage protect
- GQ:over-under protect

Shell-level rated current(A)

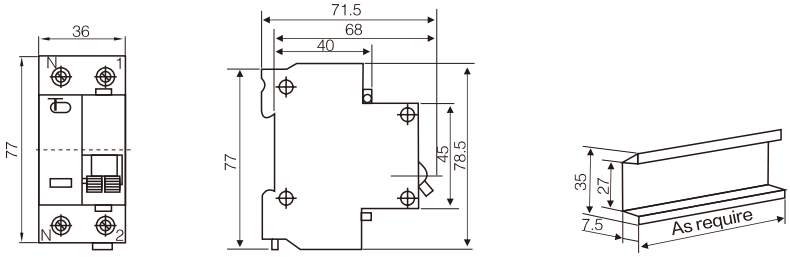
Electronic residual current breaking type

Plastic case type circuit breaker

BREAKING CHARACTERSTIC CURVE



DEMENSION



Application guidelines:

1. Press the test button once a month, check leakage protective device.
2. When the leakage protective device, the device on the obverse of the red machine instructions.
3. When reclosing circuit breaker，the protection device reset automatically.

DIMENSION

DZ47-63 high breaking miniature circuit breaker has the features of structure advanced, performance reliable, breaking capacity high, appearance elegant and its shell and parts are made of material with impact resistance, strong flame-retardant feature. It is suitable to power system of 50or 60 frequency,Ue 400V and below, Ui 63A and below. It is mainly applied at office building, residence, for lighting, power distribution and overload and short circuit protection of equipment. Normally, it also can be used as the not frequent transfer of power system. It conforms to the standards IEC60898and GB10963.1.

TECHNICAL PARAMETER

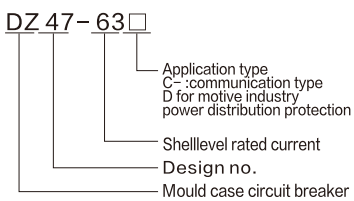
Rated voltage(V)	Pole	Rated current(A)	Rated short circuit breaking capacity	
			Breaking capacitylcs(A)	Power factor
230	1	6,10,16,20,25, 32,40	6000	0.65~0.70
400	2,3,4		6000	0.65~0.70
230	1,2	50,63	4000	0.75~0.80
400	2,3,4		4000	0.75~0.80

1.Heat resistance: category 2 (temperature 55℃,relative humidity 95%).
2.Wiring is terminal with clamp, cable dia.:25mm^2

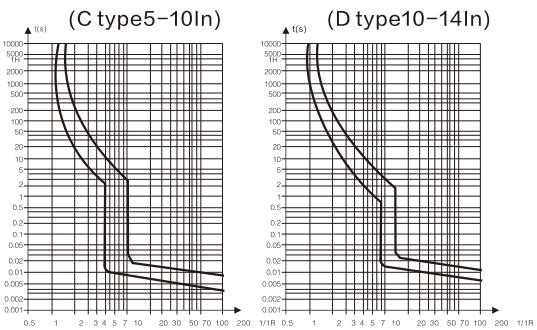
CURRENT RELEASE CHARACTER DIAGRAM

Test current	Rated voltage	Requested time	Result	Start station	Remark
1.13In	All	t≥1h	Don't trip	Cool	
1.45In	All	t<1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	In≤32A	Is<t<60s	Trip	Cool	Auxiliary switch closed and power on
2.55In	In>32A	Is<t<120s	Trip	Cool	Auxiliary switch closed and power on
5In(CType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
10In(CType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on
10In(DType)	All	t≥0.1s	Don't trip	Cool	Auxiliary switch closed and power on
14In(DType)	All	t<0.1s	Trip	Cool	Auxiliary switch closed and power on

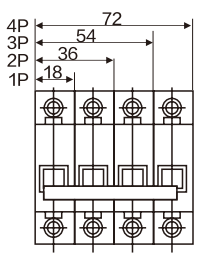
TYPE MEANING

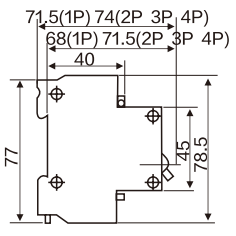


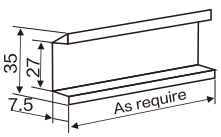
BREAKING CHARACTERISTIC CURVE



DIMENSION







APPLICATION

DZ47LE -63 SERIES residual current circuit breaker is applied in the power system of AC 50Hz,single phase 230V,three phases 400V.When somebody gets and electric shock or the leakage current exceeds the default value, the RCBO can cut off the power automatically to protect the personal safety and prevent the equipment from the fault resulted from the leakage current or can be used for the unfrequent switch of the circuit under normal condition. And extra protection functions like over voltage, under voltage can be added according to customers' request.

It conforms to the standard IEC1009-1,GB16917.1.

STRUCTURE

DZ47LE-63 series residual current circuit breaker is composed of DZ47-63high breaking mini circuit breaker and current residual current release. The RCBO is current electronic current leakage circuit breaker, the main parts include zero sequence current transformer, electronic panel, current leakage release and the circuit breaker with protection functions of over load, short circuit.

TECHNICAL PARAMETER

Rated Voltage (V)	Rated Current of Case Inm(A)	Pole	Neutral Line	Rated current In(A)	Rated short circuit breaking capacity		Rated residual current breaking current I△n(mA)	Rated residual current no breaking current I△n(mA)	Trip Type
					Breaking capacity Ics(A)	COSΦ			
230	63	1	N	6,10, 16,20, 25,32, 40	6000	0.7	30,50, 100,300	15,25, 50,150	C
230	63	2			6000	0.7			
400	63	3			6000	0.7			
400	63	3	N		6000	0.7			
400	63	4			6000	0.7			
230	63	1	N	50,63	6000	0.8			D
400	63	2			6000	0.8			
400	63	3			6000	0.8			
400	63	3	N		6000	0.8			
400	63	4			6000	0.8			

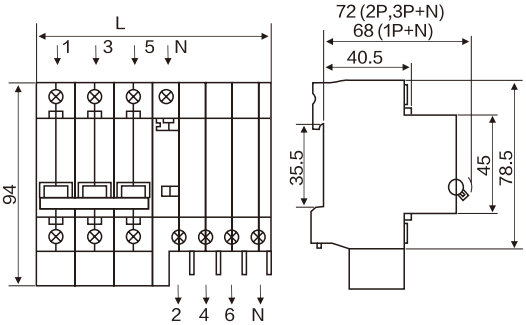
Note: Using the terminals with clamped to wiring,hard wire 16mm^2 and below are available.

TYPE MEANING

DZ 47 LE - 63 / □□

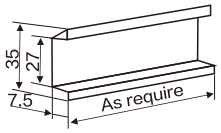
- Rated current residual breaking current
- Pole
- Shelllevel rated current
- Electronic type with earth leakage protection
- Design no.
- Plastic case type curcuit breaker

DIMENSION



L Size:

Pole	Big shell	Small shell
1P+N	18+36	18+27
2P	36+36	36+27
3P	54+50	54+36
3P+N	54+64	54+45
4P	72+64	72+45



APPLICATION

This series of circuit breaker accessories is auxiliary components,our company designed for the DZ47-63 series circuit breakers, in the home, construction, fire, intelligent electrical and other electrical lines, can choose different electrical accessories by different requests and be used with DZ47-63series circuit breaker,to achieve the remote control of the circuit breaker, sub-status indication, to provide alarm signals and other functions, better protection of the circuit, personal and property safety.

OF
auxiliary contact

DZ47 OVER-UNDER VOLTAGE RELEASE FEATURE

- There are two ways to assemble: pin assembly, screw assembly. Can meet the different modified products
- Commonly used plastic pins to assemble, will not damage the product rivets

MCB ACCERSSORY NAME APPLICATION

Accerssory name	Code	Application	Standard
Auxiliary contact	OF	Provide auxiliary signal, control auxiliary circuit	IEC60947-5-1 GB14048.5-2008
Alarm contact	SD	When the circuit breaker is protected circuit failure, provide alarm signal	IEC60947-2 GB14048.2-2008
Shunt release device,	MX	Long distance breaking electric	IEC60947-1 GB14048.1-2008
Shunt release+ auxiliary contact	MX+OF	Long distance breaking electric,and achieve the control of auxiliry circuit through auxiliry contact,owns active type and passive type	IEC60947-1 GB14048.1-2008
Under-voltage release	MN	When the power supply voltage drops from 230v to 170v±5%, the circuit breaker trip, to achieve the line undervoltage protection	IEC60947-2 GB14048.2
Over-voltage release	MV	When the power supply voltage up from 230v to 270v±5%, the circuit breaker trip, to achieve the line overvoltage protection	IEC60947-2 GB14048.2
Over-under voltage release	MV+MN	When the 220v rated voltage up to 270v±5%,or drop to170v±5% the circuit breaker trip, to achieve line protection	IEC60947-2 GB14048.2
Overvoltage, lossvoltage (electronic) release	MNVS	When the 220v rated voltage up to 270v±5%,or drop to170v±5% the circuit breaker trip, to achieve line protection.at same time when the user is powered down,release will take breaker to trip,achieve loss voltage protection	IEC60947-2 GB14048.2
Three phase over-under voltage release	MV+MN	When voltage up from 380v to 460v ±5% or drop to 300v ±5%, will achieve over-under voltage protection,and has the function about lack phase	IEC60947-2 GB14048.2

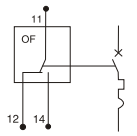
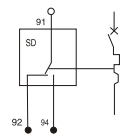
SD
alarm contact

(MX+OF)
shunt release+
auxiliary contact

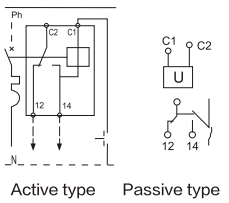
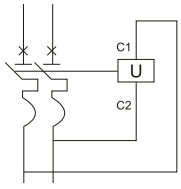
TECHNICAL PARAMETER

Accerssory name	Rated voltage Ue	Connenction image
MN under-voltage release	AC:230V	170V±5%
	AC:400V	300V±5%
MV over-voltage release	AC:230V	270V±5%
	AC:400V	460V±5%
MV+MN over-under voltage release	AC:230V	Under-voltage:170v±5% Over-voltage:270V±5%
	AC:400V	Under-voltage:300v±5% Over-voltage:460V±5%
MNVS Overvoltage, lossvoltage (Electronic) release	AC:230V	Under-voltage:170v±5% Over-voltage:270V±5%

● Auxiliary contact, alarm contact technical parameters

Accerssory name	Rated current(A)			Number of contacts per group	Connenction image
	AC：400V	AC：230V	DC：220V		
Auxiliary contact OF	3	6	1	one open one closed	
Alarm contact SD	3	6	1	one open one closed	

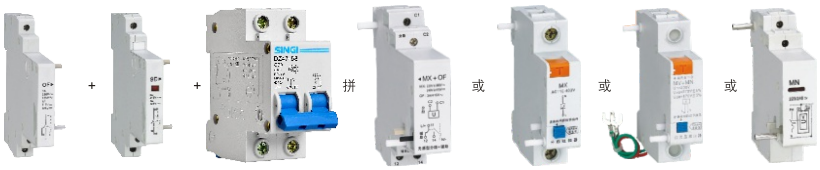
● Shunt release device, shunt release+auxiliary contact technical parameters

Accerssory name	Rated isolate voltage Ui	Rated contral power voltage Us	Trip power (W or VA)	Pull up voltage	Connenction image
MX+OF shunt release+ auxiliary contact	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1) Us	
		AC/DC: 24~48V	120		
MX shunt release	415V	AC/DC: 230~400V 24~220V	240	(0.7~1.1) Us	
		AC/DC: 24~48V	120		

MX
shunt release

TYPE MEANING

OF	Auxiliary contact
SD	Alarm contact
MV	Over-voltage release
MN	Under-voltage release
MX	Shunt release device
MX+OF	Shunt release+auxiliary contact

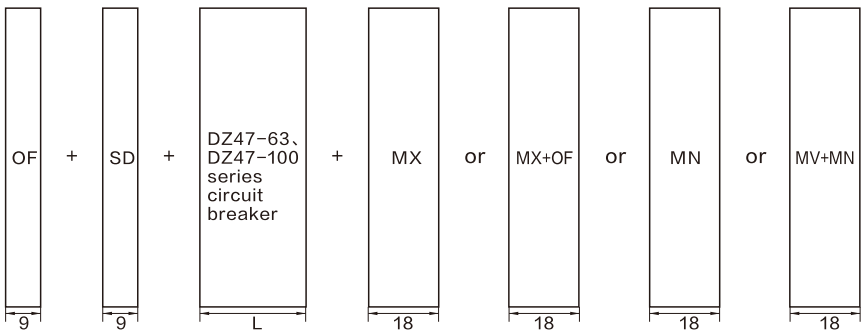


NOTE: The assembly on the left side of the circuit breaker can be one or more.
There only have 1 accessery on the breaker right

WORKING CONDITIONS AND INSTALLATION CONDITIONS

◎Ambient temperature: −5 ℃ ~+400C;
◎Altitude: no more than 2000m;
◎Environmental conditions: there should be no danger of explosion caused by the media, there is no corrosion and destruction of harmful gases and conductive dust;
◎Installation conditions: 35mm standard rail installation;

OUTLOOK AND MOUNTING SIZE



NOTE: The assembly accessory on the left side of the circuit breaker can be one or more.
There only have 1 accessery on the breaker right

APPLICATION

SWM-100 high breaking miniature circuit breaker is used in lighting and motor protection system with protections of short circuit and over load. It mainly has the features of elegant and small, weight light, performance good and reliable, breaking capacity high, trip quickly, DIN installation and the material of shell and parts is high flameproof and anti-impact plastic , life long. It is mainly applied in the system of 50/60Hz,single pole 230V,2,3,4poles for 400V as over load ,short circuit protection. And under voltage release, shunt release etc. And it also can be used in the isolation switch as the under voltage protection and remote distance breaking.It conforms to IEC60947-2,GB14048.2

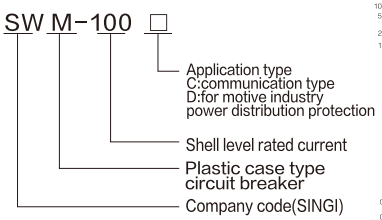
TECHNICAL PARAMETER

- Main type: C for lighting power distribution protection
  D for motive industry power distribution protection
- Rated current: 63A,80A,100A,125A
- Poles:1,2,3,4pooles
- This MCB is embedded installation(can mount on rail)
- The rated work voltage and related rated short circuit breaking capacity of this circuit breaker as follows

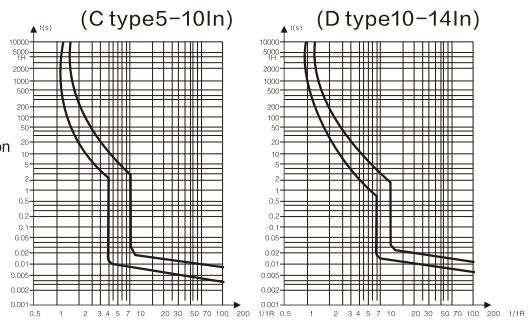
Rated current(A)	Pole	Rated voltage(V)	Rated short circuit breaking capacity	
			Breaking capacitylcs(A)	Test circuit power factor
63,80,100,125	1,2,3,4	400	10000	0.45~0.80
			10000	0.20~0.25
			10000	0.45~0.50

- power frequency voltage resistance: after humidity heat performance test, the circuit breaker can withstand 2500Vpower frequency voltage withstanding test for 1 minute ,but without insulation flashover and puncture
- mechanical electrical life: mechanical life 20,000times,electrical life 6,000times
- humidity heat withstanding:2category(temperature 55℃,relative humidity 95%).
- wiring is terminal with clamp, cable dia.:50mm2below available for hard cable

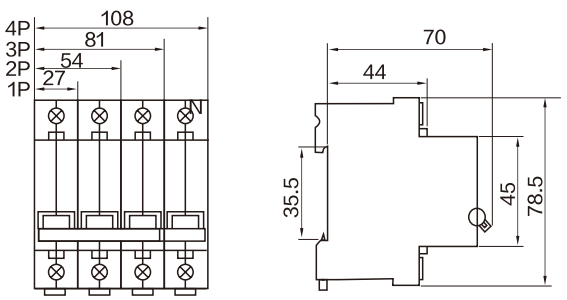
TYPE MEANING



BREAKING CHARACTERISTIC CURVE



DIMENSION



APPLICATION

SWMLE-100 residual current circuit breaker is applied in the power system of AC 50Hz, single phase 230V,three phases 400V,rated current 100A. The RCBO also can protect the circuit against current leakage, over load, short circuit etc. And extra protection function like over voltage can be added according to customers' request. It mainly used as building lighting and power distribution protection..

STRUCTURE

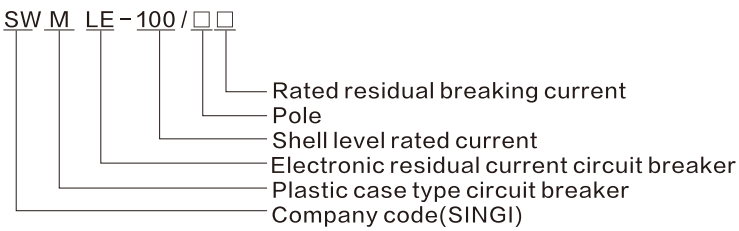
SWMLE-100 earth leakage circuit breaker is composed of SWM-100high breaking mini circuitbreaker and current leakage release. The RCBO is current electronic current leakage circuit breaker, the main parts include zero sequence current transformer, electronic panel, current leakage release and the circuit breaker with protection functions of over load, short circuit.

