

CHENZHU

Surge Protective Device (SPD)



<https://en.chenzhu-inst.com/>

CHENZHU COMPANY OVERVIEW



CHENZHU' s headquarter is located at Shanghai, China, with an area of 8500m².

Shanghai Chenzhu Instrument Co.,Ltd. was founded in April, 2002, who was originated from Shanghai Institute of Process Automation Instrumentation. CHENZHU is a professional company with core expertise of R&D, manufacturing and sale service of high quality safety products, such as isolated barriers, signal conditioners, surge protective devices, safety relays etc.

MANAGEMENT SYSTEMS



ISO9001



ISO14001



ISO45001



IECEx QUALITY ASSESSMENT

R&D Strength

Based on ISO/IEC/GB standards, CHENZHU has established the professional laboratory which is applied up to 70 test capabilities and verification items in CHENZHU's safety electrical products' development process.



R&D Team

28%
Work Force



R&D Investment

11%
of Sale Revenue



Innovation

110+
Patents



Testing Facility

80+
Capabilities

Smart Factory

CHENZHU factory is continually driven by lean management and flexible production. By our strict quality examination, CHENZHU ensures the production meets the design specification and satisfies our customers.



Factory

3500m²
In total



Max Cap.

2,000,000 pcs
Year



Sales Volume


1,080,000 pcs
In 2021



Lean Production

10+
Years' experience

IECEx TEST REPORT COVER	
ExTR Reference Number.....	CN/COMExTR15.0021.00
ExTR Free Reference Number.....	COMNEPS/ExTR15.0009
Completed by + signature (ExTL).....	Lu Qiao
Reviewed by + signature (ExTL).....	Huang Yongwei
Reviewed by + signature (ExCB).....	Ge Qing
Approved by + signature (ExCB).....	Zhang Wei
Date of issue.....	2015-03-30
Ex Testing Laboratory (ExTL).....	Shanghai Inspection and Testing Institute of Instruments and Automatic Systems(SITIAS) National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation(NEPSI)
Address.....	103 Cao Bao Road, Shanghai 200233, China
Ex Certification Body (ExCB).....	China Quality Mark Certification Group Co., Ltd
Address.....	No. 33, Zengxiang Road, Haiidian District, Beijing City, China
Applicant's name.....	Shanghai Chenzhu Instrument Co. Ltd
Address.....	Building 6, 201 Minyi Road, Caohang Development Zone, Songjiang District, Shanghai, 201612, P.R. China
Standards associated with this ExTR package.....	IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-26:2006
Clauses considered.....	All clauses considered
Test procedure.....	IECEx System
Test Report Form Number.....	ExTR_Cover_5 (released 2014-01)
Test item description.....	Surge Protective Device
Model/type reference.....	CZLBX-4B*
Code (e.g. Ex, II, T, I).....	Exia II C T4~T6 Ga
Rating.....	Safe parameters refer to the General Production Information
All testing fully performed by ExTL (Yes)	
<p>Instructions for Intended Use of ExTR Cover: An ExTR Cover is the sole top-level document to associate together all other parts of an IECEx Test Report (ExTR) package. An ExTR package is composed of an ExTR Cover and one or more associated ExTR documents (which may include Ex Test Reports, ExTR Addendums and ExTR of National Differences). All ExTR package documents are compiled and reviewed by the ExTL. The Issuing ExCB indicates final approval of the overall ExTR package on this ExTR Cover.</p> <p>Copyright © 2014 International Electrotechnical Commission System for Certification to Standards Relating to Equipment for use in Explosive Atmospheres (IECEx System), Geneva, Switzerland. All rights reserved. This blank publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEx System is acknowledged as copyright owner and source of the material. The IECEx system takes no responsibility for, and will not assume liability for, damages resulting from the reader's interpretation of the reproduced material due to its placement and content.</p>	

EU-TYPE EXAMINATION CERTIFICATE	
1	Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
2	Certificate Number: Sira 20ATEX2010X Issue: 0
3	Equipment: T-EX Series Surge Protective Devices
4	Applicant: SHANGHAI CHENZHU INSTRUMENT CO., LTD.
5	Address: Floor 7-8, Building 6, No.201, Minyi Road, Songjiang District, Shanghai, 201612, P.R.China
6	This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
7	Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
8	The examination and test results are recorded in the confidential reports listed in Section 14.2.
9	Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents: EN IEC 60079-0:2018 EN 60079-11:2012
10	The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.
11	If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.
12	This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.
The marking of the equipment shall include the following:  II G Ex ia IIC T6, T4 Ga Ta = -40 to 50 / 75 / 80	
Project Number	80038722
Signed:	N. Jones
Title:	Certification Manager
Sira Certification Service Unit 4 Haverdon Industrial Park Haverdon, CV3 9JG, United Kingdom	
Page 1 of 3	
DDP 54429 Rev 2019-10-30 This certificate and its schedules may only be reproduced in its entirety and without change.	

■ IECEx Certification

■ ATEX Certification

发明专利证书	
证书号	2087117号
发明名称	一种浪涌保护器
发明人	殷敏;任伟强;陈科会;吴士财;姚学博;张翼晨;肖国坤;王春阳;王琪
专利号	ZL 2013 1 0585112.2
专利申请日	2013年11月19日
专利权人	上海辰竹仪表有限公司; 明洋机电(中国)有限公司
授权公告日	2017年02月22日
本发明经中华人民共和国国家知识产权局审查, 决定授予专利权, 被本发明人并在本专利公告之日起生效。专利权的保护期限为二十年, 自申请日起算。专利权的保护期限届满之日即行终止。专利权的保护期限届满之日即行终止。专利权的保护期限届满之日即行终止。	
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局长	申长雨
日期	2017年02月22日

产品责任险保险单 (副本)	
保单号	CBS130019629
保险单号	ASHHS1071330001USG
请仔细阅读本保险单, 以确保其内容与被保险人的投保要求一致。	
本保险单内容主要包括: 保险范围、除外责任、赔偿处理、被保险人义务、总则、特别条款等。本保险单还包括投保申请书及其附件, 以及本公司今后以批单方式增加的内容。	
鉴于本保险单中列明的被保险人向中国太平洋财产保险股份有限公司以下简称“本公司”提交书面投保申请和相关资料(该投保申请及相关资料被视作本保险单的有效组成部分), 并向本公司缴付了本保险单中列明的保险费, 本公司同意按本保险单的规定负责赔偿在本保险单中列明的保险期限内被保险人依法对第三者应承担的经济赔偿责任, 并特立本保险单为凭。	
	
中国太平洋财产保险股份有限公司 China Pacific Property Insurance Co., Ltd. 全国统一投诉服务电话: 400895930	
	
公司盖章	
保单签发机构: 上海分公司 营业地址: 上海市吴淞路69号 邮政编码: 200860 联系电话: 021-68779600 名称: 杨智勇 性别: 男 职务: 魏俊 签发日期: 2013年09月19日 传真号码: 021-66085555	
全国统一投诉服务电话: 400895930	
	
总公司地址: 中国上海市银城中路190号 邮政编码: 200120 网址: http://www.cpic.com.cn	

■ Patent

■ Product Liability Insurance

T Series Functional SPD



SPD for signal

- 12.5mm width
- 2-wire,3-wire,4-wire is optional
- Hot pluggable



SPD for power

- 18mm/P width
- T2: 40~80kA (8/20 μ s)
- Short circuit withstanding:1000A

CZLB Series Classical SPD



SPD for signal

- 7.6mm width
- Ground via terminal or DIN 35mm rail



SPD for power

- 18mm/P width
- T2: 40kA (8/20 μ s)
- T1: 15kA (10/350 μ s)

CZLBX Series Screw Mounting SPD



- Intrinsic safety certification;explosion proof electrical product certification
- Various of thread specification is optional
- 304 or 316 stainless steel housing is optional

iFL Series Network SPD



- Fully aluminium alloy housing, good electromagnetic shielding
- FE、GE、PoE、wireless is optional
- Grounded by DIN rail or screw terminals

Catalogue

7-8

T series

**SPD for signal**

For 5V signal (Intrinsic safety)	9
For 24V signal (Intrinsic safety)	10
For 5V signal	11
For 5V signal	12

**SPD for power**

DC power	13-15
AC power (40kA)	16-17
AC power (80kA)	18-19
AC power (40kA) (400/690VAC)	20-21

CZLB series

**SPD for signal**

For 5V signal (Intrinsic safety)	22
For 24V signal (Intrinsic safety)	23

**SPD for power**

DC power	24
AC power (40kA)	25-26
AC power (160kA)(220/380VAC)	27-28

CZLBX series

**Screw Mounting SPD**

29

iFL series

**SDP for network and video**

Network	30
Network, power 2 in1	30
GigE	31
PoE	31
Wireless	32

Catalogue

T series SPD for signal

Model	Order No.	Wiring	Load current I _L	Max.operating voltage U _c	Nominal discharge current I _n (8/20μs)	Impulse current I _{imp} (10/350μs)	Protection	Page
T-5-EX-L	7086993	2	500mA	6V DC	10kA	2.5kA	IS, TC, RS-485, CAN	9
T-5-EX-L3	7025543	3	500mA	6V DC	10kA	2.5kA	IS, RTD	9
T-5-EX-L4	7019501	4	500mA	6V DC	10kA	2.5kA	IS, RTD, TC, RS-422	9
T-24-EX-L	7096962	2	500mA	32V DC	10kA	2.5kA	IS, AI, AO, DI, DO	10
T-24-EX-L3	7097610	3	500mA	32V DC	10kA	2.5kA	IS, AI, AO, DI, DO, RS-232	10
T-24-EX-L4	7040569	4	500mA	32V DC	10kA	2.5kA	IS, AI, AO, DI, DO	10
T-5-L	7099647	2	800mA	6V DC	10kA	2.5kA	TC, RS-485, CAN	11
T-5-L3	7050235	3	800mA	6V DC	10kA	2.5kA	RTD	11
T-5-L4	7029162	4	800mA	6V DC	10kA	2.5kA	RTD, TC, RS-422	11
T-24-L	7023959	2	800mA	32V DC	10kA	2.5kA	AI, AO, DI, DO	12
T-24-L3	7091758	3	800mA	32V DC	10kA	2.5kA	AI, AO, DI, DO, RS-232	12
T-24-L4	7074245	4	800mA	32V DC	10kA	2.5kA	AI, AO, DI, DO	12

T series SPD for power

Model	Order No.	Max.operating voltage U _c	Recommended backup fuse	Nominal discharge current I _n (8/20μs)	Max. discharge current I _{max} (8/20μs)	Protection	Remote signaling	Page
T-24	7062371	58VDC/40VAC	—	10kA	20kA	24VDC power (<10A)	—	13
T2-24	7073945	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	—	14
T2-24F	7093094	90VDC/60VAC	80A gG	20kA	40kA	24VDC power	✓	14
T2-110	7089524	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	—	14
T2-110F	7062355	180VDC/120VAC	80A gG	20kA	40kA	110VDC power	✓	14
T2-220	7065567	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	—	14
T2-220F	7011000	320VDC/220VAC	80A gG	20kA	40kA	220VDC power	✓	14
T2-1000	7053964	1000VDC	80A gG	20kA	40kA	1000VDC PV	—	15
T2-1000F	7065508	1000VDC	80A gG	20kA	40kA	1000VDC PV	✓	15
T2-1500	7094994	1500VDC	80A gG	20kA	40kA	1500VDC PV	—	15
T2-1500F	7067731	1500VDC	80A gG	20kA	40kA	1500VDC PV	✓	15
T2-40/2P	7067699	385VAC	80A gG	20kA	40kA	TN System	—	16
T2-40/2PF	7062709	385VAC	80A gG	20kA	40kA	TN System	✓	16
T2-40/3P	7079704	385VAC	80A gG	20kA	40kA	IT, TN-C System	—	16
T2-40/3PF	7046181	385VAC	80A gG	20kA	40kA	IT, TN-C System	✓	16
T2-40/4P	7085466	385VAC	80A gG	20kA	40kA	TN-S System	—	16
T2-40/4PF	7018432	385VAC	80A gG	20kA	40kA	TN-S System	✓	16
T2-40/1P	7056020	385VAC	80A gG	20kA	40kA	Single line	—	17
T2-40/1PF	7031533	385VAC	80A gG	20kA	40kA	Single line	✓	17
T2-40/1P+1	7032273	385VAC	80A gG	20kA	40kA	TT System	—	17
T2-40/1P+1F	7070280	385VAC	80A gG	20kA	40kA	TT System	✓	17
T2-40/3P+1	7085025	385VAC	80A gG	20kA	40kA	TT System	—	17
T2-40/3P+1F	7081984	385VAC	80A gG	20kA	40kA	TT System	✓	17
T2-80/2P	7030066	385VAC	125A gG	40kA	80kA	TN System	—	18
T2-80/2PF	7066780	385VAC	125A gG	40kA	80kA	TN System	✓	18
T2-80/3P	7025082	385VAC	125A gG	40kA	80kA	IT, TN-C System	—	18
T2-80/3PF	7038693	385VAC	125A gG	40kA	80kA	IT, TN-C System	✓	18
T2-80/4P	7018734	385VAC	125A gG	40kA	80kA	TN-S System	—	18
T2-80/4PF	7088870	385VAC	125A gG	40kA	80kA	TN-S System	✓	18
T2-80/1P	7077138	385VAC	125A gG	40kA	80kA	Single line	✓	19
T2-80/1PF	7012410	385VAC	125A gG	40kA	80kA	Single line	✓	19
T2-80/1P+1	7015677	385VAC	125A gG	40kA	80kA	TT System	—	19
T2-80/1P+1F	7042357	385VAC	125A gG	40kA	80kA	TT System	✓	19
T2-80/3P+1	7055729	385VAC	125A gG	40kA	80kA	TT System	—	19
T2-80/3P+1F	7058261	385VAC	125A gG	40kA	80kA	TT System	✓	19
T2-40/700/2P	7031662	700VAC	80A gG	20kA	40kA	TN System	—	20
T2-40/700/2PF	7087013	700VAC	80A gG	20kA	40kA	TN System	✓	20
T2-40/700/3P	7066877	700VAC	80A gG	20kA	40kA	IT, TN-C System	—	20
T2-40/700/3PF	7028674	700VAC	80A gG	20kA	40kA	IT, TN-C System	✓	20

