CHENZHU

【Alibaba】

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CZYB-E09.01/2019.11

Catalogue （2019）

Surge Protective Device

5 YEAR WARRANTY

Headquarters

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ASEAN Region

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COMPANY OVERVIEW

CHENZHU' s headquarter is located at Shanghai, China, with an area of 5000m².

Shanghai Chenzhu Instrument Co.Ltd. , originated from Shanghai Institute of Process Automation Instrumentation, was founded in April, 2002. Chenzhu now has become one of the leading brands of industrial safety equipment, providing customers with high-quality safety protection equipments such as safety barriers, SPDs, isolators, safety relays, intelligent controllers, etc.

Experience
22+
Years

Foundation
2002
Since

Sales volume
4,000,000
Pcs

Applications
4000+
Projects

R&D Strength

CHENZHU has established a professional laboratory based on ISO/IEC/GB standards to support R&D. More than 70 test items can be done in CHENZHU laboratory.

R&D Team
28%
Work Force

R&D Investment
12%
of Sale Revenue

Innovation
110+
Patents

Testing Facility
70+
Capabilities

Smart Factory

The quality of CHENZHU products is guaranteed by the quality management system, which is driven by lean management and intelligent manufacturing, to ensure that the quality meets the requirements of our design and our customers.

Factory
2500㎡
In total

Max Cap.
1,000,000pcs
Year

Lean Production
10+
Years' experience

Catalogue

T series

Catalogue

CZLBX series

CZLB series

iFL series

T series SPD for signal and power supply

It was born to protect electronic devices in automatic control systems.
It can provide surge protection for field equipments such as sensors, transmitters, flow meters, solenoid valves, thermocouples, thermal resistance, devices with RS485 or RS232 inter face and for I/O interfaces such as AI, AO, DI, DO, TI, PI in PLC, DCS, FGS, ESD control systems.
It was widely used in petrochemical, gas, environmental protection and new energy industries.

Innovatively patented technology

- Contact point gold plated and the Max. discharge current is up to 20kA/line.
- Grounding is realized through a reliable four-point connection between the buckle and the rail.
- Surge protective modules are pluggable which can be replaced conveniently online without disconnecting the circuit.

Space and costs saved

- A 4-wire product can be use to protect 2 2-wire loops.
- Grounded together via DIN rail, no individual grounding needed.

- Suitable for harsh environments such as offshore wind turbines, outdoor control systems, on site instruments and etc; passed multiple tests such as 96h salt spray, 2g vibration, Flame retardant grade: V0

Quality assurance

SIL3 IEC61508 — Functional safety certification

Ex NEPSI — Explosion proof certificate

Lightning performance test

1 Invention patent(Patent number: ZL201310585812.2)
4 utility model patents(Patent number: ZL201320735795.1、ZL201320735794.7、ZL201320735776.9、ZL201320735791.3)

CE — CE certification

中国石油 — Qualified supplier of PetroChina

Sinopec — Test reports approved by SINOPEC

CPIC — Insurance provided by CPIC

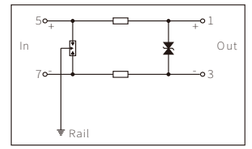
2.5kA — Reliable discharging(D1)

20kV/10kA — Reliable discharging(C2)

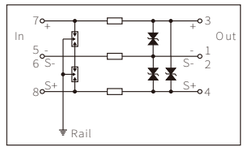
Features

- 12.5mm 2-channel ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for TC, RTD, CAN, RS-485, RS-422 and etc.
- Ground via DIN 35mm rail.

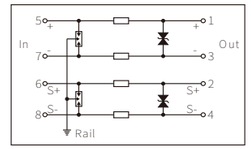
T-5-L



T-5-L3

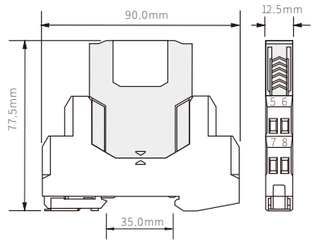


T-5-L4



Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	5V DC	5V DC	5V DC
Max. continuous operating voltage U_c	6V DC	6V DC	6V DC
Nominal operating current I_L	800mA	800mA	800mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current(10/350μs)	5kA	7.5kA	10kA
Voltage protection level U_p(8/20μs)	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Voltage protection level U_p(1kV/μs)	L-L: 20V/L-G: 600V	L-L: 20V/L-G: 600V	L-L: 20V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	1ns	1ns	1ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<10μA	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Order number	7099647	7050235	7029162

Dimensions



SIL3 IEC61508 — Functional safety certification(SIL)

Lightning performance test

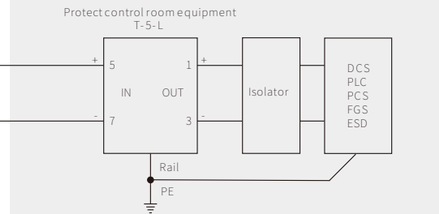
CE — CE cerification

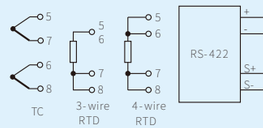
Typical applications

Field

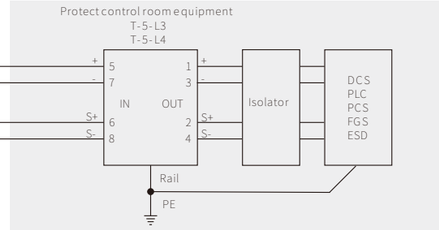
RS-485

Control Room





RS-422

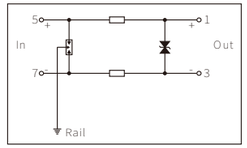


For 24V signal

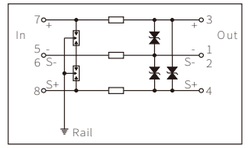
Features

- 12.5mm 2-channel ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for AI, AO, DI, DO, RS-232 and etc.
- Ground via DIN 35mm rail.