TECHNOICAL PARAMETER

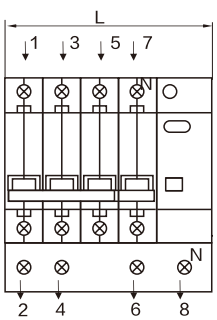
Rated Voltage (V)	Rated Current of Case Inm(A)	Pole	Neutral Line	Rated current In(A)	Rated short circuit breaking capacity		Rated residual current breaking current I△n(mA)	Rated residual current no breaking current I△n(mA)	Trip Type
					Breaking capacity Ics(A)	COSΦ			
230	100	1	N	63, 80, 100	10000	0.5	30, 50, 100, 200, 300	15, 25, 50, 100, 150	C
230	100	2			10000	0.5			
400	100	3			10000	0.5			
230/400	100	3	N		10000	0.5			
230/400	100	4			10000	0.5			
230	100	1	N		10000	0.5			D
230	100	2			10000	0.5			
400	100	3			10000	0.5			
230/400	100	3	N		10000	0.5			
230/400	100	4			10000	0.5			

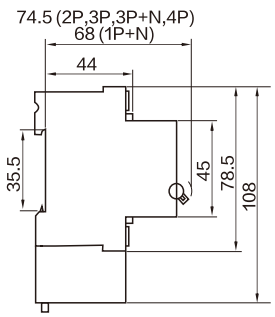
Remark:
1)rated current leakage breaking current:30/50/100/200/300mA
2)wiring is terminal with clamp, cable dia.:50mm2below available for hard cable

TYPE MEANING



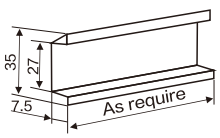
DIMENSION





L Size:

Pole	Size
1P+N	27+27
2P	54+27
3P	81+27
3P+N	81+27
4P	108+27



APPLICATION

TRL-32 series residual current operated circuit breaker (hereinafter referred to as residual current circuit breaker)is suitable single –phase circuit of AC50Hz,rated working voltage 230V or 115V and rated current up to 32A,protecting human being against electric shock. Meanwhile, it also can used to prevent fire accident caused by ground fault current due to the damage of insulation of equipment. Derivation of residual current circuit breaker also has overload protection function, it is able to effectively protect the electrical equipment from being burnt.It is featured with small volume ,high breaking, reliable operation and environmental protection, is widely applied to electric water heater, solar water heater, vending machine, water dispenser ,refrigerator, washing machine etc. providing protections against electric shock ,residual current or over load ,really is the ideal product for daily life. This product is in accordance with GB16916.1-2003 residual current operated circuit breakers without integral over current protection for household and similar uses(RCCB), GB16917.1-2003residual current operated circuit breakers with integral over current protection for household and similar uses(RCBO)

WORKING CONDITIONS ,INSTALLATION AND OPERATION

- Working conditions
  Installation class: class II.
  Altitude of installation site should not exceed 2000m.
  Ambient air temperature:

A. ambient air temperature should be within-5~+40℃

B. Average value within 24h should not exceed +35℃
  Atmospheric conditions
  Atmospheric relative humidity should not exceed 50% at max temperature +40℃, lower relative humidity is allowable at lower temperature, when the average temperature of the dampest month is +25℃,then the max relative humidity of this month is 90%,please take the condensation caused by temperature change into consideration.Please select proper residual current circuit breaker according to the protected object ,to reach the optimum protection efficiency.

PARAMETER

Model	Shell Ui(A)	Ue(V)	Frequency(Hz)	Rated Ui(A)
TORNL-32	32	230/115	50	10,16,20,25,32

Rated limit short circuit current Inc(A)	Rated surplus breaking current I△n(mA)	Rated surplus no breaking current I△n(mA)
1500	10,15,30	5,7.5,15

Max breaking time

Shell Ui Inm(A)	Operation loop times	Operation method	Operation loop times without load	Operation frequency(times/h)
		operation loop times with load		
32	10,000	6,000		240

Protection of over current release

No.	Test current item	I/In	Starting station	Test result	Remark
1	conventional not releasing current	1.13	cool	not release	
2	conventional releasing current	1.45	test following test1	release	current ascend stably to the default value within 5s
3	conventional releasing current	2.55	cool	release	

APPLICATION

SGFE electronic residual current protector for AC 50 / 60Hz, single-phase AC240V, three-phase AC415 line, when someone electric shock or circuit leakage current exceeds the specified value, automatically cut off the power to protect personal safety and prevent equipments get accident due to leakage current Caused, as well as under normal sitation can be used for unfrequently transfer.This product pass G B16916.1 IEC / EN61008-1 standard.

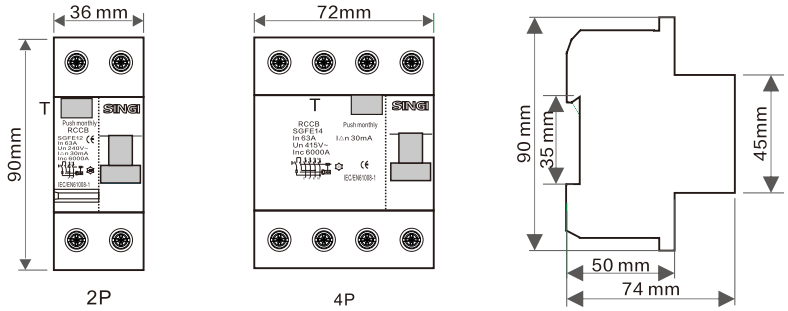
FEATURES

- Suitable for two-way bus wiring capacity
- Using leading electronic drives, more cost-effective
- Maximum connection capacity is 25mm2, wiring distance is 3N.m, suitable for different installation equipment, wiring better
- All kinds of installation equipment, wiring better
- Protection level: IP20

TECHNICAL PARAMETER

	standard	GB16916.1 IEC/EN 61008-1
Electronic characteristics	Rated current In	16A、25A、40A 、63A
	Pole	2P 4P
	Rated voltage Ue	240V / 415V
	Insulation voltage Ui	500V
	Rated power	50Hz / 60Hz
	Rated residual current breaking value I△n	0.01A、0.03A、0.1A、0.3A
	Rated residual current breaking capacity I△m	500A(In =16-40A) 、630A(In=63A)
	Breaking capacity Inc=I△c	6000A
	SCPD fuse	6000A
	Breaking time when have residual current I△n	≤0.1S
	Rated impulse withstand voltage (1.2/50) Uimp	6000V
	Dielectric voltage	2.5kA
	Pollution level	
Mechanical characteristics	life	4000
	Fault current indicator	Yes
	Degree of protection	Cable/U type busbar/Pin type busbar
	Protect level(daily average ≤35℃)	IP20
	Storage temperature	-5℃~+40℃
Combination of accessories	ambient temperature	-25℃~+70℃
	Size of terminal top/cable base	25mm² (AWG)
	Size of terminal top/busbar base	25mm² (AWG)
	Distance of screw	3.0N.m
	Mounting ways	On DIN guideEN60715(35mm) by fastening the device

DIMENSION



DIMENSION

SGFL electromagnetic type residual current protector for AC 50 / 60Hz, single-phase AC240V, three-phase AC415 line, when someone electric shock or circuit leakage current exceeds the specified value, automatically cut off the power to protect personal safety and prevent equipments get accident due to leakage current Caused, as well as under normal sitation can be used for unfrequently transfer.This product pass G B16916.1 IEC / EN61008-1 standard.

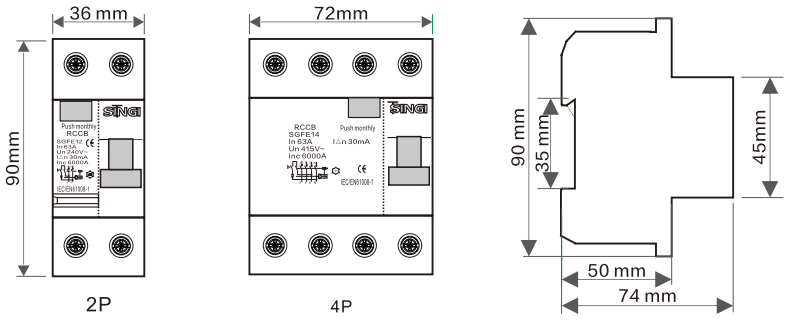
FEATURES

- Suitable for two-way bus wiring capacity
- Using leading electronic drives, more cost-effective
- Maximum connection capacity is 25mm2, wiring distance is 3N.m, suitable for different installation equipment, wiring better
- All kinds of installation equipment, wiring better
- Protection level: IP20

TECHNICAL PARAMETER

	standard	GB16916.1 IEC/EN 61008-1
Electronic characteristics	Rated current In	16A、25A、40A 、63A
	Pole	2P 4P
	Rated voltage Ue	240V / 415V
	Insulation voltage Ui	500V
	Rated power	50Hz / 60Hz
	Rated residual current breaking value I△n	0.01A、0.03A、0.1A、0.3A
	Rated residual current breaking capacity I△m	500A(In =16-40A) 、630A(In=63A)
	Breaking capacity Inc=I△c	6000A
	SCPD fuse	6000A
	Breaking time when have residual current I△n	≤0.1S
	Rated impulse withstand voltage (1.2/50) Uimp	6000V
	Dielectric voltage	2.5kA
	Pollution level	2
Mechanical characteristics	life	4000
	Fault current indicator	Yes
	Degree of protection	Cable/U type busbar/Pin type busbar
	Protect level(daily average ≤35℃)	IP20
	Storage temperature	-5℃~+40℃
Combination of accessories	ambient temperature	-25℃~+70℃
	Size of terminal top/cable base	25mm² (AWG)
	Size of terminal top/busbar base	25mm² (AWG)
	Distance of screw	3.0N.m
	Mounting ways	On DIN guideEN60715(35mm) by fastening the device

DIMENSION



APPLICATION

DZ30-32(phase line+neutral line)series miniature circuit breaker is mainly applied in the circuit of 50/60Hz, single phase 230V，protecting the circuit from over load and short circuit. The product has high breaking capacity, volume small, live wire, null wire are cut at the same time to avoid the inversed grafting of live and null wire or danger caused by the voltage between zero wire and earth.It really is the ideal product for daily life. The mcb is in accordance with standards of IEC60898-1 and GB10963.1.

TECHNICAL PARAMETER

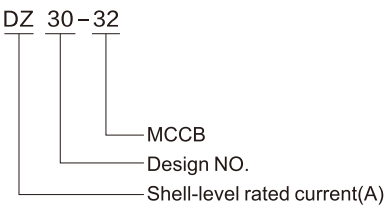
Model	Rated voltage (V)	Poles	Shell-level rated current (A)	Rated Current In(A)	Rated short circuit breaking capacity		Mechanical life
					Short circuit Capacity(A)	power factor COSϕ	
DZ30-32	230	1P+N	32	3,6,10 16,20 25,32	3000	0.65-0.70	10000

Remark:1. heat resistance: temperature 55℃,relative humidity 95%.
2. wiring is terminal with clamp, cable dia.:10mm²below available for hard cable.

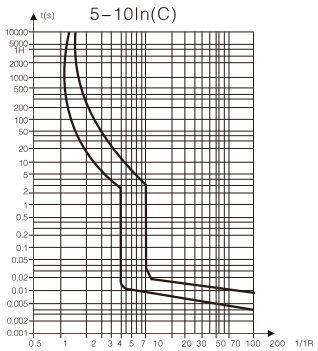
TRIPPING CHARACTERISTICS

Test current(A)	Rated current(A)	Requested time	Result	Start station	Remark
1.13In	All	t≧1h	Don't trip	Cool	
1.45In	All	t＜1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is＜t＜60S	Trip	Cool	Auxiliary switch closed, power is on
5In	All	t≧0.1S	Don't trip	Cool	Auxiliary switch closed, power is on
10In	All	t＜0.1S	Trip	Cool	Auxiliary switch closed, power is on

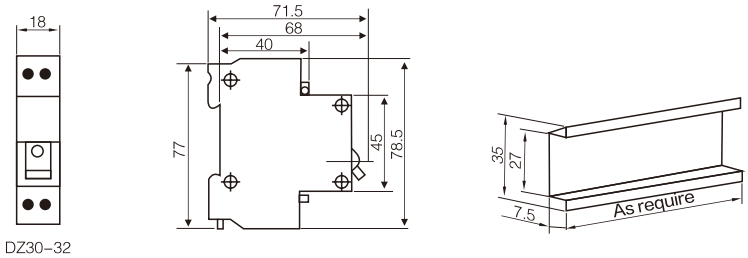
TYPE MEANING



BREAKING CHARACTERSTIC CURVE



DEMENSION



DZ30LE-32

APPLICATION

DZ30-32 (phase line+neutral line leakage) series miniature circuit breaker is suitable to the single phase residual circuit of 50/60Hz, rated voltage 230V, as the current leakage protection and protect the civil electrical circuit from over load and short circuit and it has the features of volume small, breaking capacity high. Null/live wire is cut at the same time, and even the wire is reverse connection , it still have current leakage Protection. The product conforms to standards IEC1009.1,GB16917.1etc.

TECHNICAL PARAMETER

Model	Rated voltage (V)	Poles	Shell-level rated current(A)	Rated Current In(A)	Rated breaking residual current (mA)	Rated not breaking residual current (mA)	Breaking time of rated residul current(s)	Breaking Capacity (A):	Breaking value of over-voltage(V)
DZ30LE-32	230	1P+N	32A	6,10 16,20 25,32	30	15	≤0.1	3000	/
DZ30LE-32G									280V ± 5V

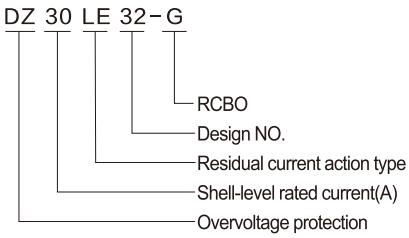
Remark:wiring is terminal with clamp, cable dia.:10mm²below available for hard cable.

TRIPPING CHARACTERISTICS

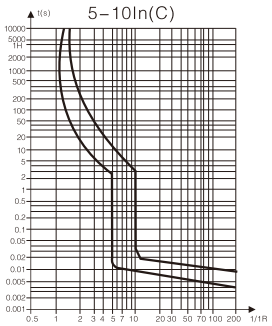
Test current(A)	Rated current(A)	Requested time	Result	Start station	Remark
1.13In	All	t≧1h	Don't trip	Cool	
1.45In	All	t＜1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is＜t＜60S	Trip	Cool	Auxiliary switch closed, power is on
5In	All	t≧0.1S	Don't trip	Cool	Auxiliary switch closed, power is on
10In	All	t＜0.1S	Trip	Cool	Auxiliary switch closed, power is on

DZ30LE-32G

TYPE MEANING

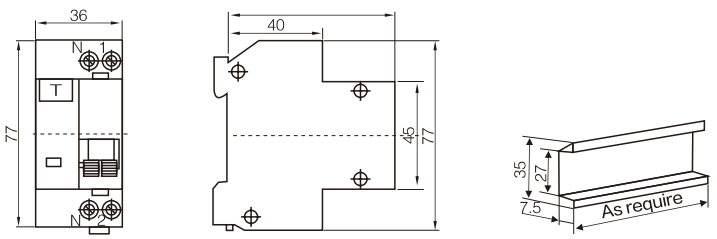


BREAKING CHARACTERSTIC CURVE



DZ30LE-32(DZ30LE-32G)

DEMENSION



Application guidelines:

1. Press the test button once a month, check leakage protective device.
2. When the leakage protective device, the device on the obverse of the red machine instructions.
3. When reclosing circuit breaker，the protection device reset automatically.

SWM2L-32 (PHASE LINE+NEUTRAL LINE+LEAKAGE) RCBO

APPLICATION

SWM2L-32 (DPN Vigi) RCBO is suitable to the single phase residual circuit of 50/60Hz, rated voltage 230V, as the current leakage protection and protect the civil electrical circuit from over load and short circuit and it has the features of volume small, breaking capacity high. Null/live wire is cut at the same time, and even the wire is reverse connection , it still have current leakage Protection.
The product conforms to standards IEC1009.1,GB16917.1etc.

TECHNICAL PARAMETER

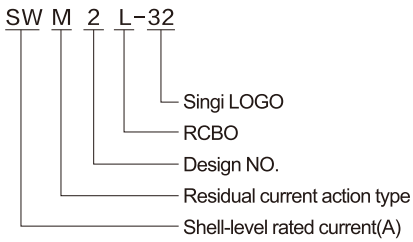
Rated voltage (V)	Poles	Shell-level rated current (A)	Rated Current In(A)	Rated breaking residual current (mA)	Rated not breaking residual current (mA)	Breaking time of rated residul current(s)	Breaking Capacity (A)
230	1P+N	32	3,6,10, 16,20, 25,32	30	15	≤0.1	3000

Remark:wiring is terminal with clamp, cable dia.:10mm²below available for hard cable.

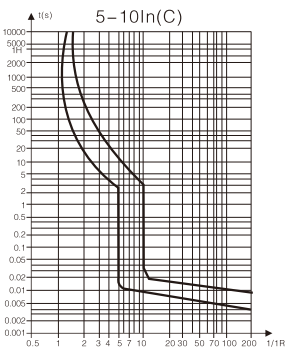
TRIPPING CHARACTERISTICS

Test current(A)	Rated current(A)	Requested time	Result	Start station	Remark
1.13In	All	t≧1h	Don't trip	Cool	
1.45In	All	t＜1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is＜t＜60S	Trip	Cool	Auxiliary switch closed, power is on
5In	All	t≧0.1S	Don't trip	Cool	Auxiliary switch closed, power is on
10In	All	t＜0.1S	Trip	Cool	Auxiliary switch closed, power is on

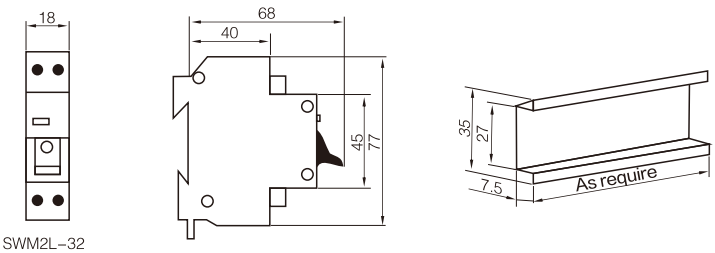
TYPE MEANING



BREAKING CHARACTERSTIC CURVE



DEMENSION



SWM2L-32

Application guidelines:

1. Press the test button once a month, check leakage protective device.
2. When the leakage protective device, the device on the obverse of the red machine instructions.
3. When reclosing circuit breaker，the protection device reset automatically.

APPLICATION

DZ30LE-50 RCBO is suitable to the single phase residual circuit of 50/60Hz, rated voltage 230V, as the current leakage protection and protect the civil electrical circuit from over load and short circuit and it has the features of volume small, breaking capacity high. Null/live wire is cut at the same time, and even the wire is reverse connection , it still have current leakage Protection.
The product conforms to standards IEC1009.1,GB16917.1etc.