Model	Order No.	Max.operating voltage U _c	Recommended backup fuse	Nominal discharge current I _n (8/20μs)	Max. discharge current I _{max} (8/20μs)	Protection	Remote signaling	Page
T2-40/700/4P	7087771	700VAC	80A gG	20kA	40kA	TN-S	-	20
T2-40/700/4PF	7020165	700VAC	80A gG	20kA	40kA	TN-S	✓	20
T2-40/700/1P+1	7062817	700VAC	80A gG	20kA	40kA	TT	-	21
T2-40/700/1P+1F	7033598	700VAC	80A gG	20kA	40kA	TT	✓	21
T2-40/700/3P+1	7013762	700VAC	80A gG	20kA	40kA	TT	-	21
T2-40/700/3P+1F	7097406	700VAC	80A gG	20kA	40kA	TT	✓	21

CZLB series SPD for signal

Model	Order No.	Wiring	Load current I _L	Max.operating voltage U _c	Nominal discharge current I _n (8/20μs)	Impulse current I _{imp} (10/350μs)	Protection	Page
CZLB-5(T2)	7051773	2	500mA	6V DC	10kA	2.5kA	IS, TC, RS-485, CAN	22
CZLB-5(R3)	7014195	3	500mA	6V DC	10kA	2.5kA	IS, RTD	22
CZLB-24(B2)	7090592	2	500mA	32V DC	10kA	2.5kA	IS, AI, AO, DI, DO	23
CZLB-24(B3)	7013226	3	500mA	32V DC	10kA	2.5kA	IS, AI, AO, DI, DO, RS-232	23

CZLB series SPD for power

Model	Order No.	Max.operating voltage U _c	Recommended backup fuse	Nominal discharge current I _n (8/20μs)	Max. discharge current I _{max} (8/20μs)	Protection	Remote signaling	Page
CZLB-24P	7059650	58VDC/40VAC	-	10kA	20kA	24VDC (<10A)	-	24
CZLB-40/2P	7051402	385VAC	80A gG	20kA	40kA	TN System	-	24
CZLB-40/2PF	7028111	385VAC	80A gG	20kA	40kA	TN System	✓	24
CZLB-40/3P	7061543	385VAC	80A gG	20kA	40kA	IT, TN-C System	-	25
CZLB-40/3PF	7023751	385VAC	80A gG	20kA	40kA	IT, TN-C System	✓	25
CZLB-40/4P	7045781	385VAC	80A gG	20kA	40kA	TN-S System	-	25
CZLB-40/4PF	7094265	385VAC	80A gG	20kA	40kA	TN-S System	✓	25
CZLB-40/1P+1	7047317	385VAC	80A gG	20kA	40kA	TT System	-	25
CZLB-40/1P+1F	7054943	385VAC	80A gG	20kA	40kA	TT System	✓	25
CZLB-40/3P+1	7078829	385VAC	80A gG	20kA	40kA	TT System	-	26
CZLB-40/3P+1F	7091611	385VAC	80A gG	20kA	40kA	TT System	✓	26
CZLB-160/440/2P	7024977	440VAC	200A gG	80kA	160kA	TN System	-	26
CZLB-160/440/3P	7069757	440VAC	200A gG	80kA	160kA	IT, TN-C System	✓	26
CZLB-160/440/4P	7086079	440VAC	200A gG	80kA	160kA	TN-S System	-	27
CZLB-160/440/1P+1	7053172	440VAC	200A gG	80kA	160kA	TT System	-	27
CZLB-160/440/3P+1	7083196	440VAC	200A gG	80kA	160kA	TT System	-	27

CZLBX Series Screw Mounting SPD

Model	Order No.	Thread	Wiring	Max. operate voltage U _c	Nominal discharge current I _n (8/20μs)	Impulse current I _{imp} (10/350μs)	Protection	Page
CZLBX-48	7041233...	1/2" NPT...	2	48V DC	10kA	2.5kA	RTD, RS-485, AI, AO, DI, DO	29
CZLBX-48-3	7024477...	1/2" NPT...	3	48V DC	10kA	2.5kA	RTD, RS-485, AI, AO, DI, DO	29
CZLBX-48-4	7060125...	1/2" NPT...	4	48V DC	10kA	2.5kA	RTD, RS-485, AI, AO, DI, DO	29

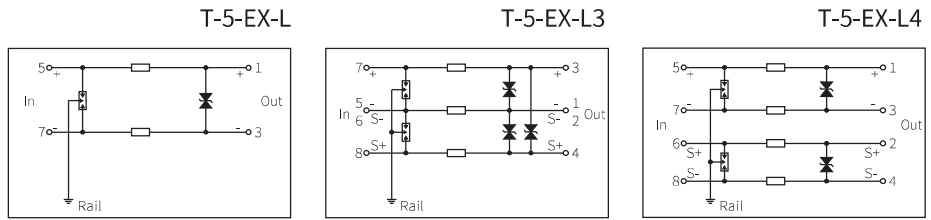
iFL Series Network SPD

Model	Order No.	Max. operate voltage U _c	Nominal discharge current I _n (8/20μs)	Protection	Page
iFL-RJ45	7079893	8VDC	2kA	Network	30
iFL-RJ45-2	7978591	8VDC/58VDC	10kA	Network, 24VDC power 2 in 1	30
iFL-RJ45-2	7054623	8VDC/275VAC	3kA	Network, 220VAC power 2 in 1	30
iFL-RJ45/PoE	7069852	8VDC/60VDC	2kA	PoE	31
iFL-RJ45/GigE	7058560	60VDC	2kA	GigE	31
iFL-RF	7043433	24VDC	10kA	Wireless	32

For 5V signal(IS system)

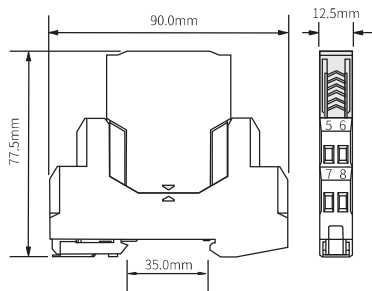
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

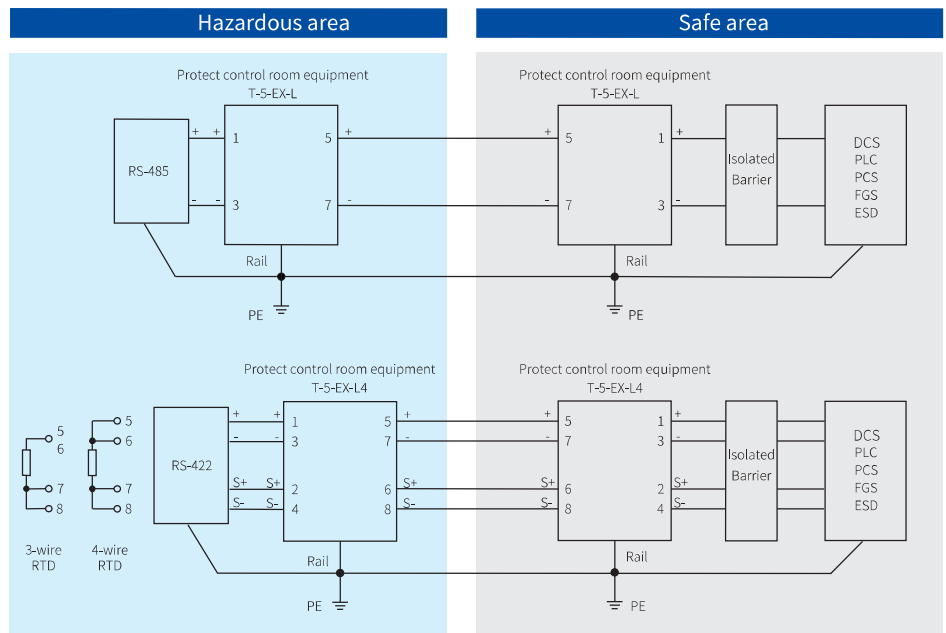


Technical data	2-wire	3-wire	4-wire
Max. continuous operating voltage U_c	6V DC	6V DC	6V DC
Nominal operating current I_n	500mA	500mA	500mA
Resistance(per line)	1Ω	1Ω	1Ω
Nominal discharge current $I_n(8/20\mu s)$	10kA	10kA	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA	20kA	20kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA	2.5kA	2.5kA
Voltage protection level $U_p(8/20\mu s)$ L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level $U_p(1kV/\mu s)$ L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	1ns	1ns	1ns
Residual current I_{PE}	<10μA	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking	II 1G Ex ia IIC T6...T4 Ga	II 1G Ex ia IIC T6...T4 Ga	II 1G Ex ia IIC T6...T4 Ga
Certificate Number	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters	$U_i=6V$; $I_i=500mA$; $P_i=5.32W$; $C_i \approx 0\mu F$; $L_i \approx 0mH$	$U_i=6V$; $I_i=500mA$; $P_i=5.32W$; $C_i \approx 0\mu F$; $L_i \approx 0mH$	$U_i=6V$; $I_i=500mA$; $P_i=5.32W$; $C_i \approx 0\mu F$; $L_i \approx 0mH$
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7086993	7075543	7019501

Dimensions



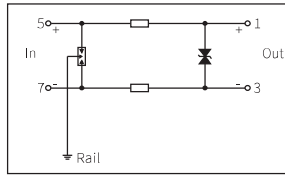
Typical applications



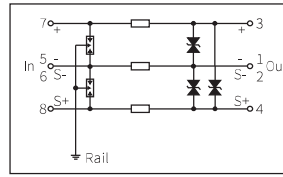
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