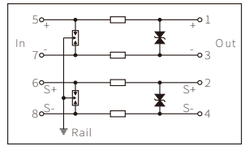
T-24-L



T-24-L3

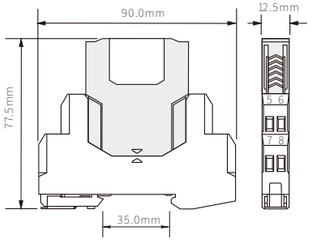


T-24-L4



Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	24V DC	24V DC	24V
Max. continuous operating voltage U_c	32V DC	32V DC	32V
Nominal operating current I_L	800mA	800mA	800mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current(10/350μs)	5kA	7.5kA	10kA
Voltage protection level U_p(8/20μs)	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V
Voltage protection level U_p(1kV/μs)	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	1ns	1ns	1ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Functional safety certification	SIL3	SIL3	SIL3
Order number	7023959	7091758	7074245

Dimensions



SIL3 IEC61508 — Functional safety certification(SIL)

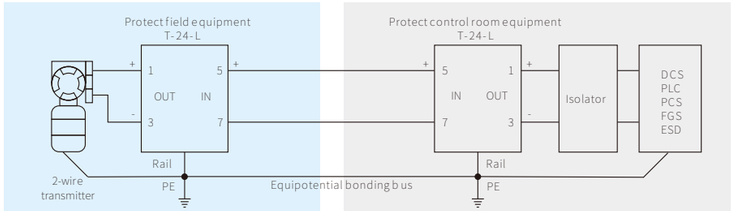
Lightning performance test

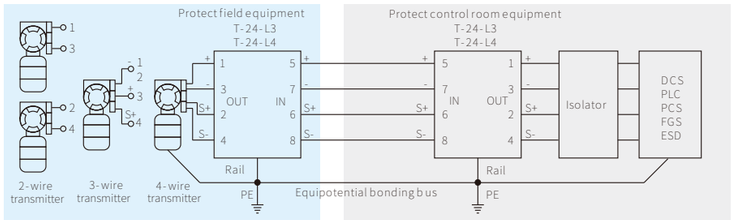
CE cerification

Typical applications

Field

Control Room



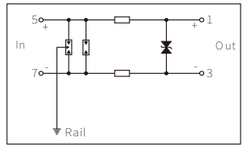


For 5V IS system

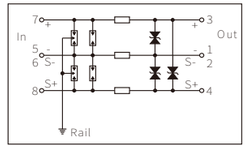
Features

- 12.5mm 2-channel ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for TC, RTD, CAN, RS-485, RS-422 and etc.
- Ground via DIN 35mm rail.

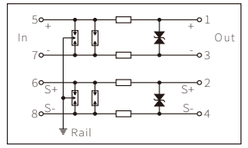
T-5-EX-L



T-5-EX-L3

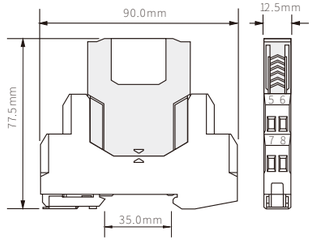


T-5-EX-L4



Technical data	2-wire	3-wire	4-wire
Nominal operating voltage U_n	5V DC	5V DC	5V DC
Max. continuous operating voltage U_c	6V DC	6V DC	6V DC
Nominal operating current I_L	500mA	500mA	500mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current(10/350μs)	5kA	5kA	5kA
Voltage protection level U_p(8/20μs)	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Voltage protection level U_p(1kV/μs)	L-L: 20V/L-G: 600V	L-L: 20V/L-G: 600V	L-L: 20V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	1ns	1ns	1ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<10μA	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Functional safety certification	SIL3	SIL3	SIL3
Order number	7086993	7025543	7019501

Dimensions



SIL3 IEC61508 — Functional safety certification(SIL)

Lightning performance test

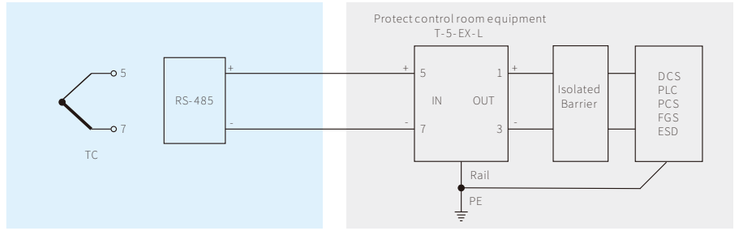
Ex NEPSI — Explosion proof certificate

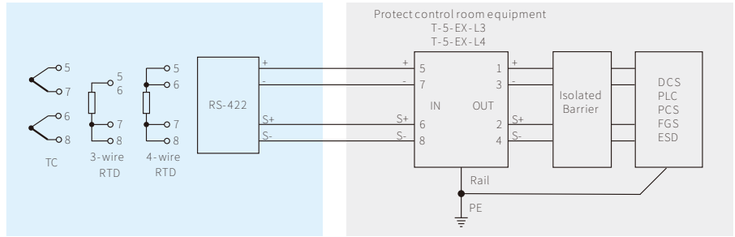
CE cerification

Typical applications

Hazardous area

Safe area



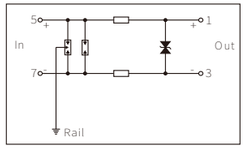


For 24V IS system

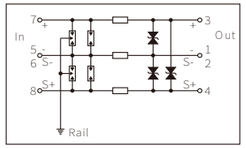
Features

- 12.5mm 2-channel ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for AI, AO, DI, DO, RS-232 and etc.
- Ground via DIN 35mm rail.