TECHNICAL PARAMETER

Model	Rated voltage (V)	Poles	Shell-level rated current(A)	Rated Current In(A)	Rated breaking residual current (mA)	Rated not breaking residual current (mA)	Breaking time of rated residul current(s)	Breaking Capacity (A)	Breaking value of over-under voltage(V)
DZ30LE -50	230	1P+N	50A	6,10, 16,20, 25,32 50	30	15	≤0.1	3000	/
DZ30LE -32G									280V ± 5V
DZ30LE -32Q									170V ± 5V

Remark:wiring is terminal with clamp, cable dia.:10mm²below available for hard cable.

TRIPPING CHARACTERISTICS

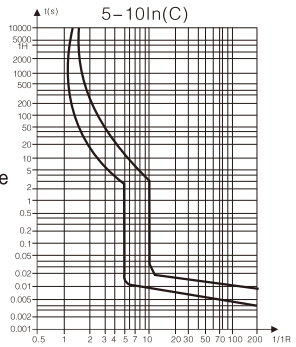
Test current(A)	Rated current(A)	Requested time	Result	Start station	Remark
1.13In	All	t≧1h	Don't trip	Cool	
1.45In	All	t＜1h	Trip	Heat	Current ascends the requested value stably in 5s
2.55In	All	Is＜t＜60S	Trip	Cool	Auxiliary switch closed, power is on
5In	All	t≧0.1S	Don't trip	Cool	Auxiliary switch closed, power is on
10In	All	t＜0.1S	Trip	Cool	Auxiliary switch closed, power is on

TYPE MEANING

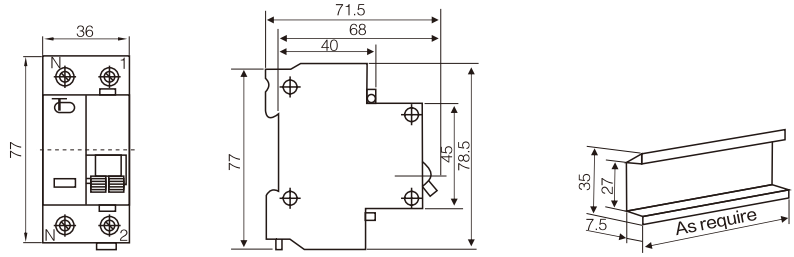
DZ 30 LE-50 □

- G:over voltage protect
- Q:under-voltage protect
- GQ:over-under protect
- Shell-level rated current(A)
- Electronic residual current breaking type
- Design no.
- Plastic case type circuit breaker

BREAKING CHARACTERSTIC CURVE



DEMENSION



Application guidelines:

1. Press the test button once a month, check leakage protective device.
2. When the leakage protective device, the device on the obverse of the red machine instructions.
3. When reclosing circuit breaker，the protection device reset automatically.

APPLICATION

SWM-125-S(DZ47-63-S)series IC card prepayment miniature circuit breaker is mainly used in 50Hz, voltage 230v/400v, current 125 a circuit overload protection, short circuit, at the same time it can also under normal circumstances do not frequent on-off electrical devices and lighting. Especially applicable to industrial and commercial lighting system, widely used in IC card prepaid meters are used to control line road break.

The product conforms to standards IEC60898-1,GB10963.1, with the international advanced level.

FEATURES

- Main type: a. C use for lighting distribution
  b. D use for Power industrial distribution protection
- Rated Current In(A): 6,20,25,32,40,50,63,80,100,125
- Installation: embedded installation(also can be installed on the guide rail)
- Mechanical life: Mechanical life of circuit breaker for 20,000 times, including electrical life is more than 10000 times.
- Circuit breaker in the -40℃~+70℃ working temperature range without deformation

TECHNICAL PARAMETER

- Rated voltage short circuit capacity(A)

Model	Rated Current In(A)	Poles	Rated current(A)	Rated short circuit breaking capacity	
				Short circuit Capacity(A)	test power factor COS ϕ
DZ47-63 -S-32	16,20,25,32 40,50,63	1P+N	230	6000	0.65-0.70
SWM-125-S	68,80,100 125	3P+N	400		

- Current tripping characteristic

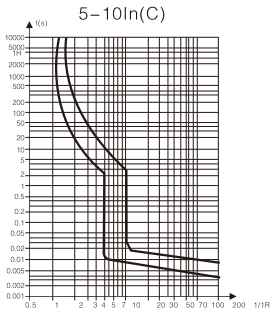
NO.	Rated current(A)	Start station	Test current(A)	Requested time	Expected results	Remark
A	In≤63A	Cold	1.13In	t≤1h	Don't trip	
	In>63A			t≤2h		
B	In≤63A	Followed by A test	1.45In	t<1h	Trip	Current ascends the requested value stably in 5s
	In>63A			t<2h		
C	In≤32A	Cold	2.55In	1s<t<60s	Trip	
	In>32A			1s<t<120s		
D	All values B, C, D type	Cold	3In 5In 10In	t≤0.1s	Don't trip	
E	All values B, C, D type	Cold	5In 10In 20In	t<0.1s	Trip	

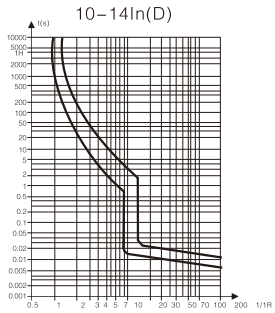
TYPE MEANING

DZ 47 - 63 - S
- S — Delay shunt tripping device
- 63 — Shell level rated current
- 47 — Design NO.
- DZ — Product NO.

SW M - 125 - S
- S — Delay shunt tripping device
- 125 — Shell level rated current
- M — MCB
- SW — company code(SINGI)

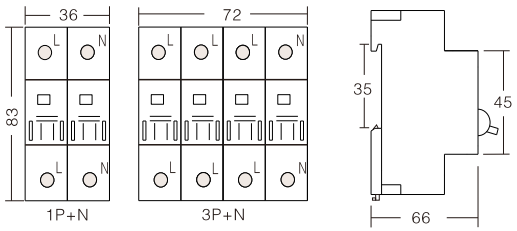
BREAKING CHARACTERSTIC CURVE



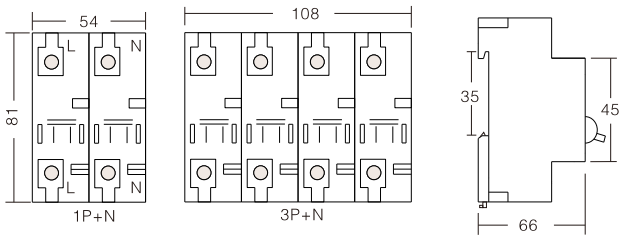


DEMENSION

DZ47-63-S



SWM-125-S



HL30-100 SERISE ISOLATION SWTICH

APPLICATION

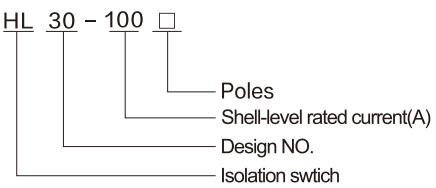
Hl30 series isolation swtich is suitable of AC 50Hz or 60Hz,rated voltage 400V and below,rate current 100A and below,to be the main switch of the terminal appliance,as well as control the electromotor,small-power appliance and illumination etc.It conforms to the standards GB14048.3 and IEC60947-3

TECHNICAL PARAMETER

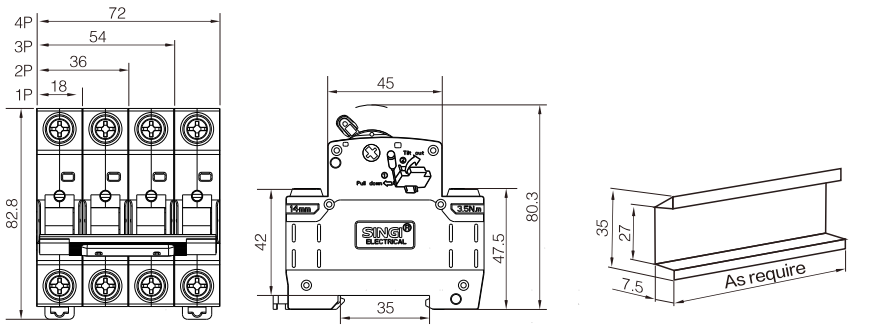
Rated voltage (V)	Rated Current In(A)	Rated making and breaking capacity	Rated short-circuit making capacity (A)	Rated short circuit fuse capacity(A/s)
230/400V	32,63,80 100,125	3Ie、1.05Ue COSΦ=0.65	1500	2000

①Poles:1,2,3,4
②On nomal din rail TH35 mm
③Wire connecting with 25mm^2 line and below

TYPE MEANING



DEMENSION



APPLICATION

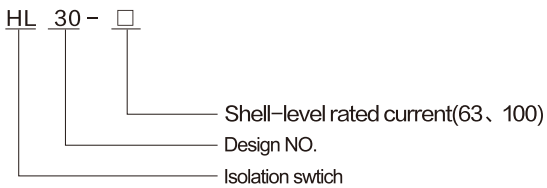
HLH30-100(63) series isolation swtich is suitable of AC 50Hz or 60Hz,rated voltage 400V and below,rate current 100A and below,to be the main switch of the terminal appliance,as well as control the electromotor,small-power appliance and illumination etc. It conforms to the standards GB14048.3 and IEC60947-3

TECHNICAL PARAMETER

Rated voltage (V)	Rated Current In(A)	Rated making and breaking capacity	Rated short-circuit making capacity (A)	Rated short circuit fuse capacity(A/s)
230/400V	32,63,80 100,125	3Ie、1.05Ue COSΦ=0.65	1500	1200

①Poles:1,2,3,4
②On nomal din rail TH35 mm
③Wire connecting with 25mm^2 line and below

TYPE MEANING



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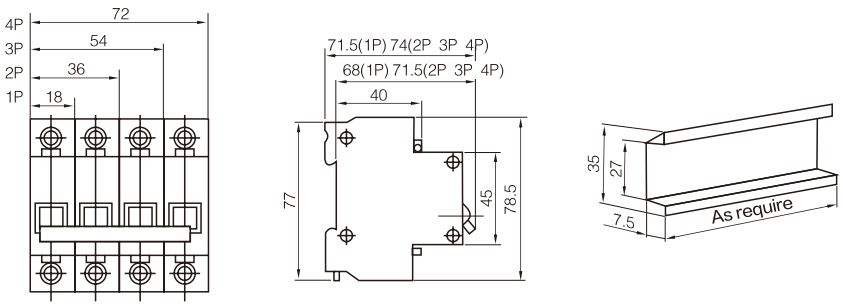


HG30 FUSE TYPE ISOLATOR

APPLICATION

This series of fuse support for AC 50HZ, rated insulation voltage to 690V,conventional heating currentup to 63A, mainly used in the electrical circuit,which size to 14x51 various using types (gG, aM, aR, etc.) as supports for fuses. The supports in this serie of fuse has capacity of keep hot stable when conventional heating current and the expected short-circuit impact current to 100kA, multi-phase combination with a separate power supply function. With a fuse indicator, the lamp indicates that the fuse has been blown. This fuse passed GB13539.1,GB/T13539.2 and IEC60269-1,IEC60269-2

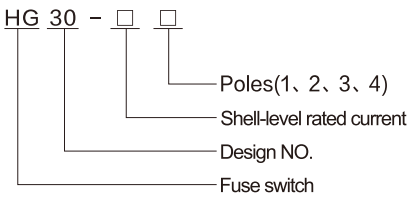
STRUCTURAL FEATURES

This series fuse support is made by riveting or welding after fiting with contacts and fuselage on the shell,which was suppressed by PA nylon high flame retardant material, can be composed of multi-phase structure, closed structure, a single support can isolate power; RT18-type support TH35mm rail-type installating.

TECHNICAL PARAMETER

Model	HG30-32	HG30-63
Rated Current In(A)	2,4,6,10,16,20,25,32	2,4,6,10,16,20,25,32,40,50,63
Fuse size(mm)	10.3 × 38mm	14 × 51mm
Rated insulation volatage(V)	690	690
Rated heating current(A)	32	63

TYPE MEANING



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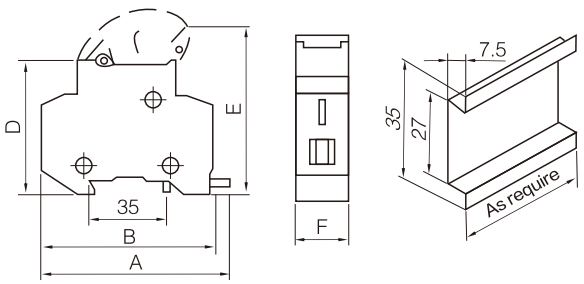


size				
A	B	D	E	F
82	78	60	77	18
106	103	80	110	26

APPLICATION

This series fuse support is made by riveting or welding after fiting with contacts and fuselage on the shell,which was suppressed by DMC nylon high flame retardant material, can be composed of multi-phase structure, closed structure, a single support can isolate power; RT18-type support TH35mm rail-type installating.

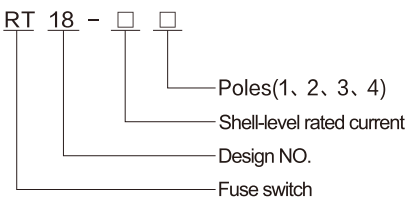
STRUCTURAL FEATURES

This series fuse support is made by riveting or welding after fiting with contacts and fuselage on the shell,which was suppressed by PA nylon high flame retardant material, can be composed of multi-phase structure, closed structure, a single support can isolate power; RT18-type support TH35mm rail-type installating.

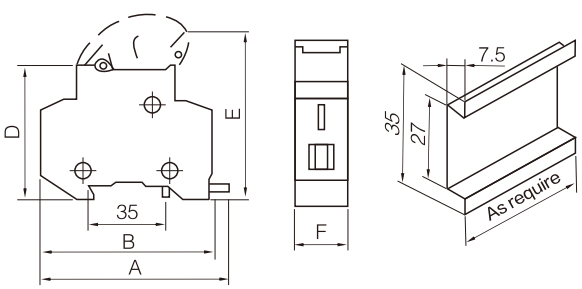
TECHNICAL PARAMETER

Model	RT18-32	RT18-63
Rated Current In(A)	2,4,6,10,16,20,25,32	2,4,6,10,16,20,25,32,40,50,63
Fuse size(mm)	10.3 × 38mm	14 × 51mm
Rated insulation volatage(V)	690	690
Rated heating current(A)	32	63

TYPE MEANING



DEMENSION



size				
A	B	D	E	F
82	78	60	77	18
106	103	80	110	26

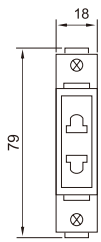
AC30 DIGITAL MOLDED SERIES SOCKET

TYPE MEANING

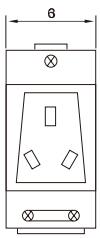
AC 30 – □ – □

- Rated Current In
- Hole numbers(2、3、4)
- Design NO.
- Digital Molded Socket

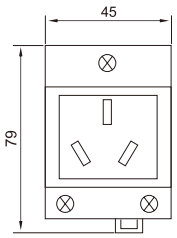
DEMENSION



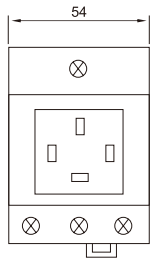
Single phase 2 holes
10A,16A



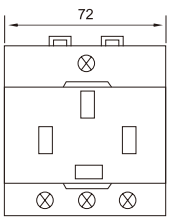
single phase 3 holes
10A,16A

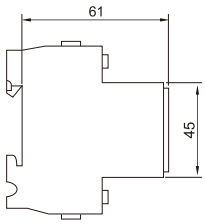


single phase 3 holes
25A



three phase 4 holes
16A





three phase 4 holes
25A

FEATURES

- Installed in the modular terminal distribution box and other sets of electrical appliances, the electrical equipment for plugging.
- Product serialization, modular, width size modularity.
- Th35mm standard mounting rail installation.
- Standard：IEC60884-1 GB2099.1
- Rated voltage：AC 230/400V

APPLICATION

- For home, hotels and other indoor, such as bathrooms, kitchen, etc., on the configuration of electrical products for residual current protection.
- For public places, such as schools, hospitals, factories, etc., on the configuration of electrical equipment for residual current protection.

FEATURES

- This product is a residual current protection switch, the outlet of the electrical equipment to provide residual current protection, it used of excellent raw materials, with power instructions, free tripping made to institution. Once the electrical appliances associated with leakage failure,the zero sequence transformer will detect the signal input to the electronic circuit, when the residual current current is greater than the residual current current, the electronic circuit output signal to the trip mechanism action, cut off the power to achieve the purpose of protecting the person and the equipment.

- This product is designed according to GB16916 and other national standards, working principle is reliable, sensitive to residual current failure, whether in the phase line (FireWire) or in the neutral line (zero line) can be residual current protection, in line with the needs of the majority of domestic users.

USING THE ENVIRONMENT

Ambient air temperature between 5℃ and 400℃; relative humidity: relative humidity not beyond 50% when 40℃。

TYPE MEANING

SG 40 L

- L — Residual protect switch
- 40 — Rated Current
- SG — Company code(SINGI)

TECHNICAL PARAMETER

Project	Value
Rated current(A)	230
Rated Current In(A)	40
Rated frequency(Hz)	50
Rated breaking residual current(mA)	30
Rated not breaking current(mA)	15
Max breaking time(s)	0.1

APPLICATION

The SPD normally is installed in the building power distribution box, computer center, telecom room, elevator control room, wiring tv room, building control room, security monitor center, fire control center ,industry control room, frequency converter equipment control room, hospital surgery room, monitoring room and the distribution box in which electronic mechanical equipment.

COMPONENTS INTRODUCTION

- Invalid tripping device

  There is invalid tripping device on the protector modular, when the protector is invalid cause of over thermal, breakdown, the invalid tripping device can separate from the power grid automatically and the indication signal is sent out. When the protector is normal, the green is displayed ,when invalid tripping ,red is displayed.