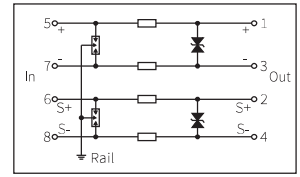
T-24-EX-L



T-24-EX-L3

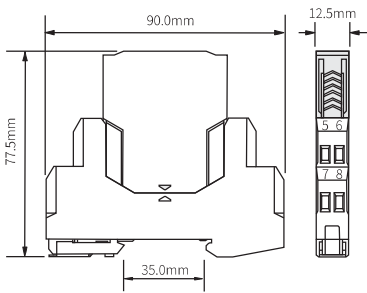


T-24-EX-L4

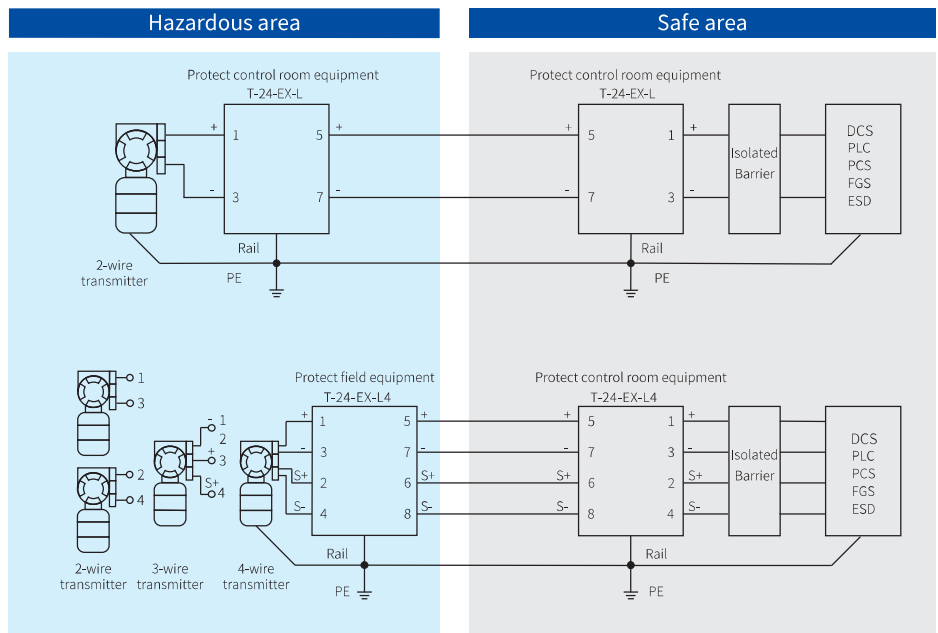


Technical data	2-wire	3-wire	4-wire
Max. continuous operating voltage U_c	32V DC	32V DC	32V DC
Nominal operating current I_n	500mA	500mA	500mA
Resistance(per line)	1Ω	1Ω	1Ω
Nominal discharge current $I_{nmax}(8/20\mu s)$	10kA	10kA	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA	20kA	20kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA	2.5kA	2.5kA
Voltage protection level $U_p(8/20\mu s)$	L-L/L-G	60V/600V	60V/600V
Voltage protection level $U_p(1kV/\mu s)$	L-L/L-G	40V/600V	40V/600V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	1ns	1ns	1ns
Residual current I_{PE}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking	II 1G Ex ia IIC T6...T4 Ga	II 1G Ex ia IIC T6...T4 Ga	II 1G Ex ia IIC T6...T4 Ga
Certificate Number	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X	Sira 20ATEX2010X IECEx SIR 20.0018X
Entity Parameters	$U_i=30V;I_i=500mA;P_i=5.32W;$ $C_i \approx 0\mu F;L_i \approx 0mH$	$U_i=30V;I_i=500mA;P_i=5.32W;$ $C_i \approx 0\mu F;L_i \approx 0mH$	$U_i=32V;I_i=500mA;P_i=5.32W;$ $C_i \approx 0\mu F;L_i \approx 0mH$
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7096962	7097610	7040569

Dimensions



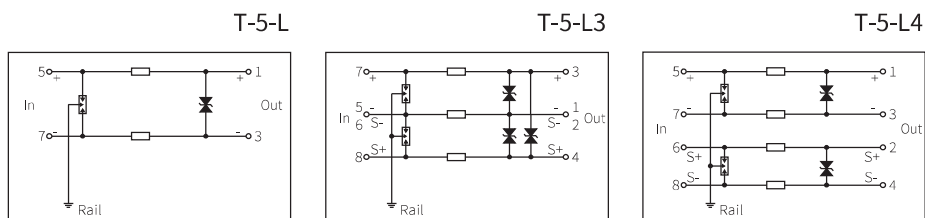
Typical applications



For 5V signal

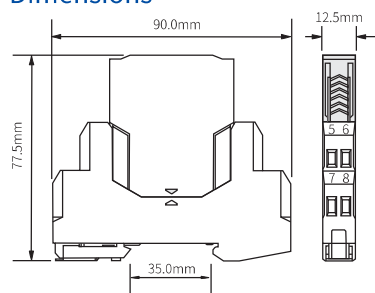
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

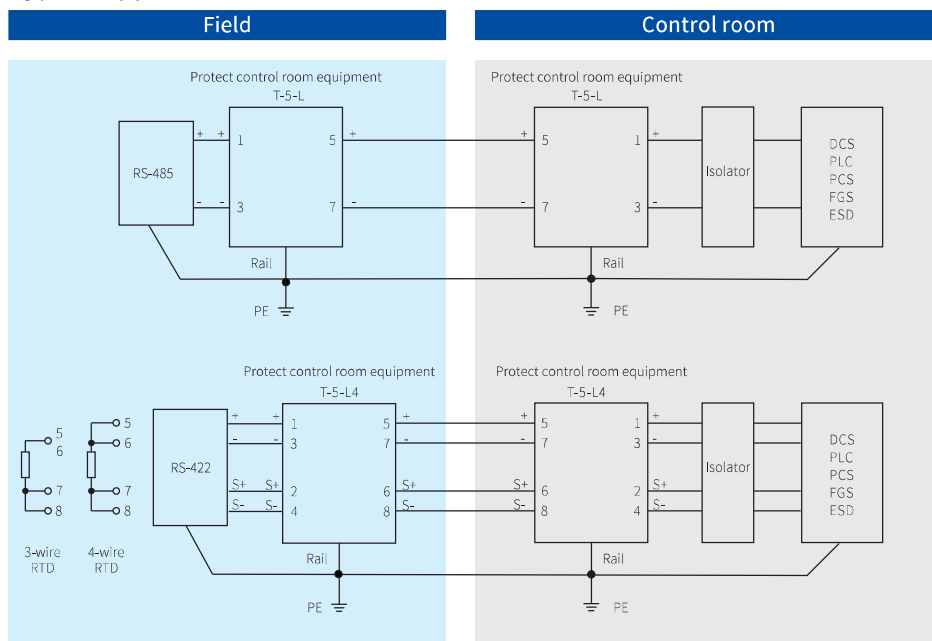


Technical data	2-wire	3-wire	4-wire
Max. continuous operating voltage U_c	6V DC	6V DC	6V DC
Nominal operating current I_l	800mA	800mA	800mA
Resistance(per line)	1Ω	1Ω	1Ω
Nominal discharge current $I_{(8/20\mu s)}$	10kA	10kA	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA	20kA	20kA
Impulse current $I_{(10/350\mu s)}$	2.5kA	2.5kA	2.5kA
Voltage protection level $U_p(8/20\mu s)$ L-L/L-G	40V/600V	40V/600V	40V/600V
Voltage protection level $U_p(1kV/\mu s)$ L-L/L-G	20V/600V	20V/600V	20V/600V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	1ns	1ns	1ns
Residual current I_{PE}	<10μA	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7099647	7050235	7029162

Dimensions

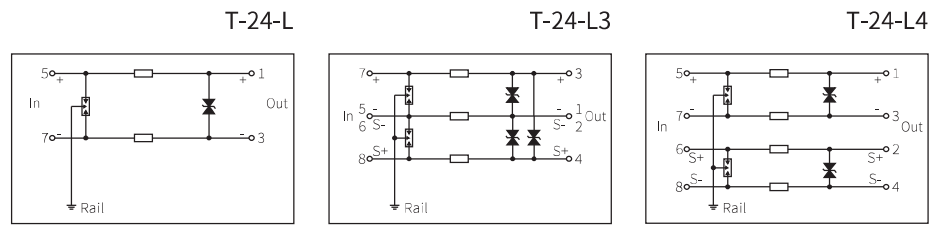


Typical applications



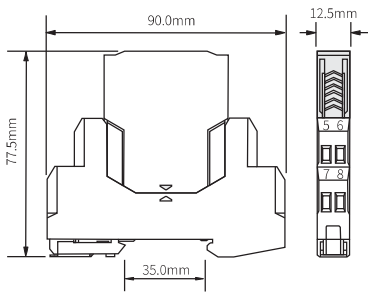
Features

- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

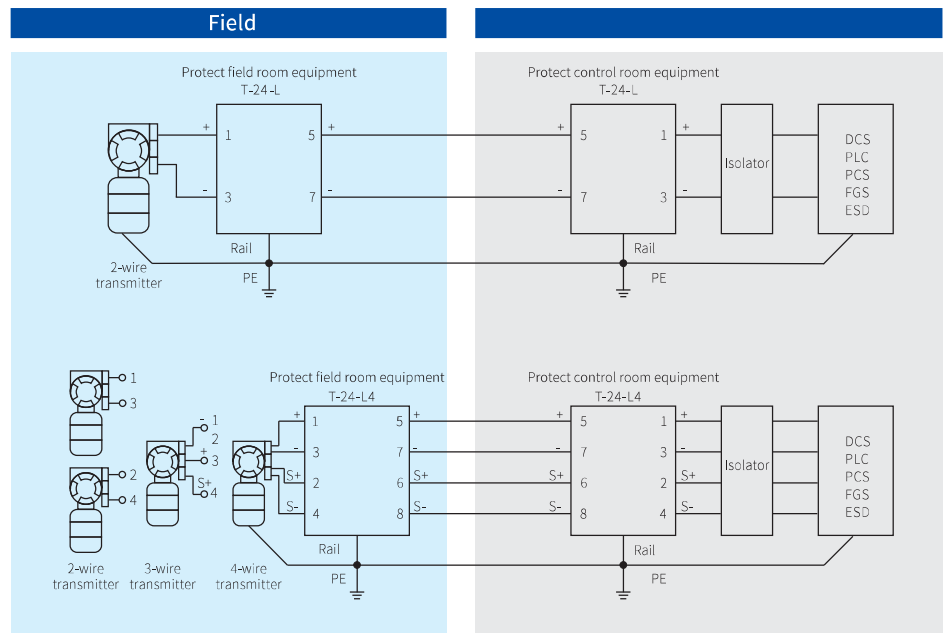


Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	32V DC	32V DC	32V DC
Nominal operating current I_n	800mA	800mA	800mA
Nominal discharge current $I_n(8/20\mu s)$	10kA	10kA	10kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA	2.5kA	2.5kA
Total impulse current $I_{imp}(10/350\mu s)$	5kA	7.5kA	10kA
Voltage protection level $U_p(I_n)$	L-G:1.3kV	L-G:1.3kV	L-G:1.3kV
Voltage protection level $U_p(I_{imp})$	L-G:70V	L-G:70V	L-G:70V
Voltage protection level $U_p(1kV/\mu s)$	L-L:40V,L-G:90V	L-L:40V,L-G:90V	L-L:40V,L-G:90V
Bandwidth(-0.5dB)	40MHz	40MHz	40MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{zz}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7023959	7091758	7074245

Dimensions



Typical applications

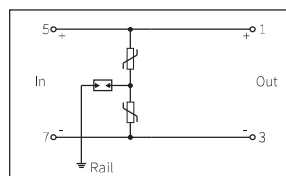


For DC power

Features

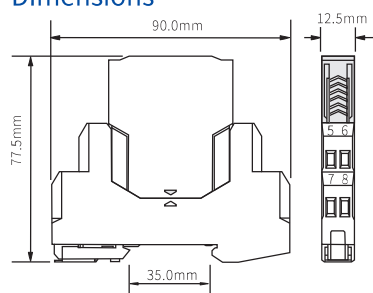
- 12.5mm width
- Pluggable protection module
- Ground via DIN 35mm rail

T-24

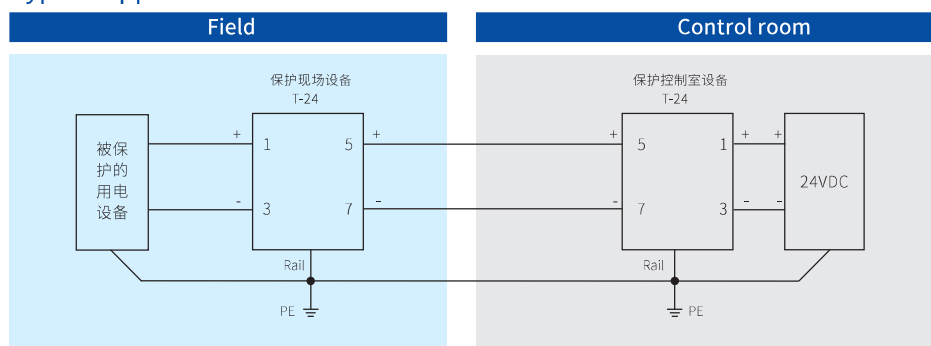


Technical data	
Max. continuous operating voltage U_c	58VDC/10VAC
Nominal operating current I_n	10A
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Impulse current $I_{mp}(10/350\mu s)$	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm ²
Residual current I_{PE}	<20 μ A
Response time	25ns
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7062371