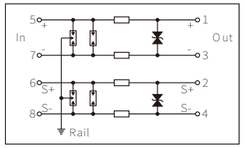
T-24-EX-L



T-24-EX-L3

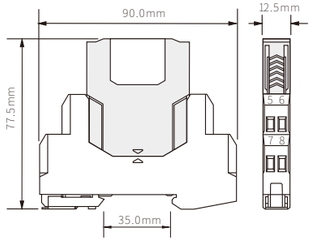


T-24-EX-L4



Technical data	2-wire	3-wire	4-wire
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_L	500mA	500mA	500mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Total impulse current(10/350μs)	5kA	7.5kA	10kA
Voltage protection level U_p(8/20μs)	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V
Voltage protection level U_p(1kV/μs)	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	1ns	1ns	1ns
Resistance(per line)	1Ω	1Ω	1Ω
Residual current I_{PE}	<1μA	<1μA	<1μA
Housing protection grade(IEC60529)	IP 20	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Functional safety certification	SIL3	SIL3	SIL3
Order number	7096962	7097610	7040569

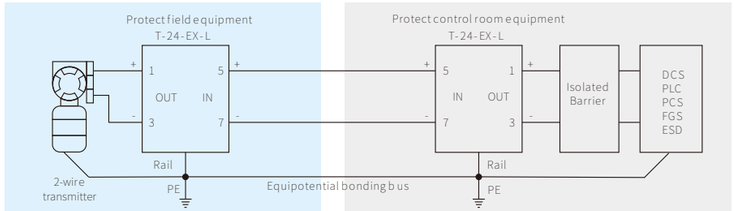
Dimensions

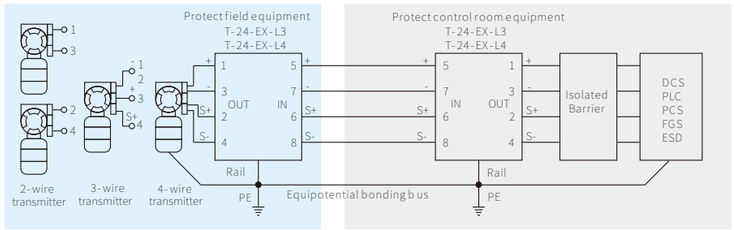


Functional safety certification(SIL) Lightning performance test Explosion proof certificate CE cerification

Typical applications

Hazardous area | Safe area



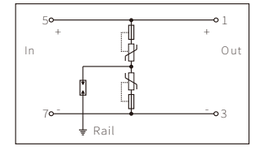


For low-voltage power supply(⩽10A)

Features

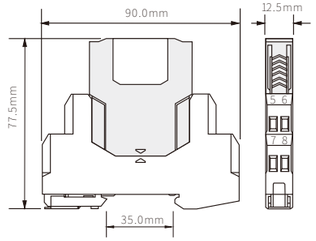
- 12.5mm ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for power supply, solenoid valve and etc.
- Ground via DIN 35mm rail.

T-24



Technical data	
Nominal operating voltage U_n	24V DC
Max. continuous operating voltage U_c	60V DC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	L-G: 10kA
Max. discharge current I_{max}(8/20μs)	L-G: 20kA
Impulse current I_{imp}(10/350μs)	L-G: 2kA
Total impulse current(10/350μs)	L-G: 4kA
Voltage protection level U_p(8/20μs)	800V
Voltage protection level U_p(1kV/μs)	600V
Residual current I_{PE}	<10μA
Response time	10ns
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-11
Order number	7062371

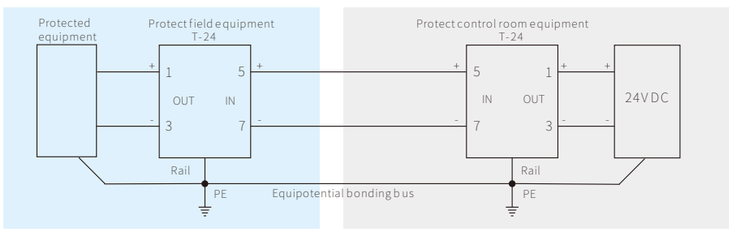
Dimensions



Lightning performance test CE cerification

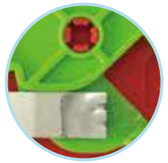
Typical applications

Field | Control Room



T series SPD for power supply

It can provide high quality, safe and reliable surge protection for devices in power supply systems.
It was widely used in petrochemical, gas, environmental protection and new energy industries.



Innovatively patented technology

- Disconnection is realized by completely isolation of electrodes which can cut off solder adhesion and extinguish arcs.
- Short circuit withstanding capacity is up to 1000A without external backup fuse.
- Innovative manufacturing process which ensures reliable quality.

Easy maintenance

- Hot pluggable
- Failure indication
- Remote alarm

Suitable for harsh environments such as offshore wind turbines, high altitude solar power stations, outdoor charging stations and etc; passed multiple tests such as 96h salt spray, 2g vibration, Flame retardant grade: V0, Max. withstanding temperature: 220°C.

Quality assurance

3 utility model patents(Patent number: ZL201720580446.5、ZL201720578782.6、ZL201720580629.7)

Lightning performance test

CE certificate

Qualified supplier of PetroChina

Test reports approved by SINOPEC

Insurance provided by CPIC

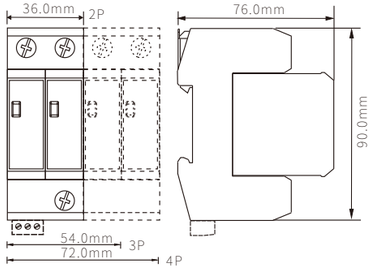
40/80kA	1000A	-40~110°C
Reliable discharging (T2)	Short-circuit withstand	Extreme temperature endurance

Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

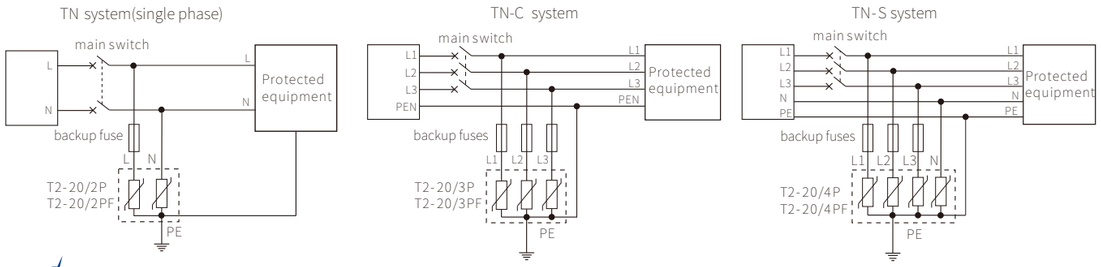
	T2-20/2P T2-20/2PF	T2-20/3P T2-20/3PF	T2-20/4P T2-20/4PF
Technical data			
Max. continuous operating voltage U_c	320VAC	320VAC	320VAC
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Voltage protection level U_p	1.2kV	1.2kV	1.2kV
Recommended backup fuse	40A gG	40A gG	40A gG
Recommended grounding cable	4~35mm²	4~35mm²	4~35mm²
Response time	25ns	25ns	25ns
Residual current I_{PE}	<10μA	<10μA	<10μA
Remote alarm output	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/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-11	IEC 61643-11	IEC 61643-11
Suitable for power supply system	TN system(single phase)	IT,TN-C system(three phase)	TN-S system(three phase)
Order number	T2-20/2P:7044946	T2-20/3P:7060683	T2-20/4P:7065597
	T2-20/2PF:7046947	T2-20/3PF:7095809	T2-20/4PF:7030095

Dimensions



76.0mm×90.0mm×36.0mm | 76.0mm×90.0mm×54.0mm | 76.0mm×90.0mm×72.0mm

Typical applications



Lightning performance test CE cerification

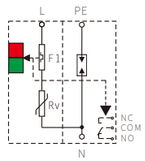
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with across-sectional area ⩾2.5mm² are recommended.
For connecting to PE, cables with across-sectional area ⩾4mm² are recommended.

AC power SPD (20kA)

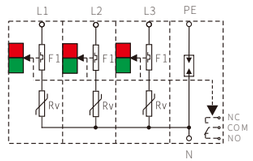
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

T2-20/1P+1
T2-20/1P+1F

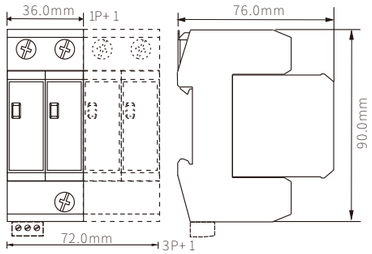


T2-20/3P+1
T2-20/3P+1F



Technical data	T2-80G	T2-20	T2-80G	T2-20
Max. continuous operating voltage U_c	255VAC	320VAC	255VAC	320VAC
Nominal discharge current I_n(8/20μs)	40kA	10kA	40kA	10kA
Max. discharge current I_{max}(8/20μs)	80kA	20kA	80kA	20kA
Voltage protection level U_p	1.2kV	1.2kV	1.2kV	1.2kV
Recommended backup fuse		40A gG		40A gG
Recommended grounding cable		4~35mm²		4~35mm²
Response time		25ns		25ns
Residual current I_{PE}		<10μA		<10μA
Remote alarm output		250VAC/0.5A;24VDC/0.5A		250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/inflammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		IEC 61643-11		IEC 61643-11
Suitable for power supply system		IT,TN-C system(single phase)		TT system(three phase)
Order number		T2-20/1P+1:7017825		T2-20/3P+1:7093873
		T2-20/1P+1F:7044393		T2-20/3P+1F:7061114

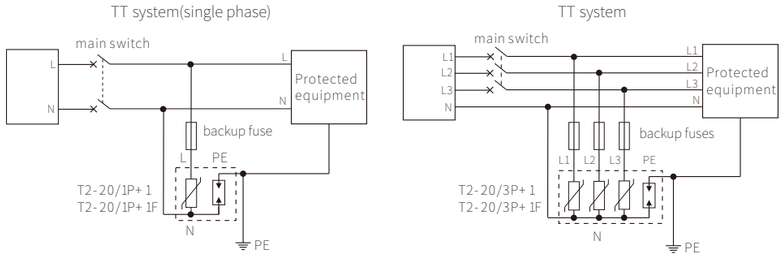
Dimensions



76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Lightning performance test

CE cerification

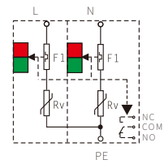
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾2.5mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾4mm² are recommended.

AC power SPD (40kA)

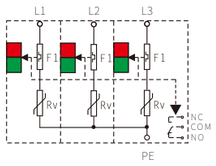
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

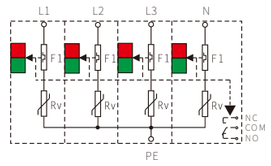
T2-40/2P
T2-40/2PF



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

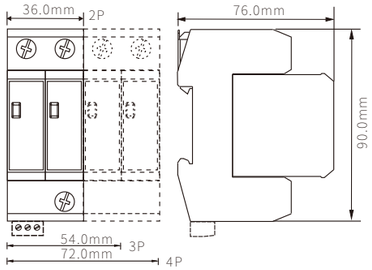


T2-40/4P
T2-40/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA	40kA
Voltage protection level U_p	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Recommended grounding cable	6~35mm²	6~35mm²	6~35mm²
Response time	25ns	25ns	25ns
Residual current I_{PE}	<10μA	<10μA	<10μA
Remote alarm output	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/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-11	IEC 61643-11	IEC 61643-11
Suitable for power supply system	TN system(single phase)	IT,TN-C system(three phase)	TN-S system(three phase)
Order number	T2-40/2P:7067699	T2-40/3P:7079704	T2-40/4P:7085466
	T2-40/2PF:7062709	T2-40/3PF:7046181	T2-40/2PF:7018432