- Alarming apparatus

  The alarming apparatus is power supplied by 220VAC,the indication lamp is green when the protector work normally, normal open contact is closed and the normal closed contact is open. Audio light alarming function: when the protection modular is invalid , the alarm will be beeping ,the normal green lamp will be changed into red lamp at the same time. When the maintainer press the stop button, the buzz will stop ,but the red lamp still is on, if the fault is not solved within 24 hours, the alarming apparatus will send out beep once again.

- Remote signal contac

  The protector can be with remote signal contact, the contact is normal open, if one or more modular of protector is invalid, the contact will be closed and send out fault signal. The rated parameter of remote signal contact is AC36V,1A.

MODEL IMPLICATION

GN S 1 □ □ □ □ □

- Parts:B sound & light alarm,X fault remote signal contact
- Nominal releasing current(KA)
- Max continuous operation working voltage(V)
- 1,2,3,4 poles
N–PE gas power release
L–N protection components
- Protection category(B,C,D)
- Design No.
- Surge protector
- company

GNS1-C installation location and usage

C degree thunder current SPD protection, used as the iso-electric level connection when there is a thunder attack;Install the surge protector at the cross between LPZOB and LPZ1 or LPZ2;Normally the protector is installed in the power distribution box of building power distribution cabinet, computer center, telecom equipment room, elevator control room, wiring TV equipment room, building self-control room, safe monitoring center, fire control center, industry self-control room, frequency inverter control room, hospital surgery room, ICU room and the place where electronic medical equipment; And it is also can be installed in the residual lighting power distribution box below 6 floor ,for villa ,the SPD should be installed in the resident power distribution box.

GNS1-D installation location and usage

The SPD is installed at the cross between LPZ and LP23 or between LPZ2 and LPZ3.It is suitable to the residual power distribution box ,computer equipment, telecom equipment, electronic equipment or the socket box at front of control equipment or near the equipment.

PARAMETER

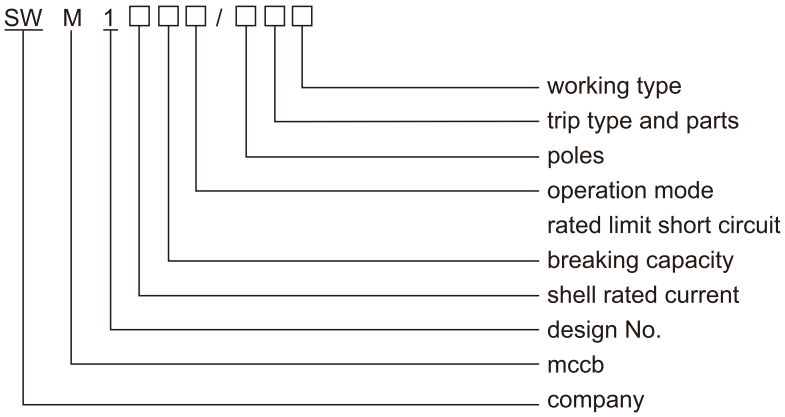
Model / Parameter item		GNS1-D/ -140-5(10)	GNS1-D/ -275-5(10)	GNS1-D/ -320-5(10)	GNS1-D/ -385-5(10)	GNS1-D/ -420-5(10)
Max continuous operation voltage UC~(V)		140	275	320	385	420
Voltage protection level UP(KV)		<=1.0	<=1.0	<=1.5	<=2.0	<=2.0
Nominal discharging current In(8/20u S) KA		5 10				
Max discharging current Imax(8/20u.S)KA		10 20				
Response time ns		<25				
Width mm		18				
color		yellow				
Protection degree		Ip20				
Shell material		Strong flame-retardant PBT				
Fuse or circuit breaker(A)		10-16				
Connection specification	Phase /zero line	25-35mm2				
	Earth line	4.0-35mm2				
	Signal line	1.5mm2				
Model / Parameter item		GNS1-C/ -550-20	GNS1-C/ -320-30	GNS1-C/ -385-30	GNS1-C/ -385-40	GNS1-C/ -420-40
Nominal discharging current In(8/20u S) KA		550	320	385	385	420
Max continuous operation voltage UC~(V)		2.5	1.5	2.0	2.0	2.0
Voltage protection level UP(KV)		20	30	30	40	40

Max discharging current Imax (8/20u.S)KA		40	60	60	80	80
Response time ns		<25				
Width mm		18				
color		yellow				
Protection degree		IP20				
Shell material		Strong flame-retardant PBT				
Fuse or circuit breaker(A)		10-16				
Connection specification	Phase /zero line	2.5-35mm2				
	Earth line	4.0-35mm2				
	Signal line	1.5mm2				

APPLICATION

SWM1moulded case circuit breaker with rated insulation voltage800V, applied in the power system of AC50(60)Hz, rated voltage 690V and below, rated current 1250A and below as the transfer not frequently. The circuit breaker has the protection devices of over load, short circuit and under voltage ,it can protect the circuit and power equipment from broken.
The mccb can be sorted to C type (basic),L type (standard),M type (high breaking), H type(higher breaking) according to its rated limit short circuit breaking capacity. The mccb has the features small volume, breaking capacity high, electric arcing short ,anti-vibration. It is the ideal product for application in land and ship. The installation can be vertical or level and the standard conforms to IEC60947-2 and GB14048.2.

MODEL IMPPLICATION



Remark: working type: power distribution/motor protection(2)
Operation mode: handle direct operation/motor-driven operation(P)
Rotary handle operation(Z)

TECHNICAL PARAMETERS

Model	Rated Current (A)	Poles	Rated Insulation Voltage (V)	Rated Voltage (V)	Electric Arcing Distance (mm)	Rated Limit Short-circuit Breaking Capacity (KA)	Rated Working Short-circuit Breaking Capacity (KA)	Operformance Performance (Times)	
								On-power	Off-power
SWM1-63L	6,10, 16,20, 25,32, 40,50, 63	2,3,4	800	400	0	25	18	6000	8500
SWM1-63M				690v and below	0	50	35		
SWM1-100C	10,16, 20,25, 32,40, 50,63, 80,100				0	25	18		
SWM1-100L					0(<=50)	35	22		
SWM1-100M					0(<=50)	50	35		
SWM1 -100H					0(<=50)	85	50		

SWM1-225C	100,125,140,160,180,200,225	2,3,4	800	400	<=50	25	18	2000	7000
SWM1-225L				690v and below	<=50	35	22		
SWM1-225M					<=50	50	35		
SWM1-225H					<=50	85	50		
SWM1-400C	225,250,315,350,400				<=50	35	25	1000	4000
SWM1-400L					<=50	50	35		
SWM1-400M					<=100	65	42		
SWM1-630C	400,500,630				<=100	35	25		
SWM1-630L					<=100	50	35		
SWM1-630M					<=100	65	42		
SWM1-630H					<=100	100	65		
SWM1-800M	630,700,800				<=100	75	50	1000	2500
SWM1-800H					<=100	100	65		
SWM1-1250H	800,1000,1250				<=120	100	65	1000	2000

TRIP MODE AND PARTS

Parts No.	Parts Name
208,308	Alarming contact
210,310	Shunt release
220,320	Auxiliary contact
230,330	Under voltage release
240,340	Shunt release ,auxiliary contact
250,350	Shunt release, under voltage release
260,360	Two group auxiliary contact

Parts No.	Parts Name
270,370	Auxiliary contact, under voltage
218,318	Shunt release, alarming contact
228,328	Auxiliary contact, alarming contact
238,338	Under voltage release, alarming contact
248,348	Shunt release, auxiliary contact, alarming contact
268,368	Two group auxiliary contact, alarming contact
278,378	auxiliary contact, under voltage release, alarming contact

THERMAL RELEASE WITH INVERSE TIME LAG

Ui of release(A)	Thermal breaking release (40℃for land,45℃for ship)		Electromagnetic release breaking current(A)	Remark
	1.05In(cool station) no breaking time(h)	1.30(thermal station) breaking time(h)		
10<In<63	>=1	<1	10In±20%	Power distribution
63<In<100	>=2	<2		
100<In<630	>=2	<2	5In±20%& 10In±20%	Power distribution
10<In<630	1.0In(cool) no breaking time(h)	1.20In(thermal) breaking time(h)	12In±20%	Motor protection

WORKING ENVIROMENT

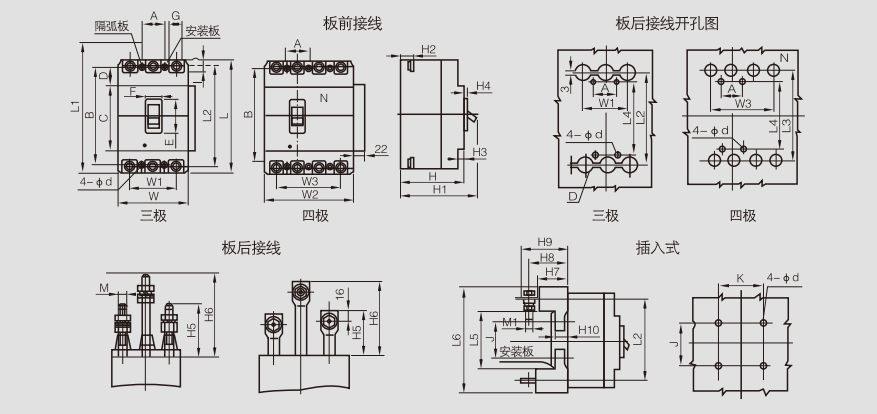
1)sea level 2000m and below;
2)the around environment tep. Below40℃ and not lower than -5℃(45℃for ship)
3)it can avoid the effect of humidity ,salt fog, oil fog, mycete.
4)The max slop is 22.5℃
5)The ship is in the normal vibration, it can work normally.
6)The place without rain, snow
7)The place without explosive gas and the gas ,conductive dust that can not corrode metal and break product insulation.

APPEARANCE&INSTALLATION DIMENSION

Model	Front wiring											
	W	W1	L	L1	L2	H	H	H2	H3	H4	C	D
SWM1 -63L	78	50	136	172	117	72.5	90.5	20.5	7	4	85	15
SWM1 -63M						82	98.5	28.5				
SWM1-100C/L	92	60	150	187	132	68	86	24	7	4	88	36
SWM1-100M/H						86	104					
SWM1-225C/L	107	70	165	215	144	86	110	24	4.5	4	102	31
SWM1-225M/H						103	127					
SWM1 -400C/L	105	96	257	367	224	105	155	38	4.5	6	128	64
SWM1-400M/H	182	116	270	370	234	110	160	43	4.5	6	134	70
SWM1-630C/L/M												

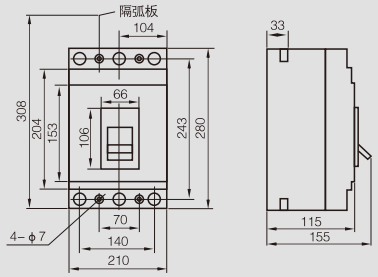
Model	Front wiring						Bark wiring						
	E	F	G	I	W2	W3	L3	L4	H5	H6	Φd	M	L5
SWM1 -63L	48	22	14	7.5	103	75	117	110	24	42		M5	100
SWM1 -63M													
SWM1- 100C/L	50	22	17.5	8.5	122	90	132	129	68	109	22	M8	92
SWM1- 100M/H													
SWM1- 225C/L	50	22	17.5	9	143	105	144	128	66	110	24	M8	94
SWM1- 225M/H													
SWM1 -400C/L	89	65	26	12.5	198	144	224	194	60	120		M10	169
SWM1- 400M/H	89	65	29	13	240	174	234	200	65	125		M12	169
SWM1- 630C/L/M													

Model	Plug.in type									Installation Dimension		
	L6	H7	H8	H9	H10	J	K	Φd1	M1	A	B	Φd
SWM1 -63L	117	28	36	43		60	50	5.5	M5	25	117	3.5
SWM1 -63M												
SWM1- 100C/L	168	50	64	76	17.5	56	60	6.5	M8	30	129	4.5
SWM1- 100M/H												
SWM1- 225C/L	183	50	71.5	86	17.5	54	70	6.5	M8	35	126	5
SWM1- 225M/H												
SWM1 -400C/L	279	60	83.5	106	21	129	60	8.5	M1	44	194	7
SWM1- 400M/H	299	60	92	110	21	123	100	8.5	M1	58	200	7
SWM1- 630C/L/M												

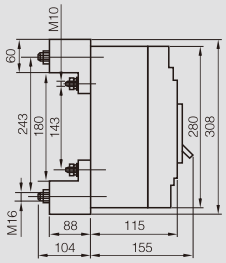


SWM1-630H、800(M、H) 外形及安装尺寸 图1、2、3

板前接线及外型尺寸（三极） 图1



插入式外型及安装、开孔尺寸（三极）



板后接线及安装开孔尺寸（三极） 图2

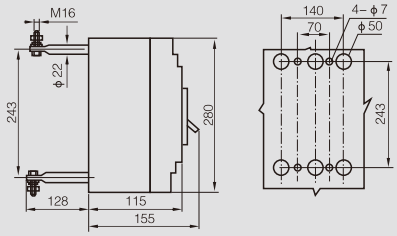
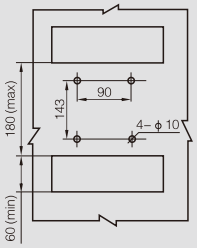
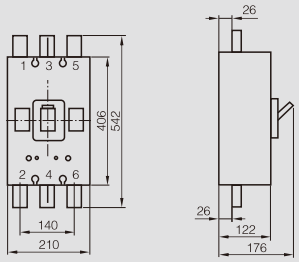


图3

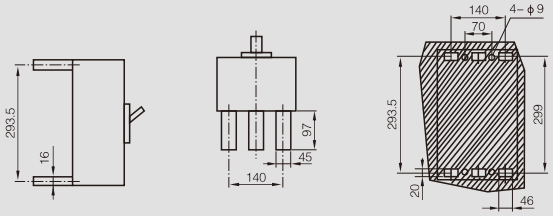


SWM1-1250 外形及安装尺寸 图4

板前接线尺寸（三级）



板后接线尺寸（三级）



APPLICATION

SWM1L residual current protection circuit breaker is suitable to the power distribution system of AC50Hz,rated voltage400V,rated current to 800A to supply indirect contact protection and prevent the fire caused by the earth fault current because of the insulation damaged of equipment. It also can be used to distribute power and protect circuit and over load, short circuit, under voltage, also non-frequent transfer of circuit or non frequent starting of motor.
This circuit breaker can work normally if any phase lost for the tri-phase power.

MODEL IMPLICATION

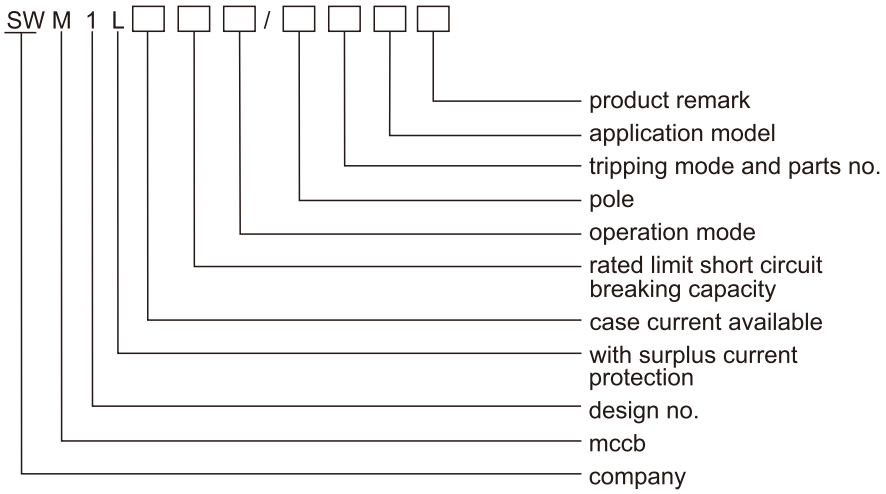


Table1

code	Remark
A	N pole without over current trip component and N closed always, not breaking as other 3 pole
B	N pole without over current trip component and N closing and breaking as other 3pole together (N closing first)
C	N pole with over current trip component and N closing and breaking as other 3pole together (N closing first)
D	N pole with over current trip component and N closed always, not breaking as other 3 pole

Table2

Part name		Without pats	Alarming contact	Shunt release	Auxiliary contact	Under voltage release	Auxiliary and alarming contact
Trip mode	instantaneous release	200	208	210	220	230	228
	compound release	300	308	310	320	330	328

Remark:
application model: power distribution or motor protection
operation mode: handle operation directly(Z), motor operation (P)
M:high breaking capacity, H: higher breaking capacity.

STRUCTURE FEATURES

This series circuit breaker is electronic current earth leakage circuit breaker.
The main parts include main switch(over current release),zero sequence current transformer, electronic amplification unit ,current leakage release, test device.
Its rated surplus breaking current I△n and the max breaking time can be adjusted according to the actual station. The circuit breaker can not be wire inlet inverse, 1,3,5 connect with power,2,4,6 connect with load.