Dimensions

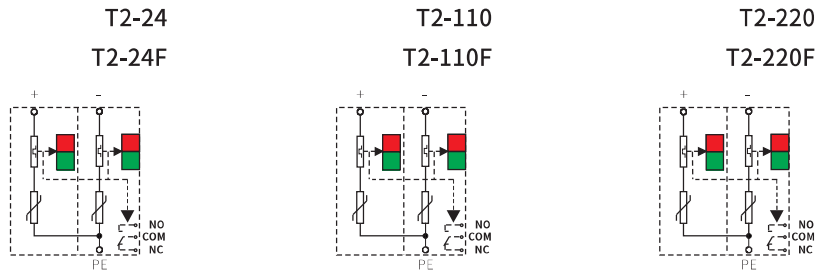


Typical applications



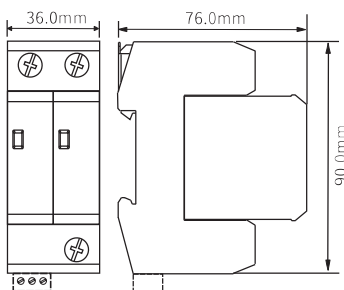
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"



Technical data	T2-24 T2-24F	T2-110 T2-110F	T2-220 T2-220F
Max. continuous operating voltage U_c	90VDC/60VAC	180VDC/120VAC	320VDC/220VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA	40kA
Voltage protection level U_p	600V	800V	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns
Residual current	<10μA	<10μA	<10μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-24: 7073945 T2-24F: 7093094	T2-110: 7089524 T2-110F: 7062355	T2-220: 7065567 T2-220F: 7011000

Dimensions (18mm/P)



76.0mm × 90.0mm × 36.0mm

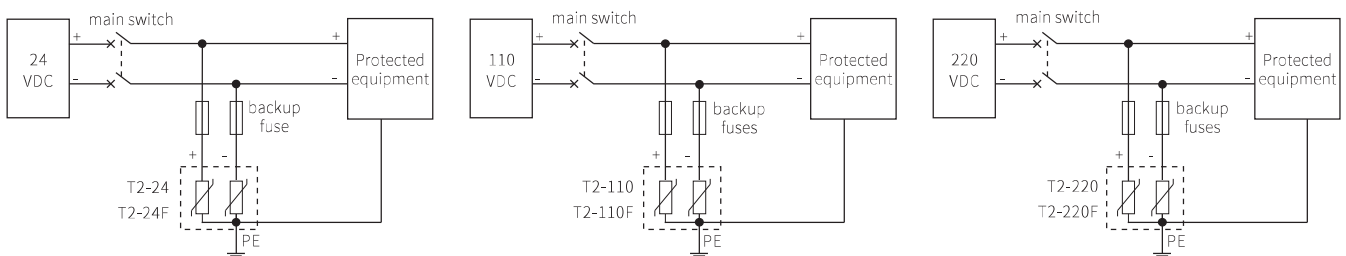


76.0mm × 90.0mm × 36.0mm



76.0mm × 90.0mm × 36.0mm

Typical applications



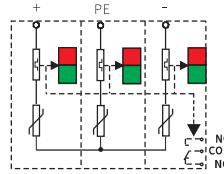
Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For DC power

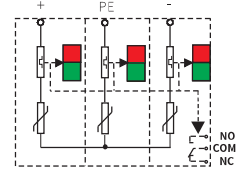
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

T2-1000
T2-1000F



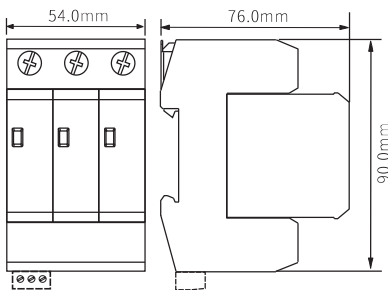
T2-1500
T2-1500F



Technical data

Max. continuous operating voltage U_c	1000VDC	1500VDC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA
Voltage protection level U_p	4kV	6kV
Short-circuit current rating I_{scpv}	1000A	1000A
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	4~35mm ²	4~35mm ²
Response time	25ns	25ns
Residual current	<10μA	<10μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	GB/T 18802.31/IEC 61643-31	GB/T 18802.31/IEC 61643-31
Certification		
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-1000: 7053964 T2-1000F: 7065508	T2-1500: 7094994 T2-1500F: 7067731

Dimensions (18mm/P)

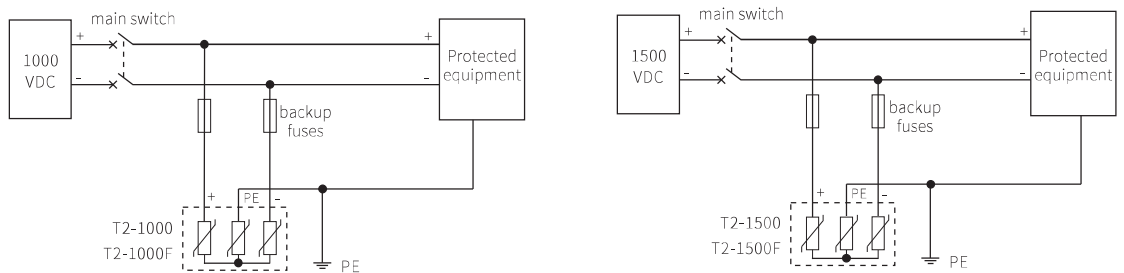


76.0mm × 90.0mm × 54.0mm



76.0mm × 90.0mm × 54.0mm

Typical applications

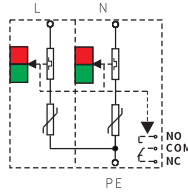


Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

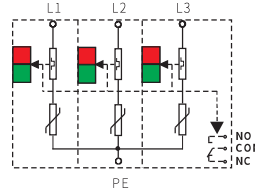
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

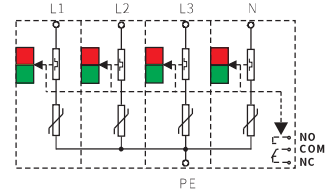
T2-40/2P
T2-40/2PF



T2-40/3P
T2-40/3PF



T2-40/4P
T2-40/4PF



Technical data

Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TN)	Three-phase four line (TN-C) Three-phase three line (IT)	Three-phase five line (TN-S)

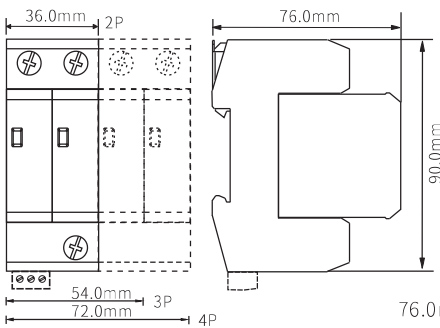
Certification

Type test: Shanghai Lightning Protection Center Shanghai Lightning Protection Center Shanghai Lightning Protection Center

Order number

T2-40/2P: 7067699 T2-40/3P: 7079704 T2-40/4P: 7085466
T2-40/2PF: 7062709 T2-40/3PF: 7046181 T2-40/4PF: 7018432

Dimensions (18mm/P)



76.0mm × 90.0mm × 36.0mm

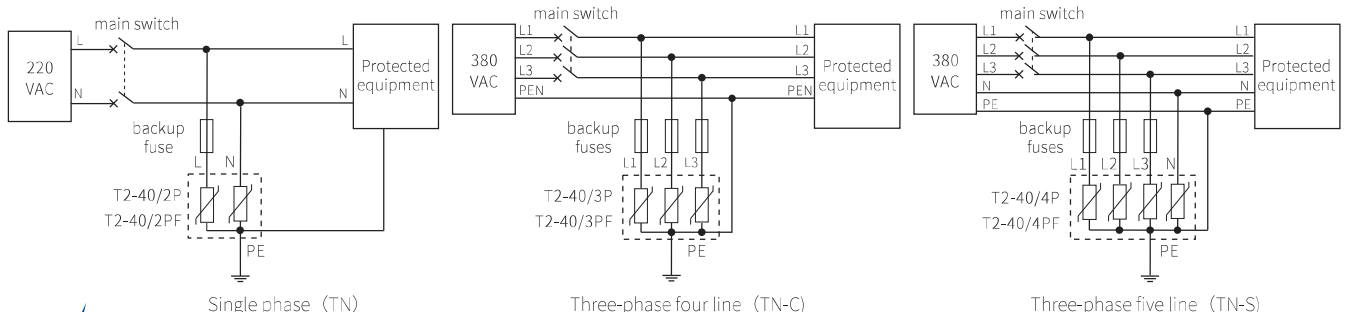


76.0mm × 90.0mm × 54.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications



Cautions:

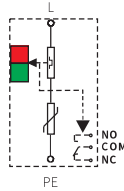
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For AC power(40kA)

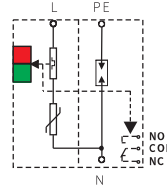
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

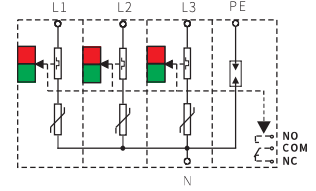
T2-40/1P
T2-40/1PF



T2-40/1P+1
T2-40/1P+1F

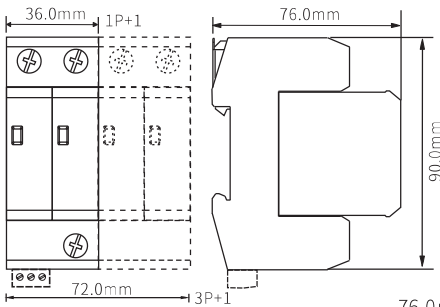


T2-40/3P+1
T2-40/3P+1F



Technical data		T2-80G module		T2-40 module	
		T2-80G module	T2-40 module	T2-80G module	T2-40 module
Max. continuous operating voltage U_c	385VAC	255VAC	385VAC	255VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	40KA	20kA	40KA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	80kA	40kA	80kA	40kA
Voltage protection level U_p	1.7kV	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse	80A gG		80A gG		80A gG
Short-circuit current rating I_{SCCR}	1000A		1000A		1000A
Recommended grounding cable	4~35mm ²		4~35mm ²		4~35mm ²
Response time	25ns		25ns		25ns
Residual current	<20μA		<20μA		<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20		IP 20		IP 20
Housing material/Flammability rating(UL94)	PA66/V0		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
Power supply system	Single line		Single phase (TT)		Three-phase four line (TT)
Certification					
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-40/1P: 7056020 T2-40/1PF: 7031533	T2-40/1P+1: 7032273 T2-40/1P+1F: 7070280	T2-40/3P+1: 7085025 T2-40/3P+1F: 7081984		

Dimensions (18mm/P)



76.0mm × 90.0mm × 18.0mm

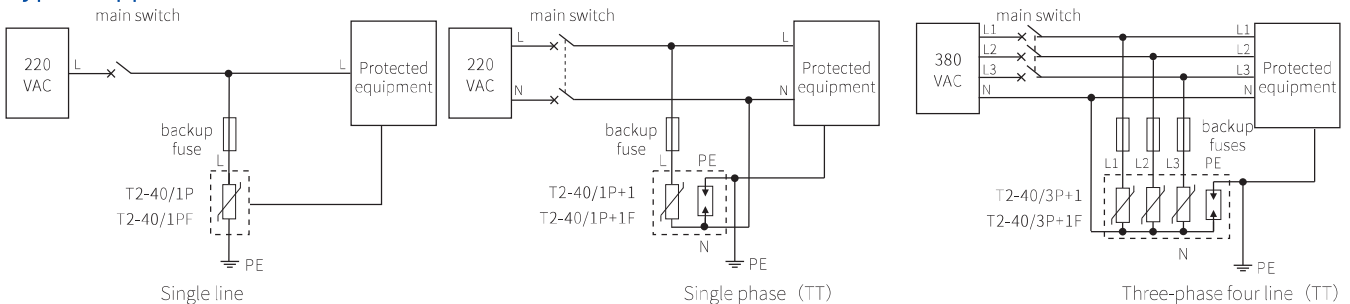


76.0mm × 90.0mm × 36.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications

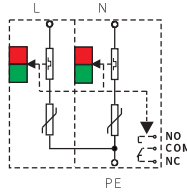


Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

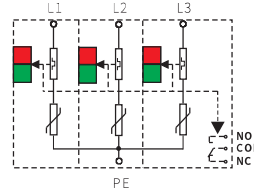
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

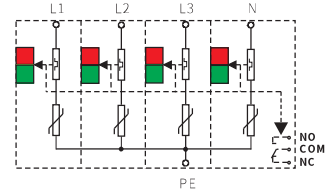
T2-80/2P
T2-80/2PF



T2-80/3P
T2-80/3PF



T2-80/4P
T2-80/4PF



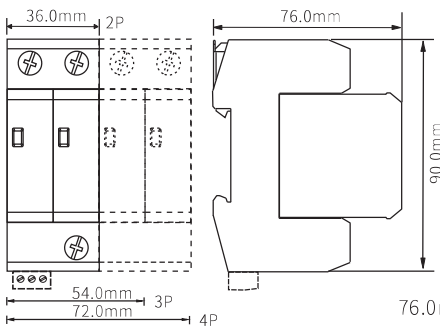
Technical data

Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	40kA	40kA	40kA
Max. discharge current $I_{max}(8/20\mu s)$	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	2.0kV	2.0kV
Recommended backup fuse	125A gG	125A gG	125A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TN)	Three-phase four line (TN-C) Three-phase three line (IT)	Three-phase five line (TN-S)

Certification

Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	T2-80/2P: 7030066 T2-80/2PF: 7066780	T2-80/3P: 7025082 T2-80/3PF: 7038693	T2-80/4P: 7018734 T2-80/4PF: 7088870

Dimensions (18mm/P)



76.0mm × 90.0mm × 36.0mm

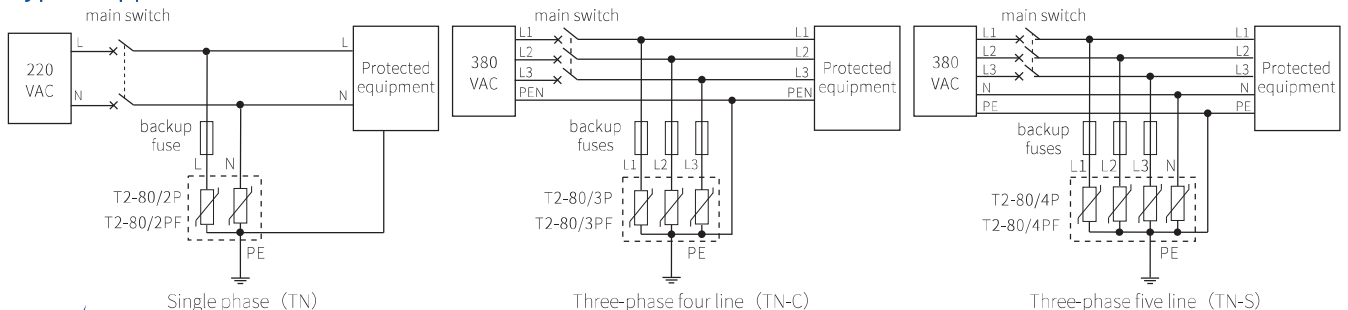


76.0mm × 90.0mm × 54.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications



Cautions:

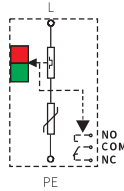
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For AC power(80kA)

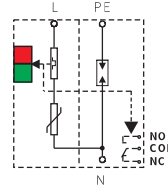
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

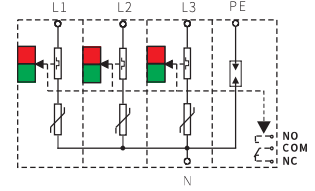
T2-80/1P
T2-80/1PF



T2-80/1P+1
T2-80/1P+1F

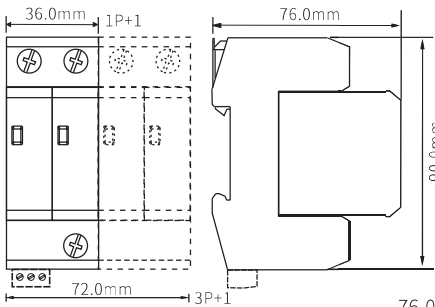


T2-80/3P+1
T2-80/3P+1F



Technical data	T2-80G module		T2-80 module	
	T2-80G module	T2-80 module	T2-80G module	T2-80 module
Max. continuous operating voltage U_c	255VAC	385VAC	255VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	40KA	40kA	40KA	40kA
Max. discharge current $I_{max}(8/20\mu s)$	80kA	80kA	80kA	80kA
Voltage protection level U_p	1.2kV	2.0kV	1.2kV	2.0kV
Recommended backup fuse	125A gG	125A gG	125A gG	125A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A	1000A
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single line	Single phase (TT)	Three-phase four line (TT)	
Certification				
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	
Order number	T2-80/1P: 7077138 T2-80/1PF: 7012410	T2-80/1P+1: 7015677 T2-80/1P+1F: 7042357	T2-80/3P+1: 7055729 T2-80/3P+1F: 7058261	

Dimensions (18mm/P)



76.0mm × 90.0mm × 18.0mm

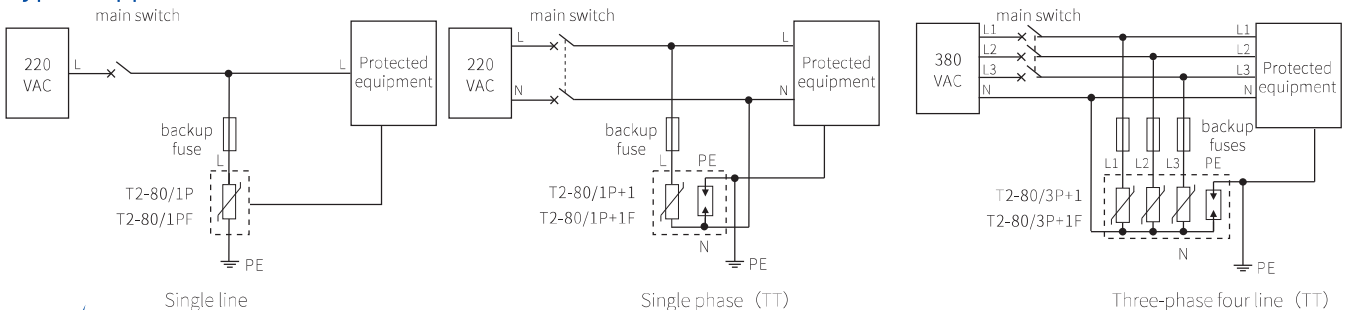


76.0mm × 90.0mm × 36.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications



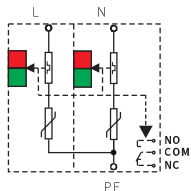
Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For AC power(40kA)(400/690VAC)

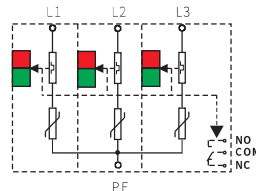
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

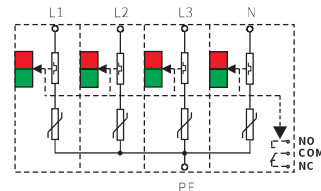
T2-40/700/2P
T2-40/700/2PF



T2-40/700/3P
T2-40/700/3PF



T2-40/700/4P
T2-40/700/4PF



Technical data

Max. continuous operating voltage U_c	700VAC	700VAC	700VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA	40kA
Voltage protection level U_p	2.8kV	2.8kV	2.8kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TN)	Three-phase four line (TN-C) Three-phase three line (IT)	Three-phase five line (TN-S)

Certification

Type test: Shanghai Lightning Protection Center

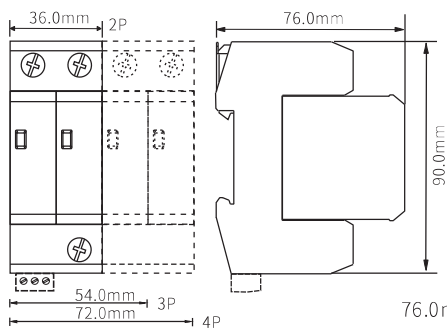
Order number

T2-40/700/2P: 7031662
T2-40/700/2PF: 7087013

T2-40/700/3P: 7066877
T2-40/700/3PF: 7028674

T2-40/700/4P: 7087771
T2-40/700/4PF: 7020165

Dimensions (18mm/P)



76.0mm × 90.0mm × 36.0mm

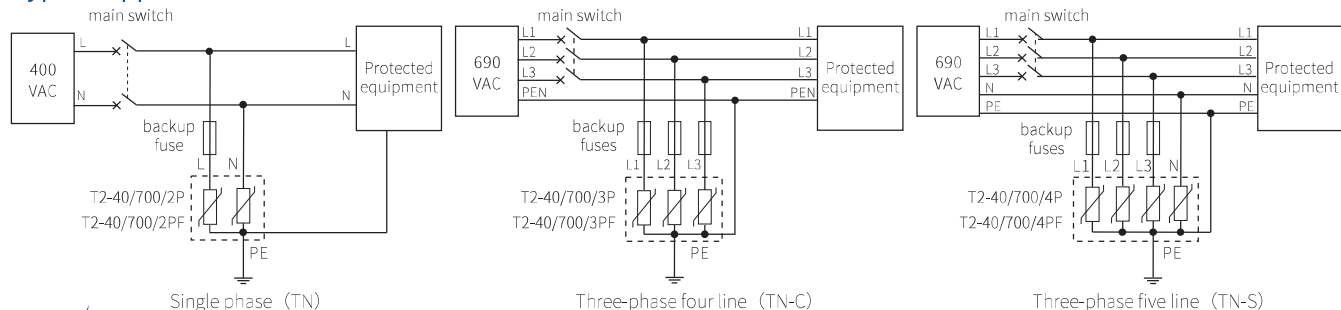


76.0mm × 90.0mm × 54.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications



Cautions:

Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For AC power(40kA)(400/690VAC)

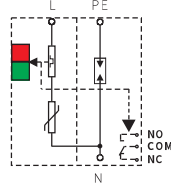
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

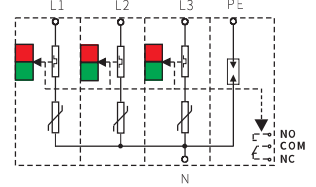
Technical data

Max. continuous operating voltage U_c	2000VDC
Nominal discharge current $I_n(8/20\mu s)$	40kA
Max. discharge current $I_{max}(8/20\mu s)$	80kA
Voltage protection level U_p	3.5kV
Recommended backup fuse	80A gG
Short-circuit current rating I_{SCCR}	1000A
Recommended grounding cable	4~35mm ²
Response time	25ns
Residual current	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TT)
Certification	
Type test	Shanghai Lightning Protection Center
Order number	

T2-40/700/1P+1
T2-40/700/1P+1F

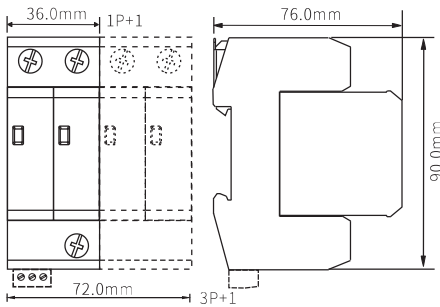


T2-40/700/3P+1
T2-40/700/3P+1F



T2-80GH module	T2-40/700 module	T2-80GH module	T2-40/700 module
2000VDC	700VAC	2000VDC	700VAC
40kA	20kA	40kA	20kA
80kA	40kA	80kA	40kA
3.5kV	2.8kV	3.5kV	2.8kV
	80A gG		80A gG
	1000A		1000A
	4~35mm ²		4~35mm ²
	25ns		25ns
	<20μA		<20μA
	250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A
	IP 20		IP 20
	PA66/V0		PA66/V0
	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
	Single phase (TT)		Three-phase four line (TT)
	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
	T2-40/700/1P+1: 7062817		T2-40/700/3P+1: 7013762
	T2-40/700/1P+1F: 7033598		T2-40/700/3P+1F: 7097406

Dimensions (18mm/P)

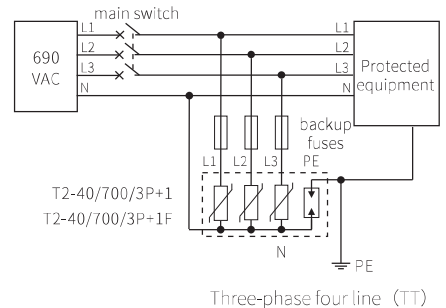
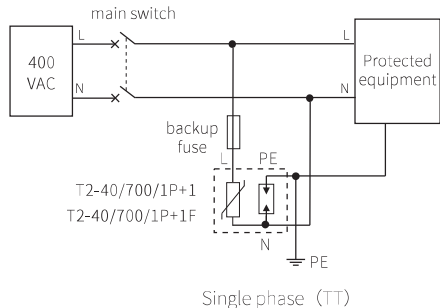


76.0mm × 90.0mm × 36.0mm



76.0mm × 90.0mm × 72.0mm

Typical applications



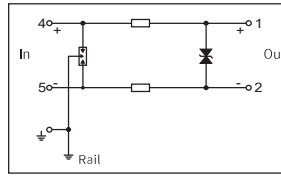
Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.