Dimensions

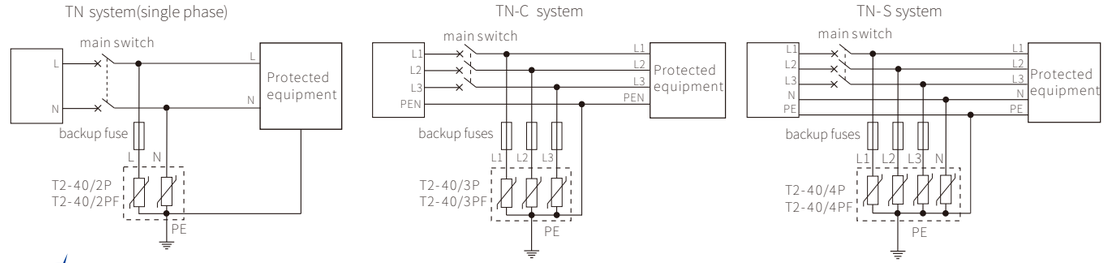


76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Lightning performance test

CE cerification

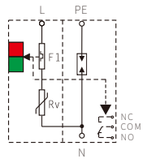
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

AC power SPD (40kA)

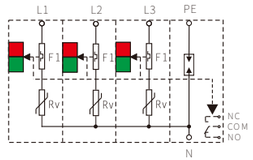
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

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

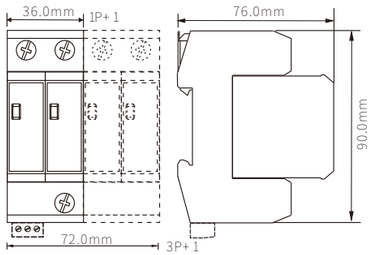


T2-40/3P+1
T2-40/3P+1F



Technical data	T2-80G	T2-40	T2-80G	T2-40
Max. continuous operating voltage U_c	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	20kA	40kA	20kA
Max. discharge current I_{max}(8/20μs)	80kA	40kA	80kA	40kA
Voltage protection level U_p	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse		80A gG		80A gG
Recommended grounding cable		6~35mm²		6~35mm²
Response time		25ns		25ns
Residual current I_{PE}		<10μA		<10μA
Remote alarm output		250VAC/0.5A;24VDC/0.5A		250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/inflammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		IEC 61643-11		IEC 61643-11
Order number		T2-40/1P+1:7032273		T2-40/3P+1:7085025
		T2-40/1P+1F:7070280		T2-40/3P+1F:7081984

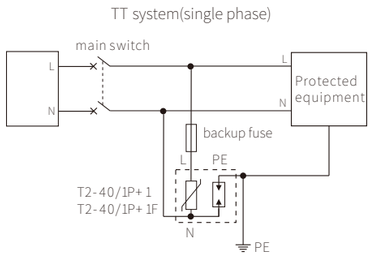
Dimensions

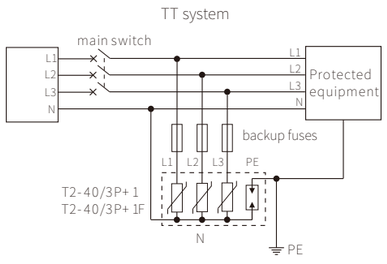


76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

Typical applications





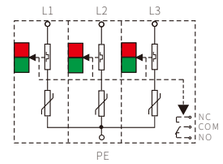
Lightning performance test CE cerification

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 ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

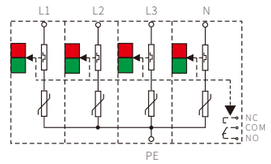
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.

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

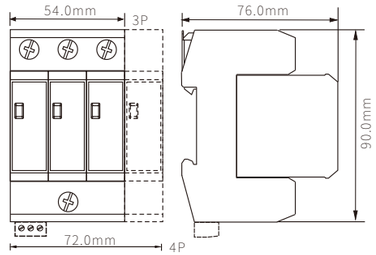


T2-40/ 700 /4P
T2-40/700 /4PF



Technical data		
Max. continuous operating voltage U_c	700VAC	700VAC
Nominal discharge current I_n(8/20μs)	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA
Voltage protection level U_p	2.8kV	2.8kV
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	6~35mm²	6~35mm²
Response time	25ns	25ns
Residual current I_{PE}	<20μA	<20μA
Remote alarm output	250VAC/0.5A;24VDC/0.5A	250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	IEC 61643-11	IEC 61643-11
Suitable for power supply system	IT,TN-C system(three phase)	TN-S system(three phase)
Order number	T2-40/700/3P:7066877	T2-40/700/4P:7087771
	T2-20/700/3PF:7028674	T2-20/700/4PF:7020165

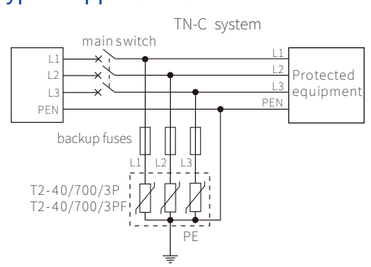
Dimensions

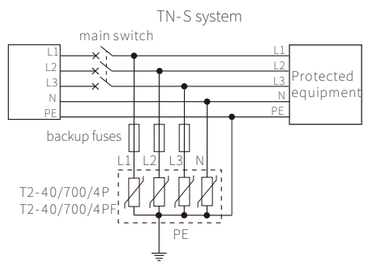


76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

Typical applications





Lightning performance test CE cerification

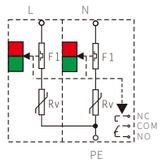
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

AC power SPD (80kA)

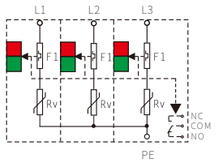
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