WORKING AND INSTALLATION ENVIROMENT

- The altitude of application place is 2000m and below;
- The temperature of around media is should be between +40℃and-5℃,
  The average temperature should not exceed 35℃.
- The air relative humidity should not be higher than 50% at max temperature+40℃ at lower temperature ,the relative humidity can be higher.
  The average lowest temperature should not exceed+25℃at the largest humidity month and the average max relative humidity should not exceed 90% and the condensation should be taken into consideration by the temperature change.
- Pollution degree 3
- Installation category III of main circuit, no need to connect with the auxiliary and control circuit of the main circuit, installation category II;
- The application place should be without explosive medium and the medium should not corrupt metal and break the insulation of the circuit;
- The place should be without rain and snow;

MAIN TECHNICAL PARAMETER

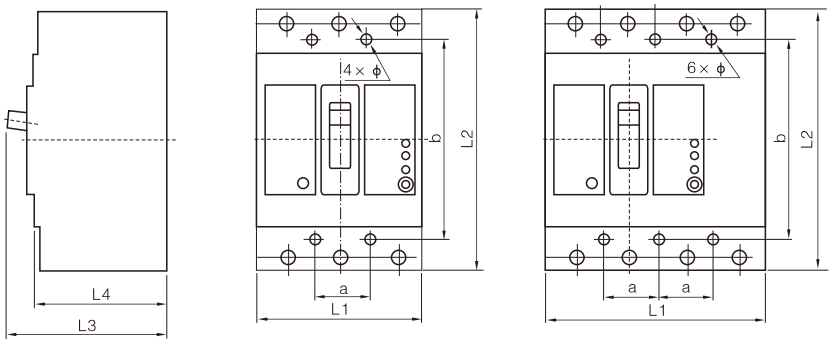
Model	Ratde Current In(A)	Rated Voltage Ue (V)	Rated Insulation Voltage (V)	Rated Frequency (Hz)
SWM1L-100M	16,20,25,32,40, 50,63,80,100	AC400	AC800	50
SWM1L-100H				
SWM1L-225M	100,125,140,160, 180,200,225			
SWM1L-225H				
SWM1L-400M	225,250,315,350,400			
SWM1L-630H	400,500,630			

Pole	Rated Limit Short Circuit Breaking Capacity Icu/cos ∅	Rated Operatio nshort Circuit Breaking Capacity Icu/cos ∅	Rated Residual Breaking Current | △n(mA)	Rated Residual No Breaking Current | △n(mA)
3,4	35KA/0.25	22KA/0.25	30,50,100, 300,500	15,25,50,150,250
	50KA/0.25	35KA/0.25		
	35KA/0.5	22KA/0.5		
	50KA/0.25	35KA/0.25		
	65KA/0.2	42KA/0.2		
4			300/500/1000	150/250/500

RESIDUALCURRENT PROTECTION BREAKING TIME

Residual Current		I△n	2I△n	5I△n	10I△n
Non time delay type	Max breaking time(s)	0.2	0.1	0.04	0.04
Time delay type	Max breaking time(s)	0.5/1.15/2.15	0.35/1/2	0.25/0.9/1.9	0.25/0.9/1.9
	Limit not driven time △t(s)		0.1/0.5/1		

APPEARANCE AND INSTALLATION DIMENSION



Model	Pole	Dimension					Installation Dimension	
		L1	L2	L3	L4	a	b	Installation Dia
SWM1L-100	3	92	150	110	92	30±0.14	129±0.32	4-φ4.5
SWM1L-100	4	122	150	110	92	30±0.14	129±0.32	6-φ4.5
SWM1L-100	3	107	165	110	90	30±0.16	126±0.32	4-φ4.5
SWM1L-100	4	142	165	110	90	30±0.16	126±0.32	6-φ4.5
SWM1L-100	4	198	257	147	107	30±0.20	194±0.43	6-φ7
SWM1L-100	4	280	280	155	116	30±0.20	243±0.50	6-φ7

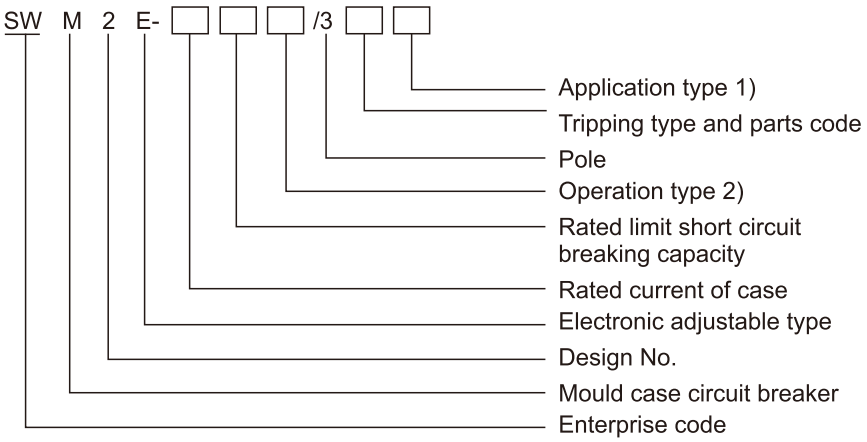
INTERODUCTION

SWM1E series electronic molded case circuit breaker(mccb) is the new model of our factory according to advanced international design and technology. Rated insulation voltage 800V, suitable to the power system of AC50Hz,400rated voltage, rated current up to 800a,used as the non frequent transfer and start for motor. The mccb can protect the circuit and equipment from over load long time delay inverse time limit, short circuit short time delay inverse time limit, short circuit short time delay definite time-lag, short circuit instance and under voltage etc.

- Level and vertical installation both available;
- Inverse wire-in is prohibited ,1,3,5 terminal for power,2,4,6terminal for load;
- Standards: A:IEC60947-1
  B:IEC60947-2
  C:IEC60947-4
  D:IEC60947-5.1

MAIN FEATURES

- SWM1Eseries electronic molded case circuit breaker has three section protection, the circuit breaker with utilization category B connected with other short circuit protection device in the same circuit has completely optional cooperation under short circuit circumstance;
- With five tripping feature: users can set the equipment through the shunt release according to the loaded current, electronic shunt release is powered by circuit breaker itself, current signal and control power is from the circle current transformer located in the circuit breaker;
- With pre-alarming indication: when the loaded current exceeds default current, the diode on the cover of circuit breaker is yellow;
- With over load indication: when the loaded current exceeds set current, the diode on the cover of circuit breaker is red;
- With fire protection shunt release for alarming but not trip: when the loaded is over current, the circuit breaker does not trip and passive contact signal is sent output for driving relative alarming device;
- Conform to the electromagnetic compatible requirement in IEC60947 appendix F;
- The dimension is same with SWM1 mccb,the installation can be changed .



Remark:1)power distribution without code, motor protection "2"
2)direct operation without code, electric operation "P", rotary handle "Z".

1) by rated current
SWM1E-100 have class 32A(16,20,25,32),63A(32,36,40,45,50,55,60,63),100A (63,65,70,75,80,85,90,95,100)
SWM1E-225 have class
225A(100,125,140,160,180,200,225)
SWM1E-400 have class
400A(200,225,280,315,350,400)
SWM1E-630 have class
630A(400,420,440,460,480,500,530,560,600,630)
SWM1E-800 have class
800A(630,640,660,680,700,720,740,760,800)
2) by wiring type
wiring at front of board, wiring behind board, plug-in three type
3) by auxiliary parts
the circuit breaker with or without parts

The auxiliary parts can be classified in or out board:

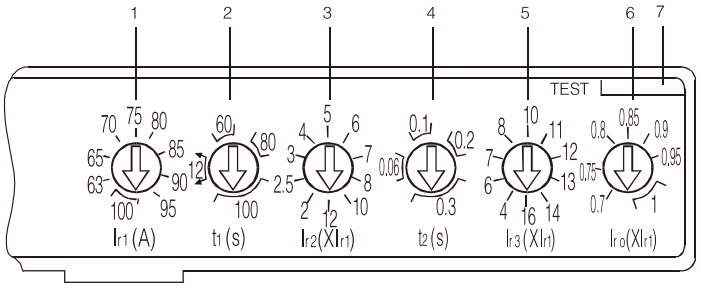
The parts in board include shunt release, under voltage release, over load beeper, auxiliary contact, alarming contact;

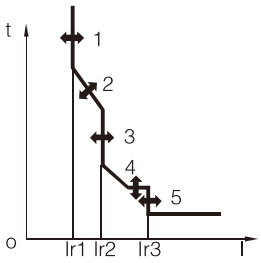
The parts out board include rotary handle operation mechanism and electric operation mechanism.

MAIN FEATURES

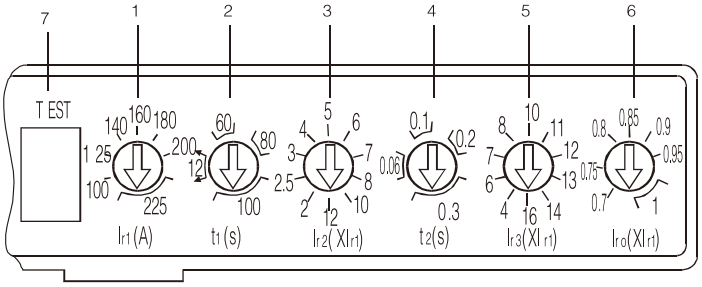
Type		SWM1E-100		SWM1E-225		SWM1E-400		SWM1E-630		SWM1E-800	
Case current Inm(A)		100		225		400		630		800	
Breaking level		M	H	M	H	M	H	M	H	M	H
Setting radioIr1(A)		32(16,20,25,32)63(32,36,40,45,50,55,60,63)100(63,65,70,75,80,85,90,95,100)		225(100,125,140,160,180,200,225)		400(200.225,250,280,315,350,400)		630(400,420,440,460,500,530,560,600,630)		800(630,640,660,680,700,720,740,760,780,800)	
Pole		3		3		3		3		3	
Rated insulation voltage Ui(V)		800									
Rated work voltage Ue(V)		400									
Rated impulse withstand voltage Uimp(V)		8000									
Limit short circuit breaking capacity Icu(kA)		50	85	50	85	65	100	65	100	75	100
Operation short circuit breaking capacity Ics(kA)		35	50	35	50	42	65	42	65	50	65
Operation short circuit withstand current Icw(kA)/1s						5		8		10	
Utilization category		A		A		A		A		A	
Flash-over distance(mm)		>=50				>=100					
Operation performance	On power	1500		1000		1000		1000		500	
	Off power	8500		7000		4000		4000		2500	

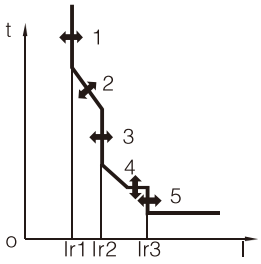
SWM1E-100,In=100A electronic release
Protection characteristic curve of electronic release





SWM1E-225,In=225A electronic release
Protection characteristic curve of electronic release





PROTECTION

- Over load long time delay breaking current Ir1 adjustment, according to different rated current of circuit breaker, it can be adjusted from 4 to 10 o'clock;
- Long time delay breaking time t1adjustment,4 o'clock adjustment is available;
- Short circuit short time delay breaking current Ir2 adjustment, 10 o'clock adjustment is available;
- Short time delay breaking t2 setting,4 o'clock setting is available;
- Short circuit instantaneous breaking current Ir3 adjustment,9 or 10 o'clock adjustment is available;
- Pre-alarming breaking current Ir0 adjustment,7 o'clock sent is available;
- test terminal is used to detect the present value of electronic shunt release;
- electronic shunt release working indication;
- pre-alarming indication;
- lover load indication;
- tripping button;

POWER LOSS AND DERATING COEFFICIENT

Power loss table

Model	Rated current(A)	Total loss for 3 phase power	
		Wiring for board front and behind	Plug-in wiring
SWM1E-100	100	35	40
SWM1E-225	225	62	70
SWM1E-400	400	115	125
SWM1E-630	630	190	210
SWM1E-800	800	262	

Over current protection feature for short time delay

Current	Inverse time limit		Breaking time			
Ir2<=I<1.5Ir2			$I^2t2=(1.5Ir)^2t2$			
1.5Ir2<=I<Ir2	Definite time-lag	Setting time t2(s)	0.06	0.1	0.2	0.3
		Tolerance(s)	±0.02	±0.03	±0.04	±0.06
		Return time available(s)			0.14	0.21

Short time-delay over current protection table

current			breking time			
Ir2<I<1.5Ir2	Inverse time limit		$I^2t2=(1.5Ir2)^2t2$			
1.5Ir2<=I<Ir2	constant time-lag	setting time t2(s)	0.06	0.1	0.2	0.3
		tollerance error(s)	±0.02	±0.03	±0.04	±0.06
		return time(s)			0.14	0.21

Default parameter of tripping release
Power distribution type

over load long time delay	setting current Ir1	In	
	time delay t1	60s	
short crcuit short time delay	setting current Ir2	8Ir1	
	time delay t2	0.3S	
short circuit instantaneous	setting current Ir3	Inm=100,225,400,630	12Ir1
		Inm=800	10Ir1
default alarm	setting current Ir0	0.9Ir1	

Motor type

over load long time delay	setting current Ir1	In	
	time delay t1	100s	
short crcuit short time delay	setting current Ir2	10Ir1	
	time delay t2	0.3S	
short circuit instantaneous	setting current Ir3	Inm=100,225,400,630	14Ir1
default alarm	setting current Ir0	0.9Ir1	

APPLICATION

Dz15 moulded case circuit breaker is suitable to the circuit of AC50Hz,rated voltage up to 380V,rated current up to 100A ,used as the protection of over load, short circuit and the non frequent start of motor.

FEATURES

Dz15 mccb operation mechanism has obviously close and break swiftly. The contact is AgZno ,the contact resistance is small, abrasion resistant, anti fusion welding, the long time delay release adopt oil damping hydraulic type release, ideal time-inverse protection feature can be supplied.

MAIN PARAMETER

Type		DZ15-40	DZ15-63(100)
Un(V)		AC380/220	
Inm(A)		40	63(100)
Pole		1,2,3,4	
In(A)		6,10,16,20,25,32,40	50,63(80,100)
Icu(A)		3000	5000
Electrical life (times)	with load	1500	
	no load	8500	
	total	10000	
operation time/hour		120	
over current tripping feature	1.05IH	not trip within 1hour	cool status
	1.3In	trip within 1 hour	thermal status
	3.0In	return time >=2s	cool status
	10In	<=2s trip	cool status

Remark: frame current>63A, default tripping time or not tripping time is 2hour.

APPLICATION

DZ15LE residual moulded case circuit breaker is suitable to the circuit of AC50Hz, rated voltage up to 380V,rated current up to 100A and neutral point is grounded , used as the earth leakage protection of power grid and protect the power circuit and motor from over load and short circuit t and the non frequent start of motor. It conforms standard GB14048.2.

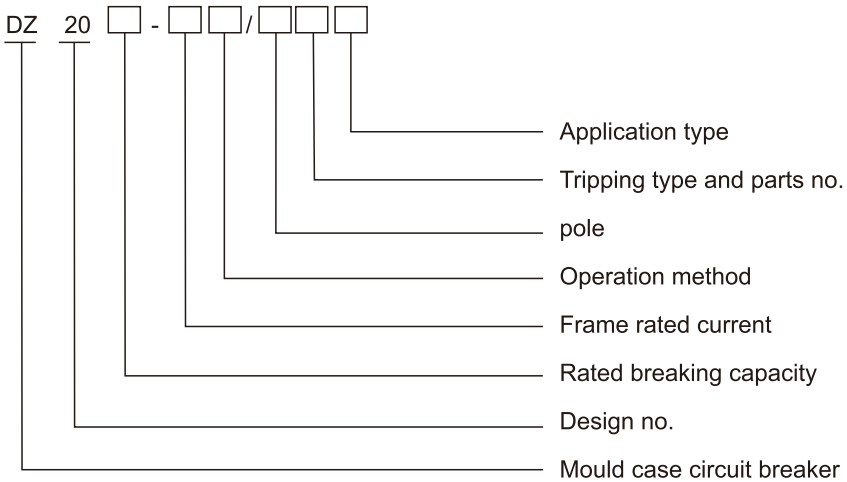
PARAMETER

type	frame current (A)	rated current(A)	pole	rated current(A)	rated current(A) rated earth breaking leakage current(mA)	rated earth leakage non breaking current (mA)
DZ15LE -40	40	220	2	6,10,16,20, 25,32,40	30	15
					50	25
		380	3,4		75	40
					100	50
DZ15LE-40 (DZ15LE -100)	100	220	2	50,63,80,100	30	15
					50	25
		380	3,4		75	40
					100	50

APPLICATION

Dz20 moulded case circuit breaker, its rated insulation voltage 660V,AC50/60Hz, rated voltage380V and below, rated current up to 2000A,normally used as power distribution, the circuit breaker with rated current 225A and 400A below also can be used as protecting motor. Under normal status, the circuit breaker also can be used as the non frequent start of motor.

MODEL IMMPLICAION



PARAMETER

case rated current Inm(A)	default termal current Itha(A)	breaking degree under short circuit status	short circuit breaking caoacity kA(valid value)		rated currentIn(A)
			Icu/cosf	Icu/cosf	
160	160	C	12/0.30		16,20,25,32,40,50,63,80, 100,125,160
100	100	Y	18/0.30	14/0.30	16,20,25,32,40,50,63,80, 100
		J	35/0.25	18/0.30	
		G	100/0.20	50/0.30	
250	250	C	15/0.30		100,125,160,180,200,225, 250
225	225	Y	25/0.25	19/0.30	100,125,160,180,200,225
		J	42/0.25	25/0.25	
		G	100/0.20		
400	400	C	20/0.30	23/0.25	250,315,350,400
		Y	30/0.25	25/0.25	
		J	42/0.25	50/0.25	
		G	100/0.20		
630	630	C	25/0.30	23/0.025	400,500,630
		Y	42/0.25	25/0.25	
		J	50/0.25	38/0.25	
1250	1250	Y	50/0.25	32.5/0.25	630,700,800,1000,1250
		J	65/0.20	32/0.25	
2000	2000	J	100/0.20	50/0.25	1000,1250,1600,1800,2000

APPLICATION

DZ20L residual current circuit breaker is applied in the power system of 380VAC, frequency 50Hz,rated current 600A and below, as protection person from electric shock and protect the equipment from insulation broken and fire danger cause of grounding fault current.

WORKING CONDITIONS

1.ambient air temperature: should be between-5℃ and +40℃, the average temperature should not exceed+35℃ within 24hours;
2.the sea level at the installation place should not exceed 2000meter;
3.the air relative humidity at the installation place should not exceed50% at +40℃, under station of lower temperature, higher humidity is permitted. The largest relative humidity is 90%,the average lowest temperature is +25℃in this month.
4.Pollution degree is 3.
5.Installation category III.
6.Standard:IEC60947-2.

PARAMETER

MODEL	rated curremt of case(A)	ratedvoltage(V)	rated frequency(HZ)	poles
DZ20L-160	160	380	50	3 or 4poles
DZ20L-250	250			
DZ20L-400	400			
DZ20L-600	600			

MODEL	rated current(A)	Rrated limit breaking capacity(KA)	rated limit breaking capacity current(mA)	rated residual not breaking current(mA)
DZ20L-160	60,63,80,100, 125,160	12	50,100,300	25,50,150
DZ20L-250	125,160,180, 200,225,250	15		
DZ20L-400	200,250,315, 350,400	20		
DZ20L-600	400,500,600			

APPLICATION

GNM3 series moulded case circuit breaker, it is applied in the circuit of AC50/60Hz/, rated insulation voltage 690V, rated operating voltage AC690V(JVM-125 500V)or below, rated operating current 12.5-800A for distributing energy of electric and infrequent making and breaking circuit. The circuit breaker are provided with the function of the protection against over load and short circuit and under voltage . The circuit breaker comply with standard of IEC60947-2, the circuit breaker are double insulating (Inm=400 or above), the control circuit of the accessories is set apart with the main circuit and does not need to open the cover of the circuit breaker when install the accessories.