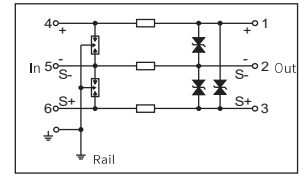
Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail

CZLB-5(T2)



CZLB-5(R3)



Technical data

Max. continuous operating voltage U_c
Nominal operating current I_n
Resistance(per line)
Nominal discharge current $I_n(8/20\mu s)$
Max. discharge current $I_{max}(8/20\mu s)$
Impulse current $I_{imp}(10/350\mu s)$
Voltage protection level U_p
Bandwidth (-0.5dB)
Response time
Residual current
Housing protection grade(IEC60529)
Housing material/Flammability rating(UL94)
Testing standard

2-wire

6V DC
500mA
1Ω
10kA
20kA
2.5kA
40V/600V
40MHz
1ns
<10μA
IP 20
PA66/V0
GB/T 18802.21/IEC 61643-21

3-wire

6V DC
500mA
1Ω
10kA
20kA
2.5kA
40V/600V
40MHz
1ns
<10μA
IP 20
PA66/V0
GB/T 18802.21/IEC 61643-21

Certification

Ex marking
Certificate Number
Entity Parameters
Functional safety certification
Type test
Order number

Ex ia IIC T4 ...T6 Ga

See Certification for details

$U_i=6V$; $I_i=500mA$; $P_i=0.75W$;

$C_i \approx 0\mu F$; $L_i \approx 0mH$

SIL3

Shanghai Lightning Protection Center

7051773

Ex ia IIC T4 ...T6 Ga

See Certification for details

$U_i=6V$; $I_i=500mA$; $P_i=0.75W$;

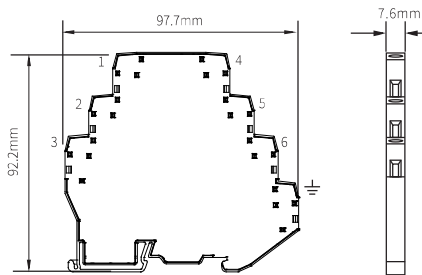
$C_i \approx 0\mu F$; $L_i \approx 0mH$

SIL3

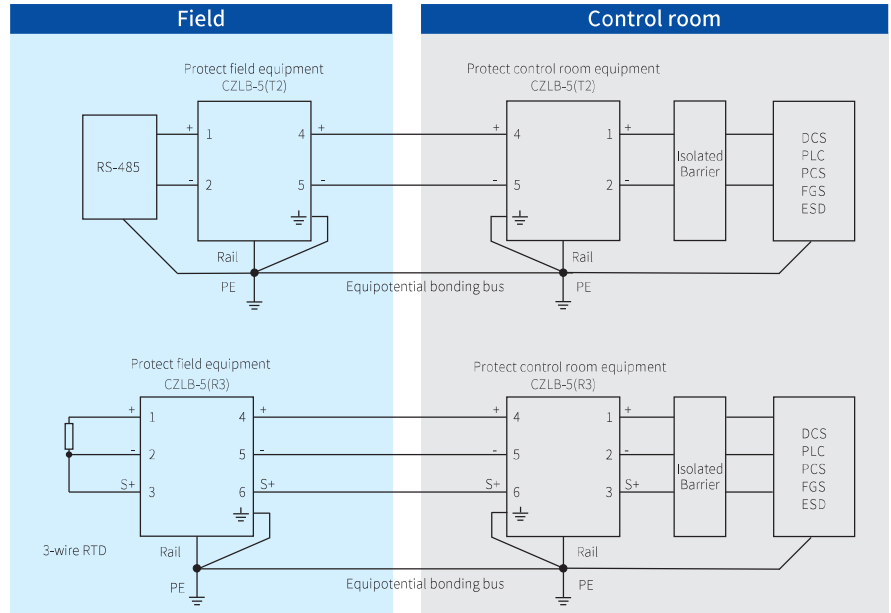
Shanghai Lightning Protection Center

7014195

Dimensions



Typical applications

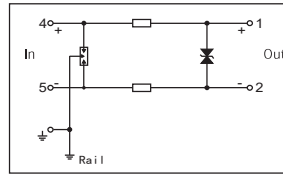


For 24V signal(IS system)

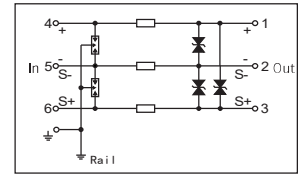
Features

- 7.6mm width
- Resistance per line:1Ω
- Ground viaterminal or DIN 35mm rail

CZLB-24(B2)



CZLB-24(B3)



Technical data

Max. continuous operating voltage U_c	
Nominal operating current I_n	
Resistance(per line)	
Nominal discharge current $I_n(8/20\mu s)$	
Max. discharge current $I_{max}(8/20\mu s)$	
Impulse current $I_{ip}(10/350\mu s)$	
Voltage protection level U_p	L-L/L-G
Bandwidth (-0.5dB)	
Response time	
Residual current	
Housing protection grade(IEC60529)	
Housing material/Flammability rating(UL94)	
Testing standard	

Certification

Ex marking	
Certificate Number	
Entity Parameters	
Functional safety certification	
Type test	
Order number	

2-wire

Max. continuous operating voltage U_c	32V DC
Nominal operating current I_n	500mA
Resistance(per line)	1Ω
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Impulse current $I_{ip}(10/350\mu s)$	2.5kA
Voltage protection level U_p	60V/600V
Bandwidth (-0.5dB)	40MHz
Response time	1ns
Residual current	<1μA
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21

3-wire

Max. continuous operating voltage U_c	32V DC
Nominal operating current I_n	500mA
Resistance(per line)	1Ω
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Impulse current $I_{ip}(10/350\mu s)$	2.5kA
Voltage protection level U_p	60V/600V
Bandwidth (-0.5dB)	40MHz
Response time	1ns
Residual current	<1μA
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21

Ex ia IIC T4 ...T6 Ga

Ex ia IIC T4 ...T6 Ga

See Certification for details

See Certification for details

$U_i=30V;I_i=500mA; P_i=0.75W;$

$U_i=30V;I_i=500mA; P_i=0.75W;$

$C_i \approx 0\mu F; L_i \approx 0mH$

$C_i \approx 0\mu F; L_i \approx 0mH$

SIL3

SIL3

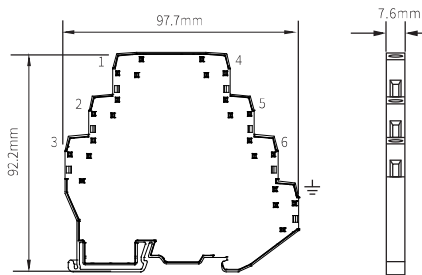
Shanghai Lightning Protection Center

Shanghai Lightning Protection Center

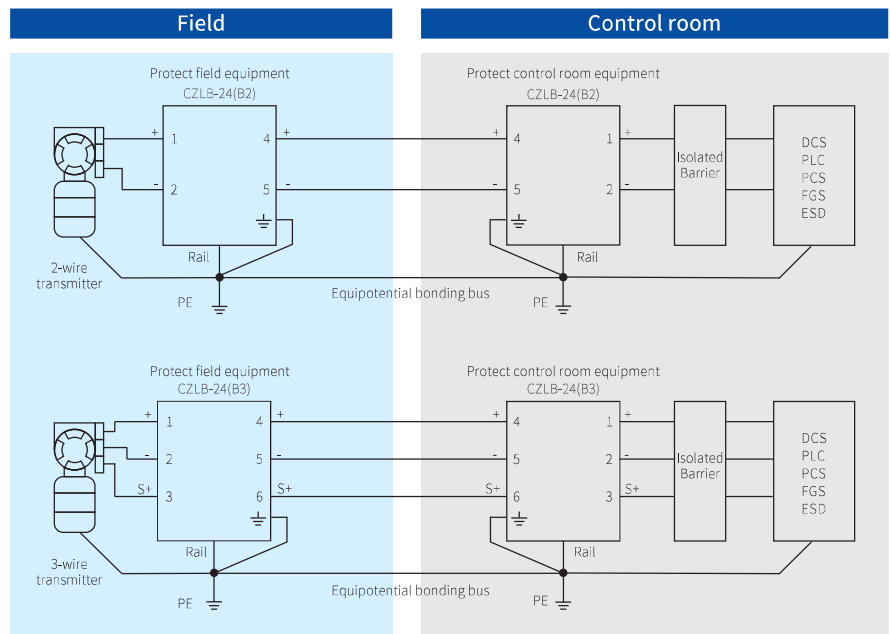
7090592

7013226

Dimensions



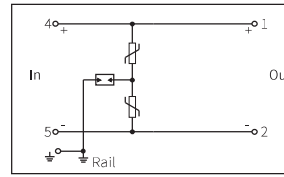
Typical applications



Features

- 7.6mm width
- Ground via terminal or DIN 35mm rail

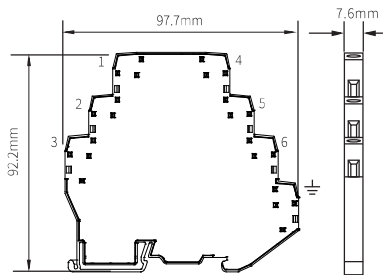
CZLB-24P



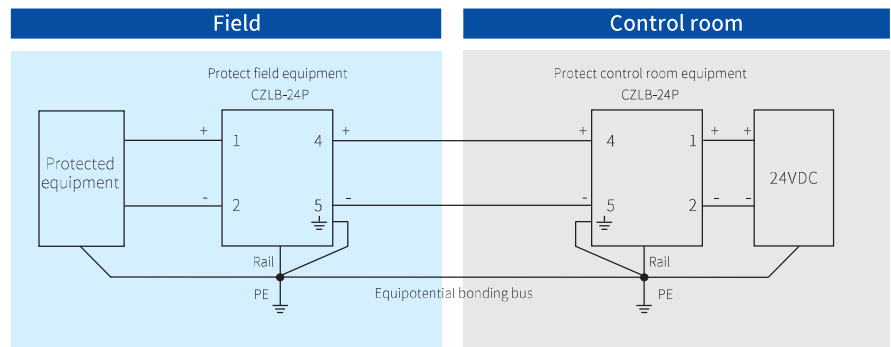
Technical data

Max. continuous operating voltage U_c	58VDC/40VAC
Nominal operating current I_n	10A
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA
Voltage protection level U_p	800V
Recommended grounding cable	2.5mm ²
Response time	25ns
Residual current	$<20\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/Flammability rating(UL94)	PA66/V0
Testing standard	GB/T 18802.21/IEC 61643-21
Certification	
Type test	Shanghai Lightning Protection Center
Order number	7059650

Dimensions



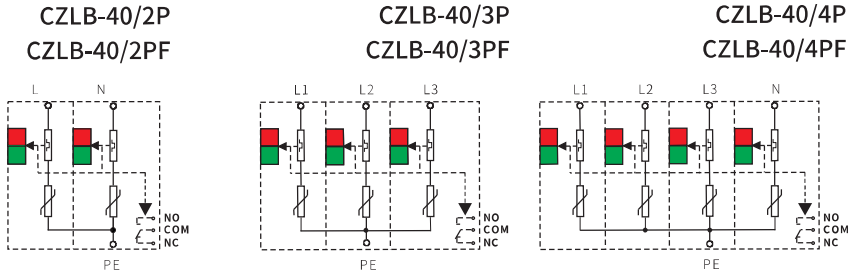
Typical applications



For AC Power(40kA)

Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

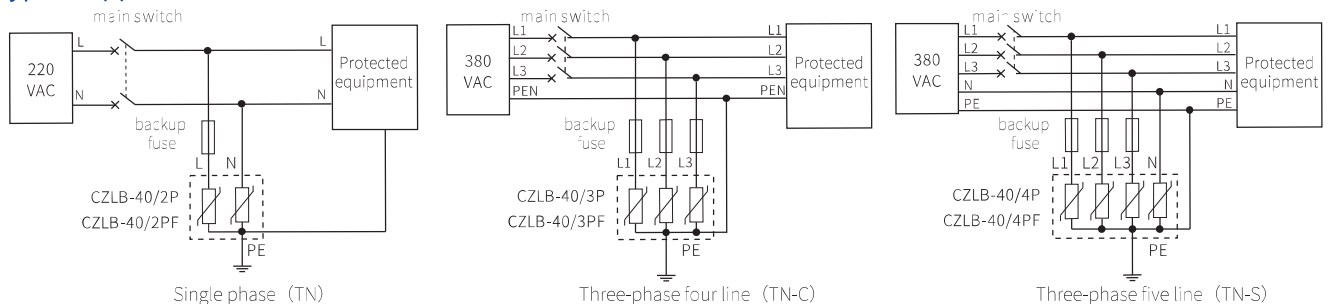


Technical data	CZLB-40/2P CZLB-40/2PF	CZLB-40/3P CZLB-40/3PF	CZLB-40/4P CZLB-40/4PF
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Short-circuit current rating I_{SCCR}	1000A	1000A	1000A
Recommended grounding cable	4~25mm ²	4~25mm ²	4~25mm ²
Response time	25ns	25ns	25ns
Residual current	<20μA	<20μA	<20μA
Remote alarm output (model F)	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A	250VAC/0.5A; 24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TN)	three-phase four line (TN-C) Three-phase three line (IT)	Three-phase five line (TN-S)
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	CZLB-40/2P: 7051402 CZLB-40/2PF: 7028111	CZLB-40/3P: 7061543 CZLB-40/3PF: 7023751	CZLB-40/4P: 7045781 CZLB-40/4PF: 7094265

Dimensions (18mm/P)



Typical applications

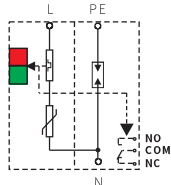


Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

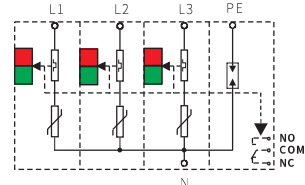
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

CZLB-40/1P+1
CZLB-40/1P+1F



CZLB-40/3P+1
CZLB-40/3P+1F

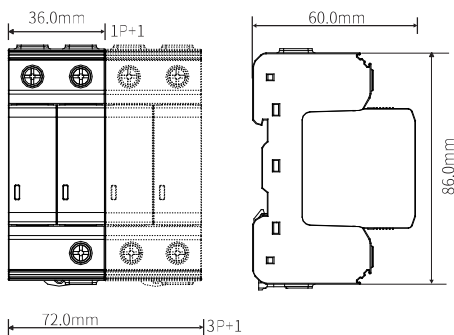


Technical data

Max. continuous operating voltage U_c
Nominal discharge current $I_n(8/20\mu s)$
Max. discharge current $I_{max}(8/20\mu s)$
Voltage protection level U_p
Recommended backup fuse
Short-circuit current rating I_{SCCR}
Recommended grounding cable
Response time
Residual current
Remote alarm output (model F)
Housing protection grade(IEC60529)
Housing material/Flammability rating(UL94)
Testing standard
Power supply system
Certification
Type test
Order number

CZLB-40G Module	C2-40 Module	CZLB-40G Module	CZLB-40 Module
255VAC	385VAC	255VAC	385VAC
20KA	20kA	20KA	20kA
40kA	40kA	40kA	40kA
1.2kV	1.7kV	1.2kV	1.7kV
	80A gG		80A gG
	1000A		1000A
	4~25mm ²		4~25mm ²
	25ns		25ns
	<20μA		<20μA
	250VAC/0.5A; 24VDC/0.5A		250VAC/0.5A; 24VDC/0.5A
	IP 20		IP 20
	PA66/V0		PA66/V0
	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11
	Single phase (TT)		Three-phase four line (TT)
	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center
	CZLB-40/1P+1: 7047317		CZLB-40/3P+1: 7078829
	CZLB-40/1P+1F: 7054943		CZLB-40/3P+1F: 7091611

Dimensions (18mm/P)

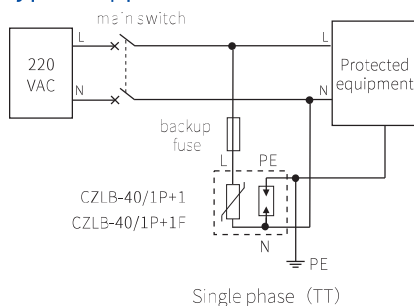


60.0mm × 86.0mm × 36.0mm

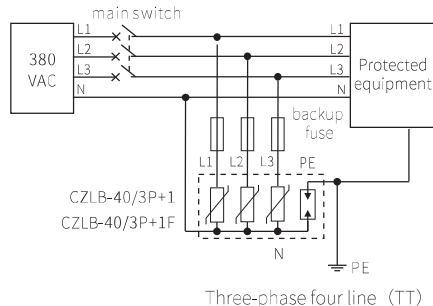


60.0mm × 86.0mm × 72.0mm

Typical applications



Single phase (TT)



Three-phase four line (TT)

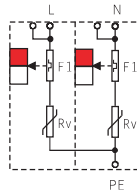
Cautions:
 Backup fuses are recommended to be installed in case SPD get short-circuited.
 For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
 For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

For AC Power(160kA)

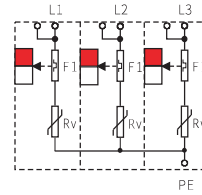
Features

- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with "F"

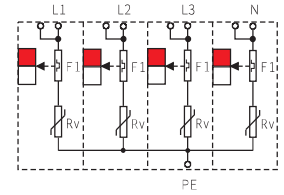
CZLB-160/440/2P



CZLB-160/440/3P



CZLB-160/440/4P



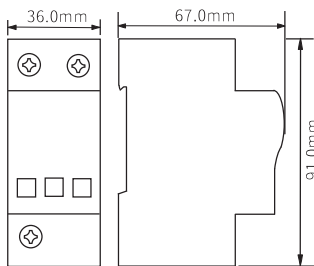
Technical data

Max. continuous operating voltage U_c	440VAC	440VAC	440VAC
Nominal discharge current I_n (8/20 μ s)	80kA	80kA	80kA
Max. discharge current I_{max} (8/20 μ s)	160kA	160kA	160kA
Impulse current I_{imp} (10/350 μ s)	15kA	15kA	15kA
Voltage protection level U_p (In)	2.8kV	2.8kV	2.8kV
Recommended backup fuse	200A gG	200A gG	200A gG
Recommended grounding cable	4~35mm ²	4~35mm ²	4~35mm ²
Response time	25ns	25ns	25ns
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/Flammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11	GB/T 18802.11/IEC 61643-11
Power supply system	Single phase (TN)	three-phase four line (TN-C) Three-phase three line (IT)	Three-phase five line (TN-S)

Certification

Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7024977	7069757	7086079

Dimensions (36mm/P)



67.0mm × 91.0mm × 72.0mm

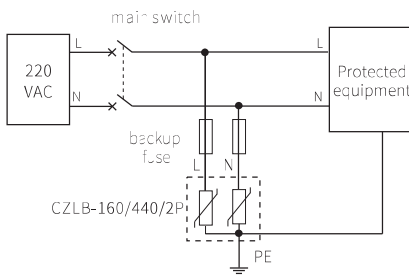


67.0mm × 91.0mm × 108.0mm

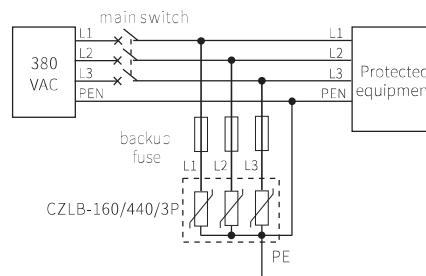


67.0mm × 91.0mm × 144.0mm

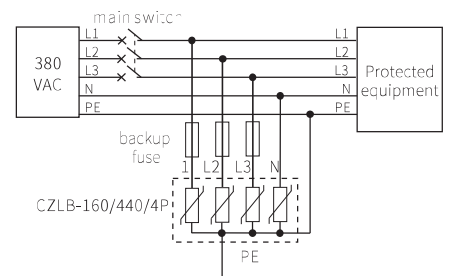
Dimensions



Single phase (TN)



Three-phase four line (TN-C)



Three-phase five line (TN-S)

Cautions:

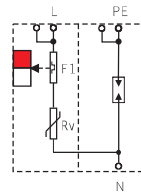
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

Features

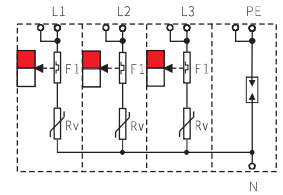
- Status indication:
 - Green: OK
 - Red: Failed
- Pluggable
- Remote alarm output is optional, named with “F”

Technical data	
Max. continuous operating voltage U_c	
Nominal discharge current $I_n(8/20\mu s)$	
Max. discharge current $I_{max}(8/20\mu s)$	
Impulse current $I_{imp}(10/350\mu s)$	
Voltage protection level U_p (In)	
Recommended backup fuse	
Recommended grounding cable	
Response time	
Housing protection grade(IEC60529)	
Housing material/Flammability rating(UL94)	
Testing standard	
Power supply system	
Certification	
Type test	
Order number	

CZLB-160/440/1P+1

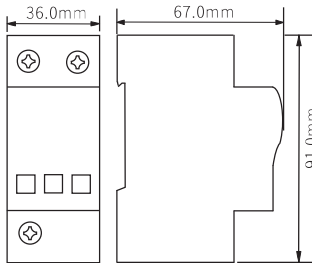


CZLB-160/440/3P+1



	CZLB-160/255	CZLB-160/440	CZLB-160/255	CZLB-160/440
Max. continuous operating voltage U_c	255VAC	440VAC	255VAC	440VAC
Nominal discharge current $I_n(8/20\mu s)$	80kA	80kA	80kA	80kA
Max. discharge current $I_{max}(8/20\mu s)$	160kA	160kA	160kA	160kA
Impulse current $I_{imp}(10/350\mu s)$	50kA	15kA	50kA	15kA
Voltage protection level U_p (In)	2.5kV	2.8kV	2.5kV	2.8kV
Recommended backup fuse		200A gG		200A gG
Recommended grounding cable		4~35mm ²		4~35mm ²
Response time		25ns		25ns
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/Flammability rating(UL94)		PA66/V0		PA66/V0
Testing standard	GB/T 18802.11/IEC 61643-11		GB/T 18802.11/IEC 61643-11	
Power supply system	Single phase (TT)		Three-phase four line (TT)	
Type test	Shanghai Lightning Protection Center		Shanghai Lightning Protection Center	
Order number	70531/2		7083196	

Dimensions (36mm/P)

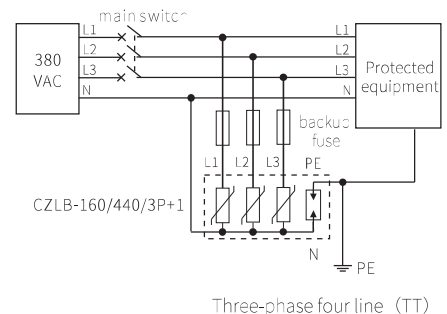
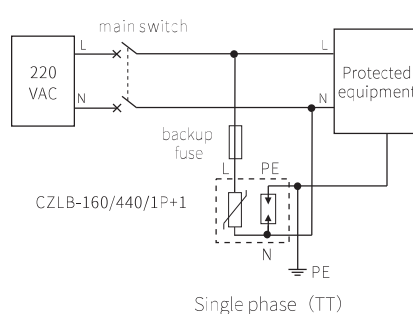


67.0mm × 91.0mm × 72.0mm



67.0mm × 91.0mm × 144.0mm

Dimensions



Cautions:

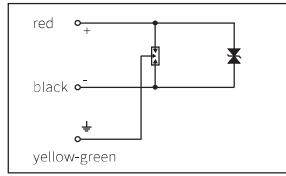
- Backup fuses are recommended to be installed in case SPD get short-circuited.
- For connecting to L/N.cables with a cross-sectional area $\geq 4\text{mm}^2$ are recommended.
- For connecting to PE.cables with a cross-sectional area $\geq 6\text{mm}^2$ are recommended.