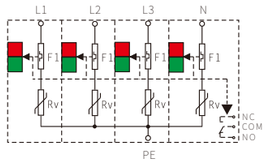
T2-80/2P
T2-80/2PF



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

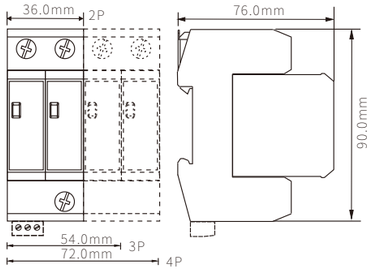


T2-80/4P
T2-80/4PF



Technical data			
Max. continuous operating voltage U_c	385VAC	385VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40kA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA
Voltage protection level U_p	2.0kV	2.0kV	2.0kV
Recommended backup fuse	125A gG	125A gG	125A gG
Recommended grounding cable	6~35mm²	6~35mm²	6~35mm²
Response time	25ns	25ns	25ns
Residual current I_{PE}	<10μA	<10μA	<10μA
Remote alarm output	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/inflammability rating(UL94)	PA66/V0	PA66/V0	PA66/V0
Testing standard	IEC 61643-11	IEC 61643-11	IEC 61643-11
Suitable for power supply system	TN system(single phase)	IT,TN-C system(three phase)	TN-S system(three phase)
Order number	T2-80/2P:7030066	T2-80/3P:7025082	T2-80/4P:7018734
	T2-80/2PF:7066780	T2-80/3PF:7038693	T2-80/4PF:7088870

Dimensions

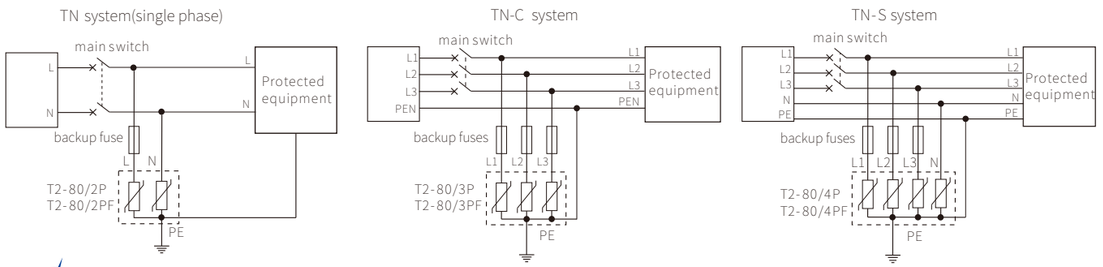


76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Lightning performance test

CE cerification

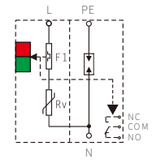
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

AC power SPD (80kA)

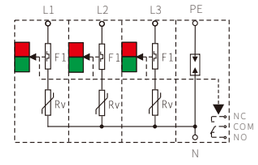
Features

- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

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

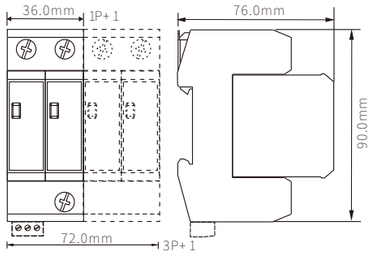


T2-80/3P+1
T2-80/3P+1F



Technical data	T2-80G	T2-80	T2-80G	T2-40
Max. continuous operating voltage U_c	255VAC	385VAC	255VAC	385VAC
Nominal discharge current I_n(8/20μs)	40kA	40kA	40kA	40kA
Max. discharge current I_{max}(8/20μs)	80kA	80kA	80kA	80kA
Voltage protection level U_p	1.2kV	2.0kV	1.2kV	2.0kV
Recommended backup fuse		125A gG		125A gG
Recommended grounding cable		6~35mm²		6~35mm²
Response time		25ns		25ns
Residual current I_{PE}		<10μA		<10μA
Remote alarm output		250VAC/0.5A;24VDC/0.5A		250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)		IP 20		IP 20
Housing material/inflammability rating(UL94)		PA66/V0		PA66/V0
Testing standard		IEC 61643-11		IEC 61643-11
Suitable for power supply system		TN system(single phase)		TTsystem(three phase)
Order number		T2-80/1P+1:7015677		T2-80/3P+1:7055729
		T2-80/1P+1F:7042357		T2-80/3P+1F:7058261

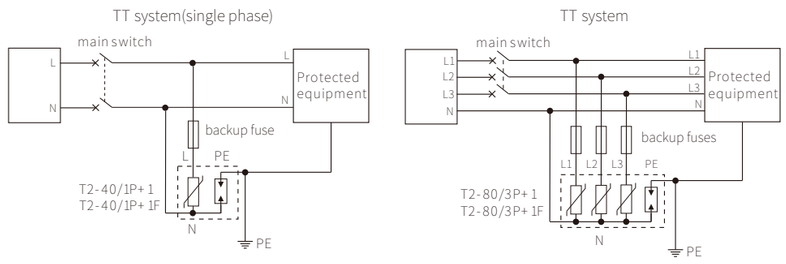
Dimensions



76.0mm×90.0mm×36.0mm

76.0mm×90.0mm×72.0mm

Typical applications



Lightning performance test

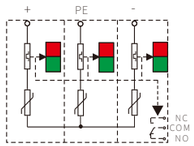
CE cerification

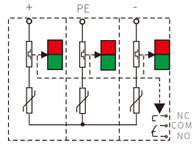
Cautions:
Backup fuses are recommended to be installed in case SPD get short-circuited.
For connecting to L/N, cables with a cross-sectional area ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

DC power SPD (photovoltaic)

Features

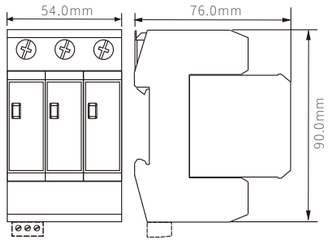
- Status indication:
  Green: OK
  Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with “F”.