PARAMETER

Type	Poles	Rated insulating Voltage(V)	Rated operating voltage(V)	Rated cirrent
JVM3-125S	1,2,3,4	690	500	12.5,16,20,25,32,40,50, 63,80,100,125
GNM3-160S	3,4	690	690 and below	16,20,32,40,50,63,80, 100,125,160
GNM3-160M				
GNM3-250S		800		100,125,160,180,200, 225,250
GNM3-250M				
GNM3-250H				
GNM3-400S				200,225,250,315,350, 400
GNM3-400H				
GNM3-400M				400,500,630
GNM3-630S				
GNM3-630M				
GNM3-630H				
GNM3-800S				500,630,700,800
GNM3-800M				
GNM3-800H				

Uitimate short circuit breaking capacity(KA)		Uitimate short circuit breaking capacity(KA)	
AC380V(400)	AC660V(690)	AC380V(400)	AC660V(690)
25		12	
35	8	25	
50	10	35	
35	14	35	
65	18	50	
85	20	65	
35	18	35	
65	22	50	
100	30	75	
35	20	35	
50	22	50	
65	25	65	
35	20	35	
50	22	50	
65	25	65	

APPLICATION

GNM2series moulded case circuit breaker is one of breaker which adopts international advanced design,.The rated insulation voltage 750V,suitable for AC50/60Hz,rated working voltage 690V or below, rated working current from 12.5-630A. It is used in distributing electric energy and non-frequent breaking in the normal condition ,protecting the current& equipment from overload and under voltage. The frame current is 400A or below. It takes protect effect when mouse cage motors non-frequent start.

PARAMETER

Type	poles	rated insulating voltage(V)	operating voltage(V)	rated current In(A)	uitimate shortcircuit breaking	service short circuit breaking
GNM2-100N	3,4	750	150	12.5,16,20 25,32,40,50 63,80,100	25	25
GNM2-100H					70	70
GNM2-100L					150	70
GNM2-160N				16,20,25,32 40,50,63,80 100,125,160	36	36
GNM2-160H					70	70
GNM2-160L					150	150
GNM2-250N				160,180,200 225,250	36	36
GNM2-250H					70	70
GNM2-250L					150	150
GNM2-400N				315,350,400	45	45
GNM2-400H					70	70
GNM2-400L					150	150
GNM2-630N				400,500,630	45	45
GNM2-630H					70	70
GNM2-630L					150	150

APPLICATION

The NF-CP series plastic outer covering type circuit breaker (hereafter refers to as circuit breaker), is this company uses the international advanced design, one of the technique of manufacture development, development new circuit breakers. Its fixed isolation voltage is 690V, is suitable in exchanges 50Hz, fixed working voltage 400V and below .Rated current to 800A circuit as frequent changeover gum less frequent motor starter. The Circuit breaker with overload, short circuit protection device, and less voltage protection circuit and power equipment are not damaged.

PARAMETER

PARAMETERType	Number of poles	Rated current in(A)	Rated voltage Ue(V)
NF50-CP	2	5,10,15,20,30,40,50	AC400(380) AC690(660) DC250
	3		
NF60-CP	2	50,60	
	3		
NF100-CP	2	50,60,75,100	
	3		
NF250-CP	3	125,150,175,200,225,250	
NF400-CP	3	250,300,350,400	
NF630-CP	3	500,600,630	

Short-circuit Interrupting capacity Icu/Ics(KA)					Weight(Kg)
DC	AC				
250V	230V	400V	440V	500V	
2.5/1	5/2	5/2	2.5/1	2.5/1	0.45
-					0.65
2.5/1	5/2	5/2	2.5/1	2.5/1	0.45
-					0.65
7.5/4	25/13	10/5	10/5	7.5/4	0.70
-					1.00
-	30/15	18/9	15/8	10/5	1.50
-	35/25	25/18	25/18	15/10	5.5
-	50/35	35/25	35/25	18/10	9.4

OVERALL

SWM6L intelligent residual current circuit breaker is an integrated intelligent circuit breaker with the features of multi-function, rated current and residual current adjustable , automatic reclose and protections of over load ,short circuit, over-under voltage. It is applied in the low voltage power system of AC 50Hz,rated working voltage 400V,rated current below 630A to supply person indirect protection or power protection of earth fault ,over load ,short circuit, over-under voltage.

FEATURES

The circuit breaker has the following features:

1)with protection functions of over load, short circuit, phase loss, under voltage, phase loss neutral line off, sudden change etc.

2)with real-time monitoring and displaying function of tri-phase current, tri-phase voltage, residual current, working status;

3)it will automatically break if the power system has problem, when the power system recover ,the circuit breaker will reclose by itself,

4)the rated current and residual current of main circuit ,delaying tine if residual current can be set according to your need;

5)with outlet interface, remote reset and break control is available;

6)with fault memory function, once there is problem with the power system, the circuit breaker will break ,but when the circuit breaker is power on ,the fault can be checked.

7)With residual current value can be traced and gears is set automatically;

8)With communication function, the communicator is connected with GPRS communication modular, the operation status of the circuit breaker can be sent to administrator's mobile.

The administrator can control the break and close of the circuit breaker;

9)Adopt SWM1 base, the structure is compact, breaking capacity high;

10)Adopt quick saturated empty core transformer to test current, the test accuracy high, operation accurate and reliable ,affluence from environment small;

11)Adopt Motorola high performance 16 bits chip, 12bits ADC shifter is inside, arithmetic quick, test accuracy high;

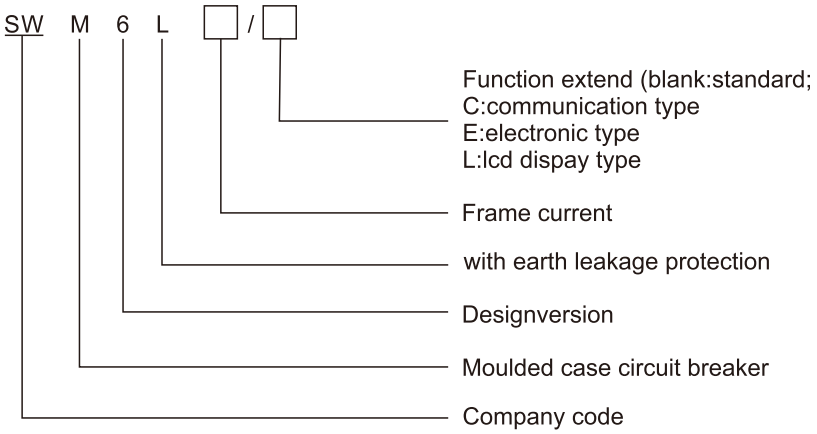
12)Calculate the valid value of current, voltage, residual current by adopting real valid value arithmetic to make sure of the parameter real and accurate;

13)All semi-conductor items also is popular used in Europe and America and Japan;

14)The circuit design is brought in international advanced EMC design ,so the electromagnetic compatibility;

15)SWM6L conforms to standard GB14048.2-2008,ZDB001-2012;

MODE IMPLICATION



Remark:1.electronic type ,the rated current is adjustable, thermomagnetic type ,the rated current can not be adjusted. Electronic type adopt electronic trip;
2.standard type is thermomagnetic type ,digital display without communication function;

MAIN PARAMETERS

1.standard GB14048.2-2008,ZDB001-2012;
2.rated voltage 380V,3 phase 4 poles, rated frequency 50Hz;
3.current

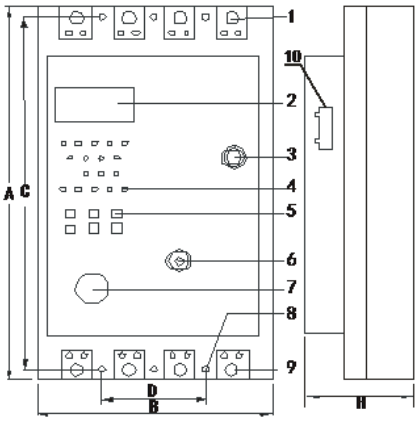
Model	Frame current(A)	Rated current(A)
SWM6L-100	100	40,60,80,100
SWM6L-250	250	100,160,225,250
SWM6L-400	400	250,315,350,400
SWM6L-630	630	400,450,500,630

4.breaking capacity

Model	Rated limited short circuit breaking capacity		Rated operated short circuit breaking capacity	
	current(A)	Power factor	current(KA)	Power factor
SWM6L-100	35	0.3	23	0.3
SWM6L-250	50	0.3	35	0.3
SWM6L-400	65	0.3	42	0.3
SWM6L-630	65	0.3	42	0.3

5.rated withstanding impact voltage8KV;insulation voltage800V;
6.operation feature AC type, application category A;
7. normal temperature for thermomagnetic type :40℃;
8.time-delay reclosing:20~60s;
9.undervoltage:single phase160V ±5%,over voltage: single phase280V±5%

10.dimension



Unit:mm

model	A	B	H	C	D	Width for wiring	Gap for wiring
SWM6L -100	230	120	115	185	60	15	30
SWM6L -250	240	140	135	220	70	22	35
SWM6L -400	335	195	185	300	95	25	45
SWM6L -630	355	240	195	315	115	30	60

11.Surplus current protection feature

- surplus current value:75,150,300,500mA for option;
- breaking time:0.2s,0.5s(S)type) for option;
- after breaker, the circuit breaker will reclose three times automatically, 5 seconds later, if the earth leakage still exist, then the circuit breaker will automatically be locked, then the earth leakage indication lamp is on and the value is displayed, when the real earth leakage current is >=999mA,it display 999;

12.over current operation feature

	Setting current times	Operation time	Beginning status
Value for default not trip	1.05In	2h not trip	Cool
Value for default trip	1.30In	2h within trip	Thermal
Value for instantaneous trip	10In	<0.2s	cool

Remark:1.realy-dispayed current can have error ±5%
2.thermal status means the circuit breaker is powered by the default ot tripping current until some time

13. the breaking feature of over current trip under situation of short circuit

The earth leakage circuit breaker is double protected by electronic over current trip and electromagnetic trip under short circuit situation; the breaking feature of control current under overload situation, it have inverse time lag(current larger ,the breaking time will be shorter, current smaller, the breaking time will be longer);the breaking feature of short circuit (instantaneous), the tripping current 10In±20%,triping time <0.2s;

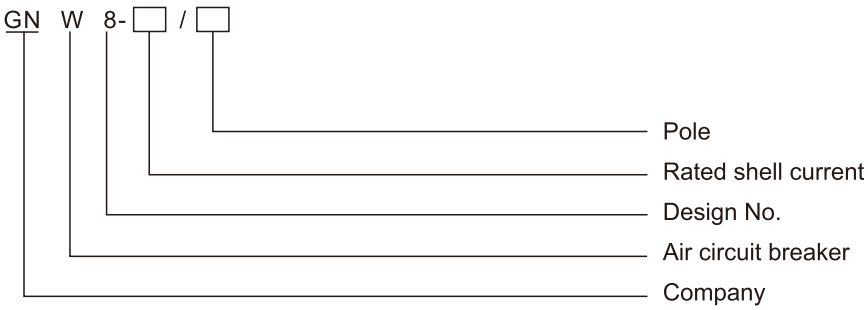
The breaking feature of electromagnetic trip under over load short circuit situation as below:

- short circuit protection current of electromagnetic release of earth leakage circuit breaker for power distribution: 10In;
- the short circuit protection current of electromagnetic release can have error ±20%;

APPLICATION

GNW8 series intelligent air circuit breaker is applicable for distribution network of AC 50Hz,rated voltage of 400V and 690V and rated current 400-6300A to distribute electric energy protection circuit and prevent power equipments from harm of overload ,under voltage ,short circuit and single-phase earth etc. provided with intelligent protecting function and precise selective protection, breaker can enhance the dependability of power supply and avoid unwanted power cut.Standard: IEC 60947-2.

MOMEL IMPLICATION AND TYPE



Installation : a. fixed type b. drawer type
Pole: 3 or 4pole
Operation mode : a. electric b. manual
Release :intelligent controller, under voltage instantaneous (time delay)trip, shunt release

MOMEL IMPLICATION AND TYPE

A: L type(communication available) M type (ordinary intelligent) L type(economical);
B: with over load long time delay inverse time limit, short time delay inverse time limit, definite time-lag ,instantaneous function. The protection functions can be set by user;
C: single-phase earth protection function;
D: display function: current set display, breaking current display ,voltage display (should be advised when ordering);
E:alarming function: with over load alarming;
F: self-check: over heart sel-check, microcomputer self-diagnose check;
G: test function: test the breaking function of controller;

NOMAL WORKING AND INSTALLATION CONDITION

- Around air temperature
  Max temp. should not be higher than +40℃,the min temp. should not be lower than -5℃,the average temp. should not be higher than +35℃;
- The sea level of installation place should not be higher than 2,000m;
- Air condition
  The air relative humidity at +40℃should not be higher than 50%,at lower temp. the humidity can be higher, if the month average max relative humidity is 90%,the month average min temp. is +25℃ and the condensation on the product surface should be taken into consideration cause of the temp. change. If the actual value exceeds above value, please consult with us;
- Protection degree IP30
- Use category :B or A
- Installation category
  Installation condition
  Rated working voltage 660V(690V)and below circuit breaker and under voltage release, the installation category of primary coil of power transformer is IV, the installation category of auxiliary control circuit is III;
- Install according the manual instruction and the lean should not be more than 5 degree.

PARAMETERS AND PERFORMANCE

Rated current of ACB Table1

Rated current of shell InmA	Rated current A
2000	400,630,800,1000,1250,1600,2000
3200	2000,2500,3200
4000	3200,3600,4000
6300	4000,5000,6300

The max power loss of circuit breaker is 360W,the rated continuous current change at different environment temperature for circuit breaker Table2

GNW8 / environment	400A	630A	800A	1000A	1250A	1600A	2000A
40	400A	630A	800A	1000A	1250A	1600A	2000A
50	400A	630A	800A	1000A	1250A	1550A	1900A
60	400A	630A	800A	1000A	1250A	1550A	1800A

2500A and above the derating coefficient is 0.9, the rated current 4000A of 6300A shell without derating.
The rated short circuit breaking capacity and short withstanding current of circuit breaker Table

3, the circuit breaker has no flash over

Rated current of shell InmA		200	3200	4000	630
rated limit short circuit breaking capacity Icu(KA)O-CO	400V	80	100	100	120
	690V	50	80	80	80
Rated short circuit making capacityNXICU(kA)/COSΦ	400V	176/0.2	200/0.2	220/0.2	264/0.2
	690V	105/0.25	143/0.2	165/0.2	187/0.2
Rated operation short circuit breaking capactiy Ics(KA)O-CO-CO	400V	50	80	80	100
	690V	40	65	65	70
Rated operating short circuit breaking capactiy Ics(kA)1s,time delay0.4s.O-CO	400V	50	80	65/80(MCR)	85/100(MCR)
	690V	40	65	50/65(MCR)	65/75(MCR)

Up-down wire-in same for the above breaking capacity

The protection feature and function of intelligent over current controller

1.protection feature of intelligent over current controller. A setting value Ir(I/In) of controller and error table 4

long time	short time delay		instant		earthing fault	
Ir1	Ir2	error	Ir3	error	Ir4	error
(0.4-1)In	(0.4-15)In	±10%	In-50kA(Inm:2000A) In-75kA(Inm:3200-4000A) In-100KA(1nm:6300A)	±15%	Inm=2000-4000A (0.2-0.8)In max 1200A min 160A	±10%

When require 3 section protection at the same time, the setting value can be overlapped
B. long time delay over current protection inverse time limit breaking feature $I^2TL=(1.51r1)^2tL$, (1.05-2.0)Ir1 breaking time as Table 5,the error ±15%
tL-long time delay1.5Ir1 setting time, TL-long time delay breaking time

1.05Ir1	1.3Ir1	1.5Ir1setting time(s)	15	30	60	120	240	480
>2h not breaking	<1hbreaking	2.0Ir1breaking(s)	8.4	16.9	33.7	67.5	135	270

C .short time delay over current protection feature

Short time delay over current protection is definite time-lag, for example, if request low times inverse time limit ,its features is I^2Ts: $(8Ir1)^2ts$, ts is normal time delay; when over current>8Ir1.automatically change into definite time-lag feature, the definite time-lag feature as Table6,time limit error±15%.

time delay(s)				return time(s)			
0.1	0.2	0.3	0.4	0.06	0.14	0.23	0.4

D .over current trip protection feature as Table1,earthing error±15%.

2.L intelligent controller

L intelligent controller, its set is code and toggle switch with over load long time delay, short circuit short time delay, instantaneous ,earth current leakage four section protection and fault station, load current light cross indication function, but without nixie tube display.
Operation feature of circuit breaker
Operation performance of circuit breaker is reflected by operation loop times as Table7

Rated current of shell (A)	Operation loop total times
2000	10,000
3000,4000	5,000
6300	2,000

Working voltage and needed power of shunt release ,under voltage release ,electric operation mechanism ,energy release(closing) electromagnet ,intelligent controller as table 8

rated working volotage / needed power / item	AC50HZ		DC current	
	220V	380V	110V	220V
shunt release	24VA	36VA	24W	24W
under voltage release	24VA	36VA		
closing electromagnet	24VA	36VA	24W	24W

Electric operation mechanism	Rated current of shell	2000A	85VA	85VA	85W	85W
		3200A,4000A	110VA	110VA	110W	110W
		6300A	150VA	150VA	150W	150W
Power of intelligent controller			AC220V,AC380V,DC220V,DC110V			

Reliable breaking voltage range of shunt release is 72%-110%, of closing electromagnet and operation mechanism 85%-110%
Under voltage release feature of circuit breaker as Table 9

category		Under voltage time delay trip	Under voltage instantaneous trip
Trip time		Time delay1.3.5s	instantaneous
Voltage of release	35%-70%Ue	Reliable break for circuit breaker	
	<=35%Ue	Can not closing for circuit breaker	
	(85-110%)ue	Reliable closing for circuit breaker	
Within1/2 time delay. if power voltage return to 85%Ue		Can not break for circuit breaker	

The accuracy of delayed time ±10%

The performance of auxiliary contact

1.the default thermal current is 6A
2.four normal open, four normal close or six normal open ,six normal close
3.closing and breaking capacity as Table 10 under abnormal condition

using category	closing			breaking		
	I/Ie	U/Ue	COSΦ or T0.95	I/Ie	U/Ue	COSΦ or T0.95
AC-15	10	1.1	0.3	10	1.1	0.3
DC-13	1.1	1.1	6pe	1.1	1.1	6pe

closing and breaking operation cycles and operation frequency		
operation cycles	operation cycles/min	power time(s)
10	6 or same with main frenquency	0.05

when Pe>=50W.T0.95max-6Pe<=300mS

4.closing and breaking capacity as Table 11 under normal condition

using category	closing			Breaking		
	I/Ie	U/Ue	COSΦ or T0.95	I/Ie	U/Ue	COSΦ or T0.95
AC-15	10	1	0.3	1	1	0.3
DC-13	1	1	6pe	1	1	6pe

Breaking position key

The circuit breaker has “breaking position key”. It can lock the circuit breaker at breaking, at this station, whatever closing or energy(closing) release electromagnet ,the circuit breaker can not close.