Screw mounting SPD

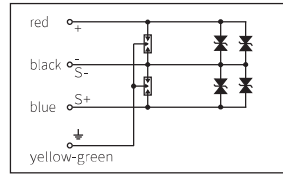
Features

- Intrinsic safety certification; explosion proof electrical product certification
- Available in various of thread specification
- Available in various of housing material

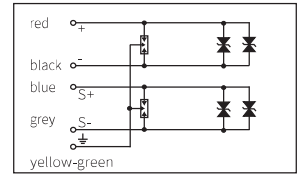
CZLBX-48



CZLBX-48-3

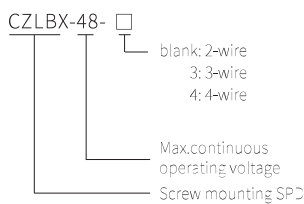


CZLBX-48-4

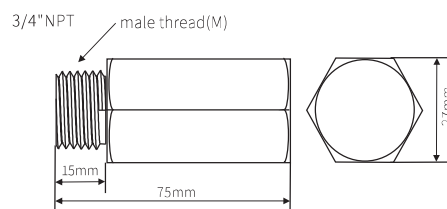
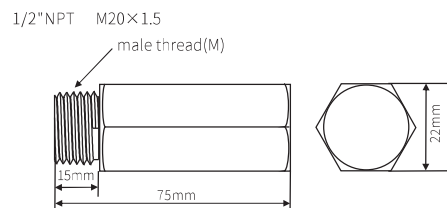


Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	24V DC	24V DC	24V DC
Max. continuous operating voltage U_c	48V DC	48V DC	48V DC
Nominal discharge current $I_n(8/20\mu s)$	10kA	10kA	10kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA	2.5kA	2.5kA
Voltage protection level $U_p(I_n)$	L-G:1kV	L-G:1kV	L-G:1kV
Voltage protection level $U_p(I_{imp})$	L-G:680V	L-G:680V	L-G:680V
Voltage protection level $U_p(1kV/\mu s)$	L-L:60V;L-G:90V	L-L:60V;L-G:90V	L-L:60V;L-G:90V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns	L-L:1ns,L-G:200ns
Housing protection grade(IEC60529)	IP 67	IP 67	IP 67
Housing material	304 or 316	304 or 316	304 or 316
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Ex marking	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga	Ex ia II C T6...T4 Ga
Certificate Number	CSANe 21ATEX2011X	CSANe 21ATEX2011X	CSANe 21ATEX2011X
Entity Parameters	$U_i=48V;I_i=500mA;P_i=5.32W;$ $C_i=0nF;L_i=0mH$	$U_i=48V;I_i=500mA;P_i=5.32W;$ $C_i=0nF;L_i=0mH$	$U_i=48V;I_i=500mA;P_i=5.32W;$ $C_i=0nF;L_i=0mH$
Functional safety certification	SIL3	SIL3	SIL3
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	1/2" NPT(304): 7041233 3/4" NPT(304): 7030261 M20×1.5(304): 7019156 ...	1/2" NPT(304): 7024477 3/4" NPT(304): 7079620 M20×1.5(304): 7018599 ...	1/2" NPT(304): 7060125 3/4" NPT(304): 7031784 M20×1.5(304): 7020401 ...

Naming

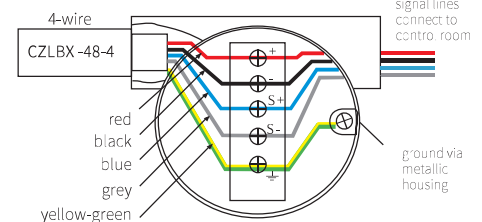
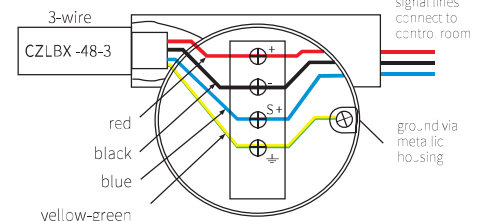
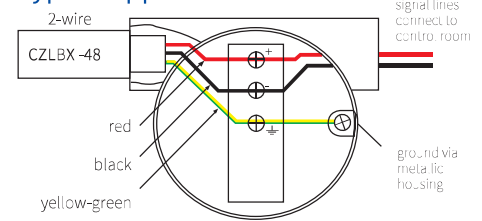


Dimensions



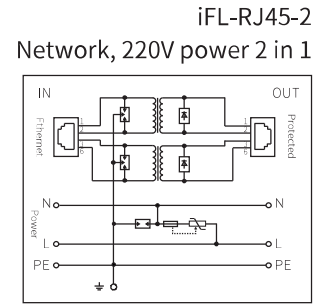
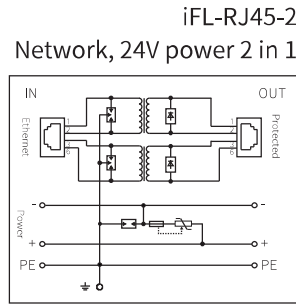
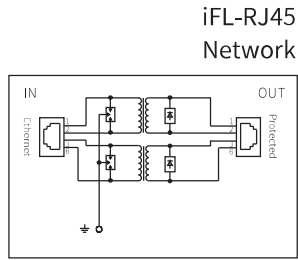
Wire specification: 26/0.254
Signal wire is with 18AWG, 1mm²
Ground wire is with 16AWG, 1.32mm²
Wire length: 240mm

Typical applications



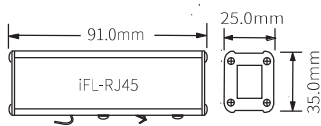
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grounded by DIN rail or screw terminals



Technical data	RJ45	24VDC	220VAC
Max. continuous operating voltage U_c	8VDC	58VDC/40VAC	270VAC
Nominal discharge current I	2kA	10kA	3kA
Voltage protection level U_p (L-L/L-G)	100V/300V	850V/1kV	1kV/1.2kV
Bandwidth	100MHz	-	-
Insertion loss (0.1~50MHz)	0.5dB	-	-
Wires protected	1/2,3/6	+/-	L/N
Interface	RJ45	plug-inwiring	plug-inwiring
Housing protection grade(IEC60529)	IP20	IP20	IP20
Housing material(housing/end face)	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel	Aluminium alloy/304 stainless steel
Testing standard	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21	GB/T 18802.21/IEC 61643-21
Certification			
Type test	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center	Shanghai Lightning Protection Center
Order number	7079893	/9 /8591	7054623

Dimensions



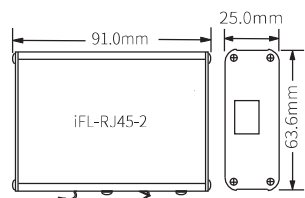
91.0mm × 35.0mm × 25.0mm



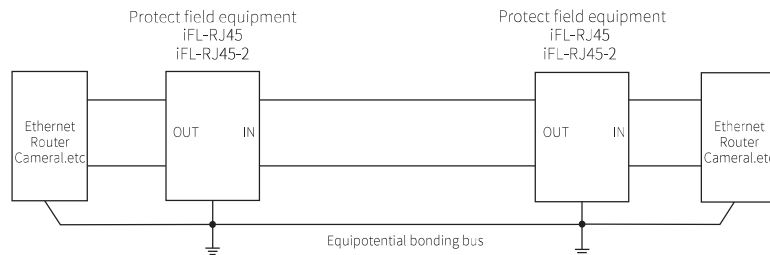
91.0mm × 63.6mm × 25.0mm



91.0mm × 63.6mm × 25.0mm



Typical applications

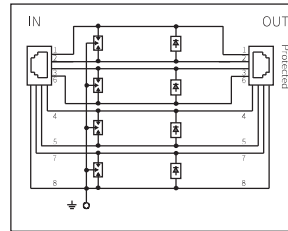


iFL Network SPD

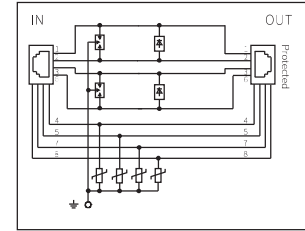
Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Suitable for various of network cameras.
- Grounded by DIN rail or screw terminals

iFL-RJ45/GigE



iFL-RJ45/PoE



Technical data

Max. continuous operating voltage U_c
Nominal discharge current I_n
Voltage protection level U_p (L-L/L-G)
Bandwidth
Insertion loss (0.1~50MHz)
Wires protected
Interface
Housing protection grade(IEC60529)
Housing material (housing/end face)
Testing standard
Certification
Type test
Order number

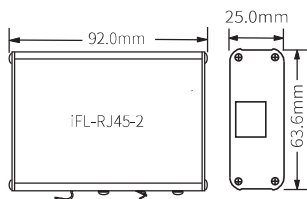
GigE

60VDC
2kA
600V/1kV
500MHz
≤0.5dB
1/2,3/6,4/5,7/8
RJ45
IP20
Aluminium alloy/304 stainless steel
GB/T 18802.21/IEC 61643-21
Shanghai Lightning Protection Center
7058560

PoE power

60VDC
2kA
600V/1kV
-
-
+/-
RJ45
IP20
Aluminium alloy/304 stainless steel
GB/T 18802.21/IEC 61643-21
Shanghai Lightning Protection Center
7069852

Dimensions

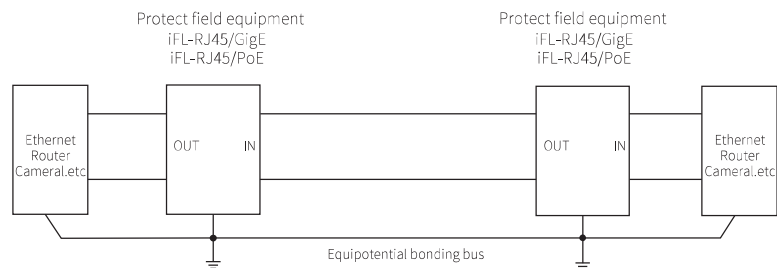


92.0mm × 63.6mm × 25.0mm



92.0mm × 63.6mm × 25.0mm

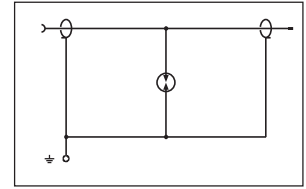
Typical applications



iFL-RF

Features

- Fully aluminium alloy housing, good electromagnetic shielding.
- Available in various of thread specification.
- Low insertion loss and standing wave ratio

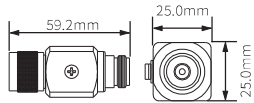


Technical data

Max. continuous operating voltage U_c	24V
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Voltage protection level U_p	450V
Frequency range	0~4GHz
Response time	100ns
Interface	SMA, N, F, TNC, BNC
Insertion loss	$\leq 1.5GHz(0.1dB)/\leq 4GHz(2dB)$
Characteristic impedance	50Ω(N, TNC, SMA);75Ω(F, BNC)
Housing protection grade(IEC60529)	IP 55
Housing material	aluminium alloy
Testing standard	GB/T 18802.21/IEC 61643-21

Dimensions

N: iFL-RF/N



N: iFL-RF/N

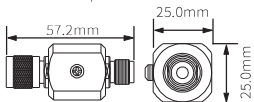


TNC: iFL-RF/TNC



SMA: iFL-RF/SMA

TNC: iFL-RF/TNC

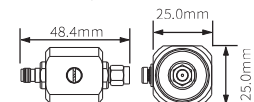


F: iFL-RF/F

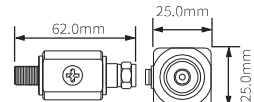


BNC: iFL-RF/BNC

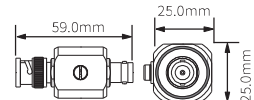
SMA: iFL-RF/SMA



F: iFL-RF/F



BNC: iFL-RF/BNC



Typical applications





【Factory video @Youtube】

CZYB-E09-C.01/2022.03

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