Technical data	T2-1000 T2-1000F	T2-1500 T2-1500F
Max. continuous operating voltage U_{cpv}	1000VDC	1500VDC
Short-circuit current rating I_{scpv}	1000A	1000A
Nominal discharge current I_n(8/20μs)	20kA	20kA
Max. discharge current I_{max}(8/20μs)	40kA	40kA
Voltage protection level U_p	4kV	6kV
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	6~35mm²	6~35mm²
Response time	25ns	25ns
Residual current I_{PE}	<10μA	<10μA
Remote alarm output	250VAC/0.5A;24VDC/0.5A	250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	IEC 61643-31	IEC 61643-31
Order number	T2-1000:7053964	T2-1500:7094994
	T2-1000F:7065508	T2-1500F:7067731

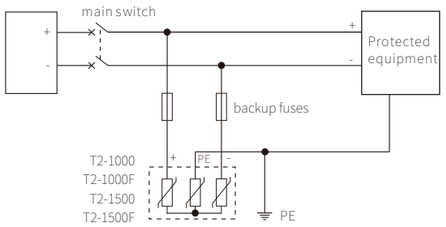
Dimensions



76.0mm×90.0mm×54.0mm

76.0mm×90.0mm×54.0mm

Typical applications



Lightning performance test

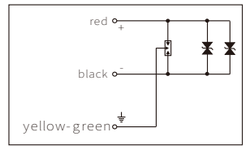
CE certification

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 ⩾4mm² are recommended.
For connecting to PE, cables with a cross-sectional area ⩾6mm² are recommended.

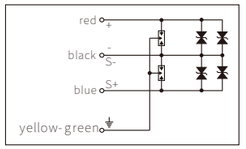
Screw mounting SPD(parallel connection)

Features

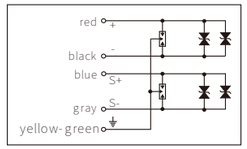
- Intrinsic safety certification;explosion proof electrial product certification.
- Suitable for 2, 3, 4-wire transmitter, thermal resistor, thermocouple, flow meter, solenoid valve, RS-485, RS-232 and etc.



CZLBX-48



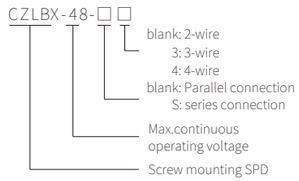
CZLBX-48-3



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(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	85V	85V	85V
Voltage protection level U_p(1kV/μs)	600V	600V	600V
Bandwidth(-0.5dB)	10MHz	10MHz	10MHz
Response time	1ns	1ns	1ns
Housing protection grade(IEC60529)	IP 65	IP 65	IP 65
Housing material	304 stainless steel	304 stainless steel	304 stainless steel
Thread standard	specified in orders	specified in orders	specified in orders
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Flame-proof safety certification	Ex d II C T4~T6 Gb	Ex d II C T4~T6 Gb	Ex d II C T4~T6 Gb
Functional safety certification	SIL3	SIL3	SIL3
Order number	1/2" NPT：7041233	1/2" NPT：7024477	1/2" NPT：7060125
	3/4" NPT：7030261	3/4" NPT：7079620	3/4" NPT：7031784
	M20×1.5：7019156	M20×1.5：7018599	M20×1.5：7020401

Naming



Male thread need to be specified in orders.
M20×1.5
1/2 " NPT
3/4 " NPT ... ...

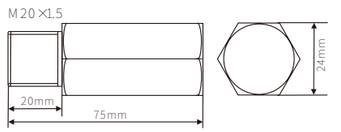
Wire specification:16AWG,200mm

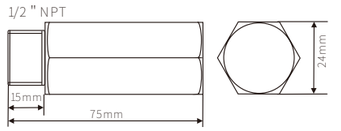
Functional safety certification(TUV)

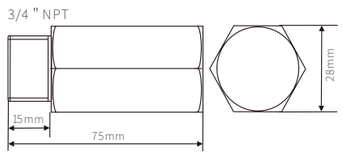
Type test report

IECEx intrinsic safety certification

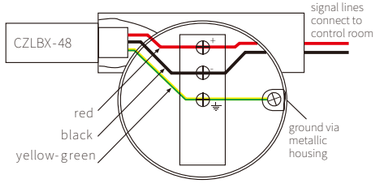
Dimensions



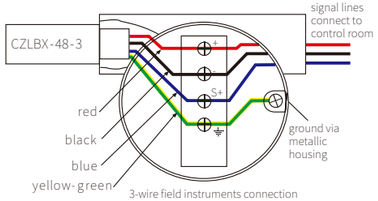




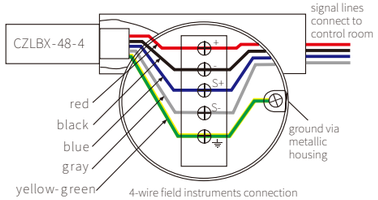
Typical applications



2-wire field instruments connection



3-wire field instruments connection

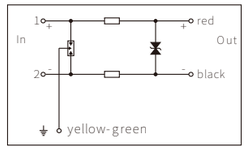
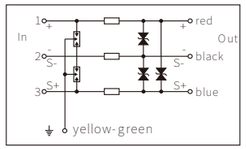
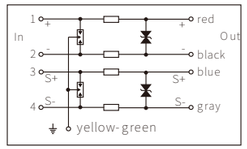


4-wire field instruments connection

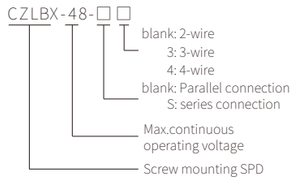
Screw mounting SPD(series connection)

Features

- Intrinsic safety certification;explosion proof electrial product certification.
- Suitable for 2, 3, 4-wire transmitter, thermal resistor, thermocouple, flow meter, solenoid valve, RS-485, RS-232 and etc.