STRUCTURE

The fixed ACB mainly is composed of contact system, intelligent controller, manual operation mechanism, electric operation mechanism, installation base. the drawer type is mainly composed of contact system, intelligent controller, manual operation mechanism, electric operation mechanism, drawer base.

The circuit breaker is three-dimensional installation mode, with structure compact , volume small features. The contact system is sealed in a insulation base, each phase contact is separated by insulation board and shaped a small room and intelligent controller, manual operation organization ,electric operation mechanism are located front in sequence to form separate unit each, if any of them is broken, it is possible to discharge it and replace a new one.

The drawer type circuit breaker is combined of plug-in circuit breaker and drawer base.

The DIN rail in the drawer base can be pulled in and out, the plug-in circuit breaker locates in the DIN rail in and out of the drawer ,the main circuit connection through the plug-in connection of busbar of plug-in circuit breaker and the bridge contact of drawer base;

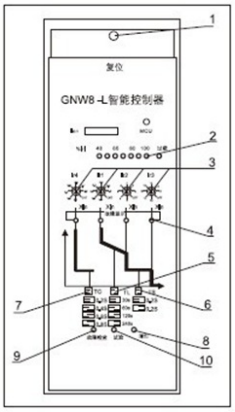
The drawer type circuit breaker has three working station:”connection”, ”test”, ” breaking” station. The change of the station is achieved by turning the handle, the indication of the three station is through the finger locating at drawer base.

When it is in “connection “station, the primary and the secondary circuit are conducted ; When it is in ”test” station, the primary breaks and insulation board separates, only the secondary circuit is conducted and some necessary test can be carried;

When it is in ”breaking” station, the primary and the secondary circuit both are breaking and the drawer type ACB has mechanism interlock position, only the ACB locates at “connection” or “test” station, then it can be closed but can not in middle of the two station.

The ACB ,including fixed and drawer type, two or three of them can combine into double power transfer switch device by connected with our GNQ2 double power automatic transfer controller to achieve two or multi power supply.

L controller panel



1.reset button
press this button if circuit breaker has fault or test trip, then the circuit breaker close once more.
2.load display
display over load long time delay current
3.long time delay, short time delay ,time delay, earth protection current setting knob
set each protection current according to the value of the knob.
4.Fault display lamp
Indicate fault type
5.long time delay over load protection time set by toggle switch
6.short time delay time set by toggle switch
7.earth fault protection time set by toggle switch
8.clear key
after controller set, test, fault ,press this key to make the controller enter into normal station
9.fault check key
if the circuit breaker break when it has fault, press the key to display the fault reason, it has fault memory function even power off
10.test key
this key check if the configuration between controller and circuit breaker well.

1.secondary circuit wiring terminal
2.panel
3.closing button
4.energy storage/release indicate
5.handle plug-in position
6.handle storage position
7.”connection”,”test” and “separation” indication
8.closing and breaking indication
9.breaking button
10.intelligent release
11.fault breaking indication/resent button
12.drawer base
13.shunt release
14.auxiliary contact
15.closing(energy release) electromagnet
16.manual energy storage mechanism
17. electric energy storage mechanism
18.operation mechanism
19 under voltage release

APPLICATION

GNQ2series GS isolation type automatic transfer switch is composed of switch body and intelligent controller. It is suitable to the double power system of AC power below 415V,frequency 50/60Hz,rated current up to 3200A. The main applied places include hospital, shopping mall, bank, fire control ,telecommunication, high-rising building etc. where the power off is not allowed.

FEATURES

- Adopt composite contact, level mechanism, micro-motor energy preserved and micro-electronic control technology, zero flashing-over arc achieved(without arc shield);
- Adopt composite contact, level mechanism, micro-motor energy preserved and micro-electronic control technology, zero flashing-over arc achieved(without arc shield);
- Transferring of performance load isolation switch adopts single electric motor, transfer reliably ,stably ,no noise, impact small;
- Drive motor of operation device need power only when the performing load isolation switch transfer, under normal working status, no power is needed, so the energy saving is achieved;
- Performing load isolation switch has mechanical interlock device to guarantee the separately work of normal and backup power;
- With significant on-off position indication, lock etc. the isolation between power and load is achieved reliably;
- Safety and performance good ,automation strong, reliability high, life duration is more than 8,000times;
- Mechanical and electrical is designed overall,, transfer accurate ,flexible, smoothly , adopting advanced logical control technology ,anti-interference strong, no interference to others;
- With main power close, backup power break; main power break, backup power close; main and backup power both break(I-O-II) three station;
- Installation convenient, connection of control circuit adopts plug-in terminal;
- Four operation functions: emergency manual operation, electric remote control operation, emergency breaking operation under station of automatic control, automatic control operation;

MAIN PARAMETERS

Conventional thermal current Ith(A)		125	160	200	250	315	400
Rated insulation voltage Ui(V)		750	750	750	750	1000	1000
Dielectric strength(V)		5000	5000	5000	5000	8000	8000
Rated impact withstanding voltage Uimp kV (installation category V)		8	8	8	8	12	12
Rated working current Ie(A)							
400V	AC-21B	125	160	200	250	315	400
	AC-22B	125	160	200	250	315	400
	AC-23B	125	160	200	250	315	340
750V	DC-21B	125	160	160	200	315	400
	DC-22B	125	125	125	160	315	315
	DC-23B	80	80	100	125	125	125
220V	AC-21B	125	160	200	250	315	400
	AC-22B	125	160	200	250	315	400
	AC-23B	125	125	160	200		
440V	AC-21B	100	125	160	200	315	400
	AC-22B	100	125	160	200	315	400
	AC-23B	100	125	160	200		
Motor power P(kW)							
	400V	63	80	100	132	160	220
	750V	75	75	90	110	185	185
Over load capacity							

500	630	1000	1250	1250	1600	2500	3200
1000	1000	1000	1000	1000	1000	1000	1000
8000	8000	10000	10000	10000	10000	10000	10000
12	12	12	12	12	12	12	12
500 500 425	630 630 500	1000 1000 800	1250 1250 1000	1250 1250 1000	1600 1600 1250	2500 2500 1250	3200 2500 1250
400 315 125	500 315 125	1000 800 400	1000 800 400	1000 800 400	2000 2000 1000	2500 2000 1000	3200 2000 1000
500 400	630 500						
400 400	500 500						
280 185	315 185	560 475	560 475	560 475	710 750	710 750	710 750

APPLICATION

Two section PC class dual-power supply automatic transfer switch (ATST)is the latest company technology development of high-tech products. It conforms to GB/T14048. 1-2006,GB/T1408.11-2002 and also with ”high-rise building fire norms” and “architectural design fire norms”, ”emergency lighting design guide”, ”civil electrical design specifications” It is mainly used for the state of a load, widely applicable to the fire protection, postal communication, hospitals ,hotels, urban rail transport and high-rise buildings, industrial assembly line, television stations etc. Main power ,emergency power can be power grids, self-excitation generator ,battery etc.

FEATURES

IEC60947-1general rules
IEC60947-6-1<automatic transfer switch equipment>
IEC60947-2<circuit breaker>
Small volume, convenient installation
Self-input and self-restore, self-input without self-restore, automatic or manual transfer depends on your option
Integral and split type available
2,3,4 poles optional
Parameters could be adjusted

PARAMETERS

type		GNQ2-32NS	GNQ2-125NS	GNQ2-250NS	GNQ2-400NS
		10,16,20,25,32	32,40,50,63,80, 100,125	100,125,140,160, 180,200,225,250	160,180,200,225, 250,315,350,400
rated current(A)		3.5		7	
operation curent(A)		5		35	
rated short time withstand current (KA)		8000		6000	
ltfe duration (times)	electric	3000		2000	
	mechanical				
operation cycle (s/times)		15		10	

APPLICATION

SWLZ transfer load isolation switch ,combined of two SWL overlapped up and down or assembly by left and right, suitable to the transfer of two power source or two load and safe isolation.
The switch is according to standard IEC60947-3.

PARAMETERS

Rated short time withstande current Icw(KA Rms)0.1S/1.0S		20/10	20/10	30/12	30/12	45/20	45/20
Making breaking capacity							
Making capacity(A Rms)AC-23 380v		100	1000	1600	1600	2500	3200
Rated short circuit making capacity Icm (kA peak)		12	12	17	17	30	30
mechanical life (loop operation times)		10000	10000	10000	10000	5500	5500
electric life (loop operation times)							
rated voltage Ue=660V rated current Ie 1500 cosφ=0.95 AC-21B cosφ=0.65 AC-22B cosφ=0.35 AC-23B		1500 1000 500	1500 1000 500	1500 1000 500	1500 1000 500	750 500 250	750 200 250
Operation moment (N.m)		4	6.5	10	10	14.5	14.5
Weight(Kg)	3pole	1	1	2	2	3.5	3.5
	4pole	1.5	1.5	2.5	2.5	4	4

50/25	50/25	90/50	90/50	90/50	90/50	90/50	90/50
3200	3200	8000	8000	8000	8000	8000	8000
40	40	70	70	70	70	70	70
5500	5500	4000	4000	3000	2500	2500	2500
750 500 150	750 500 250	600 400 200	600 400 200	450 300 150	450 200 100	450 200 100	350 200 100
14.5	14.5	27	27	27	60	60	60
4	4	10.5	10.5	16	31	31	42
4.5	4.5	13	13	20	40	40	49

APPLICATION

GNQ1series miniature circuit breaker automatic transfer switch is composed of two mcb and its auxiliary parts. It is suitable to the double power system of AC power below 415V,frequency 50/60Hz,rated current below63A. The main applied places include hospital, shopping mall, bank, fire control , telecommunication, high-rising building etc. where the power off is not allowed.

FEATURES

With small volume, simple structure ,easy operation ,long life ,3/4pole available;
The switching drive is single motor ,stable ,without noise, impact small;
With mechanical and electric interlock, switching reliable ,manual and automatic transfer optional;
The rated current of normal power mcb and backup power mcb can be different;
The terminal in ATS is for user wiring to display the close or open station of mcb;
The mcb has high breaking capacity.

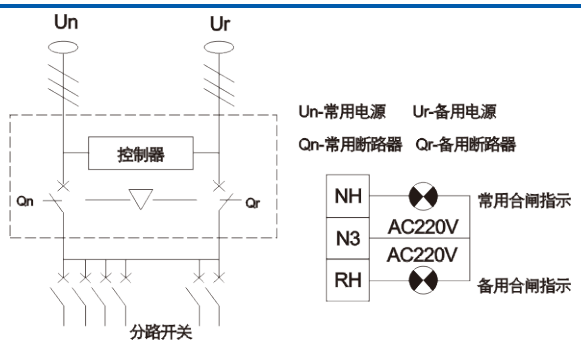
WORKING CONDITIONS

The around air temperature should be between +5℃ and +40℃ ,the average value should be not higher than 35℃;
The sea level should not exceed 2,000m;
The air relative humidity should not exceed 50%,lower temperature ,the humidity can be higher, the average temperature +25℃,,the max relative humidity should not exceed 90% and the surface condensation should be taken into consideration cause of the temperature change;
Pollution degree III;
The working place is without strong vibration and impact, no corrosive gas that corrode metal and break the insulation, no strong dust, no conductive particulate and explosive dangerous substance, no strong electromagnetic interference.

PARAMETERS

Pole	Rated voltage Ue (VAC)	Rated current In(AAC)	Rated frequency (Hz)	Control Voltage (V)	Transfer time(s)	Limit breaking capacity (A)cos Φ	Mechanical life(times)
2	220	6,10,16, 20,25, 32,40, 50,63	50/60	220	1.5-3	6,000/0.65	10,000
3	380					4,500/0.7	
4							

WIRING FOR USER



Remark: chose the suitable wire ,connect the wire-in and wire-out of mcb well and the phase sequence of wire-in should be accordant. For 3 pole mcb, add neutral line of each mcb to the neutral N terminal of ATS, or the ATS can not work normally.

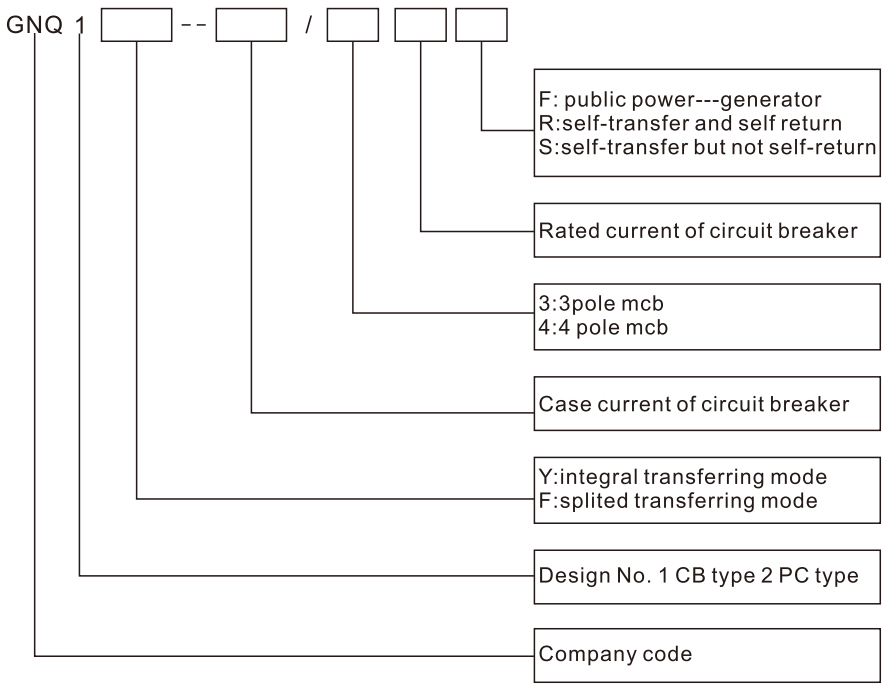
APPLICATION

GNQ1series molded case circuit breaker intelligent dual-power automatic transfer switch, brief namely transfer switch, is the latest developed new products, suitable to power system of AC 50/60Hz,rated voltage 400V,rated current 6-800Amp.When the normal power have fault, the transfer switch can automatically switch between normal power and backup power or generator to make sure of the power reliable and safe. It is also possible to selectively switch between two power according to the load. The transfer switch has the protections of over load, under voltage, short circuit, phase loss etc. and mainly applied at the places like fire control, airport ,television station, hospital, shopping mall ,bank , chemical engineering ,metallurgy, high building and military facility etc. where the power can not be interrupted to make sure of the continuous power.

WORKING CONDITIONS

The around air temperature should be between +5℃ and +40℃ ,the average value should be not higher than 35℃;
The sea level should not exceed 2,000m;
The air relative humidity should not exceed 50%,lower temperature ,the humidity can be higher, the average temperature +25℃,,the max relative humidity should not exceed 90% and the surface condensation should be taken into consideration cause of the temperature change;
Pollution degree III;
The working place is without strong vibration and impact, no corrosive gas that corrode metal and break the insulation, no strong dust, no conductive particulate and explosive dangerous substance, no strong electromagnetic interference.

MODEL IMPLICATION



PRODUCT STRUCTURE AND FEATURES

GNQ1 intelligent double power automatic transfer switch is composed of two sets 3 pole or 4 pole molded case circuit breaker and auxiliary parts alarming contact, mechanical interlock transmission mechanism ,controller etc. It has the features of

Adopt high performance SCM control program , nixie tube voltage display;
Anti-interference strong and accuracy high;
With protections of over load, under voltage, short circuit ,phase loss, intelligent alarm;
Transfer switch adjustable ,transferring time accurate;
Small volume ,breaking capacity high ,flash-over short, structure compact , appearance elegant;
Anti-corrosion strong, power supply reliable;
Operation without noise, energy saving and power loss decreased, installation convenient ,operation easy, stability high.
With reliable mechanical and electric interlock protection device preventing the two mccb from closing at the same time;
Automatic transferring parameter can be set outside;
With operation motor intelligent protection;
The ats with fire control circuit, when the fire control center send a control signal to the intelligent controller, both the two mccb will be broken automatically;
With generator starting signal, when the normal power is abnormal, ATS controller will send a starting signal to the generator, then it will generate automatically.

MAIN TECHNICAL PARATEMERS

Table1

Model	GNQ1-100/225	GNQ1-400	GNQ1-630/800
Mechanical life(times)	5,000	3,000	2,500
Electrical life(times)	1,000	1,000	1,000
Usage life(times)	6,000	6,000	6,000
Rated working mode	Continuous working		
Over voltage transferring set value	120%Ue		
Under voltage setting range	(60%-85%)Ue continuously adjustable		
Contact transferring time(s)	<4		
Breaking time delay	0.5~30 continuously adjustable		
Closing time delay	0.5~30 continuously adjustable		

Table2

Model	Optional mccb	pole	Breaking capacity Icu(KA)	Rated current of mccb(A)	Rated working voltage of mccb(V)	Rated insulation voltage(V)
GNQ1-100	GNM1-100	3	35,50	16,20,32, 40,50,63,80, 100	AC380(400)	690
		4	50			
GNQ1-225	GNM1-225	3	35,50	125,160, 180,200, 225	AC380(400)	690
		4	50			
GNQ1-400	GNM1-400	3	50,65	250,315, 350,400	AC380(400)	690
		4	65			
GNQ1-630	GNM1-630	3	50,65	500,630	AC380(400)	690
		4	65			
GNQ1-800	GNM1-800	3	50,65	700,800	AC380(400)	690
		4	65			

TRANSFER MODES

Table1 for self-transfer and self-return

Normal power	Backup power	Control function
Normal	Normal	Normal power supply:Q2 break,Q1closed
Abnormal	Normal	Q1 pass time delay and break,Q2 closed, backup power supply
Return normal	normal	Q2pass time delay and break,Q1 closed, return to normal power supply

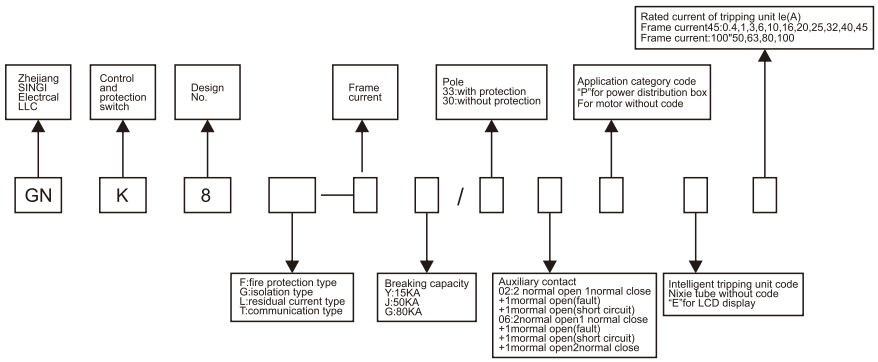
Table2Self-transfer but not self-return

Normal power	Backup power	Control function
Normal	Normal	Normal power supply:Q2 break,Q1closed
Abnormal	Normal	Q1 pass time delay and break,Q2 closed, backup power supply
Return normal	normal	Backup power supply still
Normal	abnormal	Q2pass time delay and break,Q1 closed, normal power supply

Table3 Public power-generator

Normal power	Backup power	Control function
Normal	Normal	Normal power supply:Q2 break,Q1closed
Abnormal	Normal	generating
abnormal	generating	When the generating voltage arrive 80% rated voltage, generator power supply
Return normal	generating	Passed time delay,Q1 closed, return to normal power supply

Remark: Q1:the circuit breaker which controls normal power
Q2:the circuit breaker which controls backup power
Transferring time delay(0~30s,the default value 3s)
Returning time delay(0~30s,the default value 3s)



APPLICATION

GNK8 control and protective switch is suitable to the power system of AC50/60Hz,rated voltage max 690V,rated current from 1 A to 100A ,used to connect ,load and break normal and set improper current.GNK8 is a switch that combine the function of circuit breaker, contactor, thermal relay etc. each feature coordinate inside .When it is applied in
3 phase AC motor ,it can protect the circuit from phase loss, over voltage, under voltage and 3 phase imbalance. GNK8 is operated by itself and manual and can achieve automatically control remotely and direct manual operation.
GNK8 control and protective switch can be divided as Y type (normal breaking capacity),J type (high breaking capacity),H type (highest breaking capacity)
GNK8 installation can be vertical and level;
GNK8 conform the standard:IEC60947-6-2

WORKING CONDITION

ISea level<2000m;

IEnvironment temperature-5℃~+40℃,average should not be high than +35℃;

IThe atmosphere temperature is +40℃,the air relative humidity should not exceed 50%,at lower environmental temperature, higher relative humidity is available, the average min temperature is +25℃,the average max relative humidity should not exceed 90%.

IPollution grade:3

IInstallation category: III.

PARAMETERS

Frame rated current Inm		45A	100a
Rated insulation voltage Ui		690V	
Rated working voltage Ue		380V,690V	
Rated control voltage Us		220V	
Rated frequency		50/60Hz	
pole		3P	
electromagnetic release rated current In(A)		16,45	63,100
Intelligent release rated working current Ie(A)		0.4,1,3,6,10,16,20, 25,32,40,45	50,63,80,100
Rated operation short circuit breaking capacity (AC380V)kA	Y	15	15
	J	50	50
	H		80
AC-43 electrical life times		100	
Mechanical life times		500	

PARAMETERS

lOverload long time delay protection: the user can set by himself, the default value is Ir1=1.5Ie,breaking time<10s;

lShort circuit short time delay protection:Ir2=6~12Ie,the default value for motor is Ir2=12Ie, Ir2=6Ie for power distribution;

lShort circuit instant protection:Ir3=8~16Ie ,the default value Ir3=14Ie±20%, breaking time<=0.2s;

lTime delay protection when start: during the starting, the switch only protect the equipment from phase loss, over-under voltage, short circuit, current leakage and tri-phase imbalance and the breaking time <=5s;

lOver voltage protection: when the working voltage exceed the default set value , he breaking time <=10s;

lUnder voltage protection: when the working voltage is below the default set value , the breaking time <=10s;

lPhase loss protection: when any of the phase is lose ,the breaking time is <=3s;

lTri-phase imbalance protection: when the current difference between any phase is 20~80%(default 60%),the breaking time <=10s;

lUnder current protection: when the working current is below the default set current, the breaking<=30s;

Current leakage protection: when the leakage current is larger than the set value, the breaking time <=0.2s;

GENERAL INFO

GNZ series intelligent information distribution box is the best configured products for the wiring system of modern intelligent building, it integrates the signals of broadband data, voice telephone, cable TV, safety and supervisory, remote control, power automatic meter reading etc. It is convenient for customers to manage, distribute and control kinds of information and network signal, more easy, fun and safe for your living environment.
The products mainly are applied in modern home, intelligent house estate, enterprise and public entertainment places etc. It has the merits of

- Design novel ,easy for installation, swift and economical;
- Management centralized , visual mark ,easy see for the system connection;
- Supply the signals of video, voice, data, supervisory, monitoring and remote intelligent control etc.;
- Flexible, efficiency high, reliability high;
- Compatibility and openness are suitable for the development of internet present and future;
- Beautiful appearance ,the inner terminals are fixed to function panel by unitary, the interface is friendly for users;
- Flush installation ,elegant;
- Conform to the wiring standard of EIA/TIA570A.

PRODUCT FEATURES

- The panel is the technology of two installation, then it avoid the effecting the appearance when installing;
- conform to the cable installation specification X4AWG;
- gold-plated technology for the interface languet to make sure of good performance of continuity and durability;
- self-lock mechanism plug to guarantee the high reliability of signal connection.

GNZ-208D INTELLIGENT INFORMATION DISTRIBUTION BOX

PRODUCT INTRODUCTION

- Router: five 10/100M automatic computer router for 4 sets computer on internet in the same time;
- Cable TV: one incoming, five six going(5-100MHz),F type standard terminal;
- Voice telephone:RJ45 shielded category 5 information outlet provides one-ingoing four-outgoing and one-ingoing two out-going;
- Computer data:RJ45 terminal supply one incoming four outgoing and one incoming two outgoing groups wire;
- Light current signal module:12pairs of light current signal transfer terminals, provide intermediate contact for security and remote meter reading system for three meters;
- Installation Dimension:250*200*110mm;
- Appearance Dimension:225*160*92mm;

GNZ-108WB INTELLIGENT INFORMATION DISTRIBUTION BOX

GENERAL INFO.

- Cable TV: one incoming, five outgoing(5-100MHz)F type standard terminal
- Voice telephone:RJ45 shielded category 5 information outlet provides two-ingoing four-outgoing and one-incoming two-outgoing;
- Light current signal module:20pairs of light current signal transfer terminals, provide intermediate contact for security and remote meter reading system for three meters;
- Supervisory signal model: two pairs of BNC radio frequency connectors for monitoring and visible adaptation abutment;
- Wireless router: high performance self adaption computer wireless router, supply the internet for multi computers at the same time and with the function of cable router of
- one incoming four outgoing.
nstallation Dimension:300*250*110mm;
- Appearance Dimension:278*205*92mm;

GNZ-708GL1 FIBER INTELLIGENT INFORMATION DISTRIBUTION BOX

PRODUCT INTRODUCTION

- Cable TV: one-incoming, four-out-going
- Voice telephone: one-incoming, four-outgoing
- Router: one-incoming ,four-outgoing
- ONU installation bracket :one
- Two pin double power socket: one
- Fiber fixation clamp: two
- nstallation Dimension:360*230*120mm;
- Appearance Dimension:390*260*140mm;

GNZ-708GL2 FIBER INTELLIGENT INFORMATION DISTRIBUTION BOX

GENERAL INFO.

- Router: five 10/100M automatic computer router for 4 sets computers on internet in the same time;
- Cable TV: F standard terminal, one incoming, four outgoing (5-1000MHz);
- Voice telephone:RJ45 shielded terminal two ingoing six outgoing;
- Supervisory signal : two pairs of BNC radio frequency connectors for monitoring and visible adaptation abutment;
- Power switch:220V input, two DC7.5V outputting terminals, supplying power for router, exchanger;
- Power socket: two way multi function socket, one group 220V input, two groups AC220V output, with two terminals;
- Fiber welding disc: supply fixing for the surplus fiber in the box;
- Fiber fixing clamp: fix the fiber in the box to prevent it movable.
- Product dimension:425*325*140mm
- Installation dimension:400*300*120mm

GNZ-708GF3 FIBER INTELLIGENT INFORMATION DISTRIBUTION BOX

PRODUCT INTRODUCTION

- Router: five 10/100M automatic computer router for 4 sets computers on internet in the same time;
- Cable TV: F standard terminal, one incoming, four outgoing (5-1000MHz);
- Voice telephone:RJ45 shielded terminal two ingoing six outgoing;
- Supervisory signal : two pairs of BNC radio frequency connectors for monitoring and visible adaptation abutment;
- Power switch:220V input, two DC7.5V outputting terminals, supplying power for router, exchanger;
- Power socket: two way multi function socket, one group 220V input, two groups AC220V output, with two terminals;
- Fiber welding disc: supply fixing for the surplus fiber in the box;
- Fiber fixing clamp: fix the fiber in the box to prevent it movable.

Product dimension:420*347*140mm
Installation dimension:400*300*120mm

GNB10 SERIES POWER DISTRIBUTION BOX

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Merlin Gerin type;
- 4,6,9,13,15,18,26,36,54,72 modules available;
- Flush and surface installation available;
- Transparent and opaque available;
- Cambered and streamlined surface;
- Convenient bound opening key;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , single row ,box is 0.8mm thickness, double or multi rows 1.0mm thickness and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-1004	4 circuits	122×142×77	140×160×88
	GNB-1006	6 circuits	175×190×80	198×210×95
	GNB-1009	9 circuits	230×190×80	255×210×95
	GNB-1013	13 circuits	300×190×80	325×210×95
	GNB-1015	15 circuits	334×190×80	360×210×95
	GNB-1018	18 circuits	390×190×80	415×210×95
Double row	GNB-1026	26 circuits	390×395×80	325×425×95
	GNB-1030	30 circuits	334×395×80	360×425×95
	GNB-1036	36 circuits	390×395×80	415×425×95
Three rows	GNB-1045	45 circuits	334×610×80	360×630×95
	GNB-1054	54 circuits	390×610×80	415×630×95
Four rows	GNB-1072	72 circuits	390×820×80	415×840×95

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Convenient bound opening key;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , single row ,box is 0.8mm thickness, double or multi rows 1.0mm thin and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

FEATURES

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-3004	4 circuits	138×154×80	158×174×90
	GNB-3007	7 circuits	190×200×80	210×220×90
	GNB-3010	10 circuits	244×200×80	264×220×90
	GNB-3013	13 circuits	298×200×80	318×220×90
	GNB-3015	15 circuits	334×200×80	354×220×90
	GNB-3018	18 circuits	388×200×80	408×220×90
	GNB-3021	21 circuits	442×200×80	462×220×90
Double row	GNB-3020	20 circuits	244×420×80	264×440×90
	GNB-3026	26 circuits	298×420×80	318×440×90
	GNB-3030	30 circuits	334×420×80	354×440×90
	GNB-3036	36 circuits	388×420×80	408×440×90
Three rows	GNB-3039	39 circuits	298×640×80	318×660×90
	GNB-3045	45 circuits	334×640×80	354×660×90
	GNB-3054	54 circuits	388×640×80	408×660×90
Four rows	GNB-3072	72 circuits	388×860×80	408×880×90

(NEW)

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Convenient bound opening key;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , single row ,box is 0.8mm thickness, double or multi rows 1.0mm thin and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-N3009	9 circuits	232×210×80	352×230×95
	GNB-N3013	13 circuits	304×210×80	324×230×95
	GNB-N3015	15 circuits	340×210×80	360×230×95
	GNB-N3018	18 circuits	394×210×80	414×230×95
	GNB-N3022	22 circuits	466×210×80	486×230×95
Double row	GNB-N3026	26 circuits	304×440×80	324×460×95
	GNB-N3030	30 circuits	340×440×80	360×460×95
	GNB-N3036	36 circuits	394×440×80	414×460×95
	GNB-N3044	44 circuits	466×440×80	486×460×95
Three rows	GNB-N3045	45 circuits	340×670×80	360×690×95
	GNB-N3054	54 circuits	394670×80	414×690×95
	GNB-N3066	66 circuits	466×670×80	486×690×95

(NEW)

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Convenient bound opening key;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , single row ,box is 0.8mm thickness, double or multi rows 1.0mm thin and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-N3109	9 circuits	232×210×80	352×230×95
	GNB-N3113	13 circuits	304×210×80	324×230×95
	GNB-N3115	15 circuits	340×210×80	360×230×95
	GNB-N3118	18 circuits	394×210×80	414×230×95
	GNB-N3122	22 circuits	466×210×80	486×230×95
Double row	GNB-N3126	26 circuits	304×440×80	324×460×95
	GNB-N3130	30 circuits	340×440×80	360×460×95
	GNB-N3136	36 circuits	394×440×80	414×460×95
	GNB-N3144	44 circuits	466×440×80	486×460×95
Three rows	GNB-N3145	45 circuits	340×670×80	360×690×95
	GNB-N3154	54 circuits	394670×80	414×690×95
	GNB-N3166	66 circuits	466×670×80	486×690×95

GNB50 SERIES POWER DISTRIBUTION BOX

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent in sulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- TCL type;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Lid open from right to left or from left to right ;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , 1.0mm thickness and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-5008	8circuits	215×210×80	250×230×105
	GNB-5012	12circuits	280×220×80	315×250×105
	GNB-5016	16circuits	360×220×80	390×250×105
	GNB-5020	20circuits	430×220×80	460×250×105
Double row	GNB-5024	24circuits	280×370×80	315×400×105
	GNB-5032	32circuits	360×470×80	390×500×105
	GNB-5040	40circuits	430×470×80	460×500×105

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Convenient bound opening key;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , single row ,box is 0.8mm thickness, double or multi rows 1.0mm thin and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-N5008	8circuits	214×210×90	334×230×105
	GNB-N5012	12circuits	286×220×90	306×250×105
	GNB-N5016	16circuits	358×220×90	378×250×105
	GNB-N5020	20circuits	430×220×90	450×250×105
Double row	GNB-N5024	24circuits	286×400×90	316×430×110
	GNB-N5030	30circuits	340×400×90	370×430×110
	GNB-N5040	40circuits	430×470×90	450×500×105

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on.

FEATURES

- Standard IEC60670
- Protection degree IP30;
- Simon type;
- Flush and surface installation available;
- Transparent and opaque available;
- Straight line surface;
- Lid open from down to up ;
- Flame-retardant PC panel ,ivory-white ,never fade ,ABS frame;
- The installation screw is occlusion ,elegant ;
- Terminal with flame-retardant shield, wiring is safe and reliable;
- The base is good cool-rolled steel plate , 1.0mm thickness and the surface is plastic casted;
- Good zinc-plated din to prevent from rust.
- Adjustable DIN rail ,adjustable depth;
- Red copper busbar;
- Certificates CE &CB.

SPECIFICATION

	Product model	Name	Installation size (mm)	Outline size (mm)
Single row	GNB-6008	8circuits	201×190×85	223×206×105
	GNB-6012	12circuits	273×210×85	295×226×105
	GNB-6016	16circuits	345×210×85	367×226×105
	GNB-6020	20circuits	417×210×85	439×226×105
Double row	GNB-6024	24circuits	273×420×85	295×452×105
	GNB-6032	32circuits	345×420×85	367×452×105
	GNB-6040	40circuits	417×420×85	439×452×105
Three rows	GNB-6048	48circuits	345×630×85	367×678×105
	GNB-6060	60circuits	417×630×85	439×678×105

PRODUCT INTRODUCTION

GNB series flush type and surface distribution boxes/distribution boards are mainly used in the circuit of AC 50Hz, rated voltage 220V/380V, and acted to install the modular combination equipment. It is widely used in the family, high building, house, station, port, airport, commercial house, hospital, cinema, enterprises and so on occasion. The plastic unit of the GNB Series Flush type and Surface type distribution boxes adopts ABS flame-proof material with the characteristics of flame-proof, impulse proof, excellent insulation property and so on

FEATURES

GNB7008, GNB7012, GNB7016, GNB7020, GNB7024 models available;
Surface and flush mounting optional;
Cover and box are both 1.0mm thickness cold-rolled metal sheet;
The cover is strengthening technology;
The color is lightening white;
Customization is available including box is deeper, box thickness (0.6mm, 0.8mm, 1.2mm optional), the dia. and site of knockouts;

PARAMETERS

Model	Dimension (mm)	Installation Dimension (mm)	Max modules	Panel size (mm)	Terminal view window (mm)	Row	Packing
GNB7008	247*250*100	206*220*90 (flush)	8P	166	145*46	single	12 pcs /CTN
GNB7016	390*250*100	350*220*90 (flush)	16P	310	290*46	single	10 pcs/CTN
GNB7020	464*250*100	422*220*90 (flush)	20P	382	361*46	single	8pcs/CTN
GNB7024	320*452*100	278*412*90 (flush)	24P	238 *192	217*46	double	8pcs/CTN
GNB7032			32P			double	5pcs/CTN
GNB7040			40P			double	5pcs/CTN
GNB7048			48P			three	1pcs/CTN
GNB7060			60P			three	1pcs/CTN
GNB7080			80			three	1pcs/CTN