	CZLBX-48 -S	CZLBX-48 -S3	CZLBX-48 -S4
			
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 operatingcurrent I_L	500mA	500mA	500mA
Nominal discharge current I_n(8/20μs)	10kA	10kA	10kA
Max. discharge current I_{max}(8/20μs)	20kA	20kA	20kA
Impulse current I_{imp}(10/350μs)	2.5kA	2.5kA	2.5kA
Voltage protection level U_p(8/20μs)	L-L: 85V/L-G: 600V	L-L: 85V/L-G: 600V	L-L: 85V/L-G: 600V
Bandwidth(-0.5dB)	2MHz	2MHz	2MHz
Response time	1ns	1ns	1ns
Resistance(per line)	1Ω	1Ω	1OΩ
Housing protection grade(IEC60529)	IP 65	IP 65	IP 65
Housing material	304 stainless steel	304 stainless steel	304 stainless steel
Thread standard	specified in orders	specified in orders	specified in orders
Testing standard	IEC 61643-21	IEC 61643-21	IEC 61643-21
Certification			
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Flame-proof safety certification	Ex d II C T4~T6 Gb	Ex d II C T4~T6 Gb	Ex d II C T4~T6 Gb
Functional safety certification	SIL3	SIL3	SIL3
Order number	1/2" NPT：7078456	1/2" NPT：7059806	1/2" NPT：7098412
	3/4" NPT：7078796	3/4" NPT：7034552	3/4" NPT：7014832
	M20×1.5：7076759	M20×1.5：7066404	M20×1.5：7082065

Naming

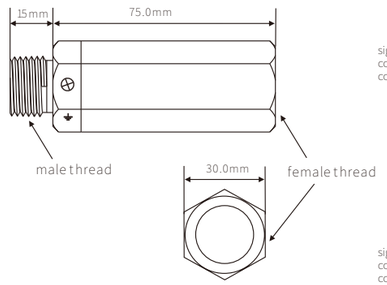


Male thread need to be specified in orders.
M20×1.5
1/2 " NPT
3/4 " NPT ... ...

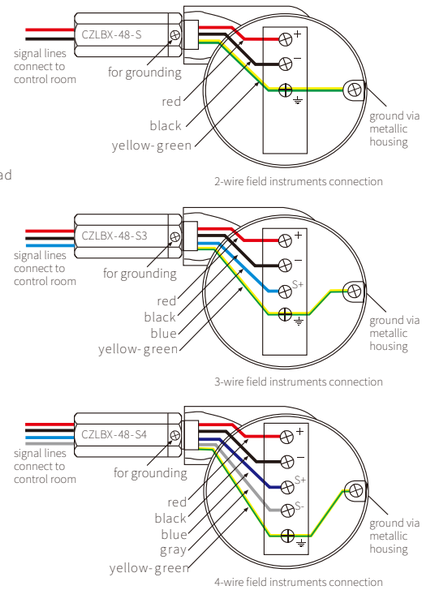
Wire specification:16AWG,180mm

SIL3 IEC61508 Functional safety certification(SIL) | Lightning performance test | IECEx intrinsic safety certification

Dimensions



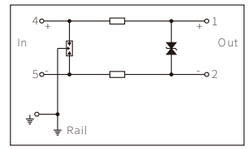
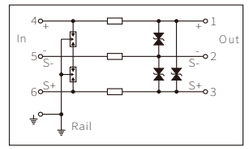
Typical applications



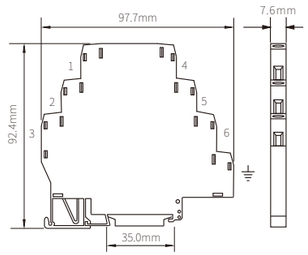
For 5V signal

Features

- 7.6mm ultra-thin design.
- Small resistance, low impedance.
- Suitable for TC, RTD, CAN, RS-485 and etc.
- Ground viaterminal or DIN 35mm rail.

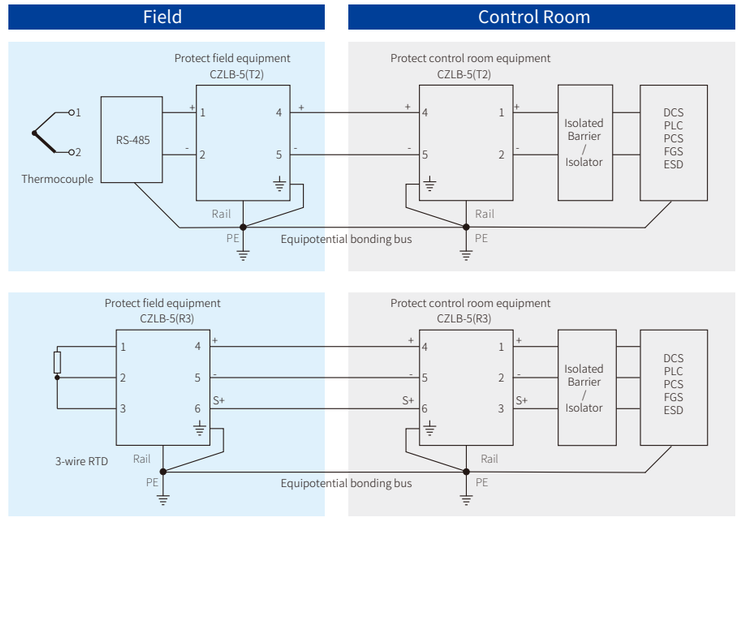
	CZLB-5 (T2)	CZLB-5 (R3)
		
Technical data	**2-wire**	**3-wire**
Nominal operating voltage U_n	5V DC	24V DC
Max. continuous operating voltage U_c	6V DC	32V DC
Nominal operating current I_L	500mA	500mA
Nominal discharge current I_n(8/20μs)	5kA	5kA
Max. discharge current I_{max}(8/20μs)	10kA	10kA
Impulse current I_{imp}(10/350μs)	1kA	1kA
Voltage protection level U_p(8/20μs)	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz
Response time	1ns	1ns
Resistance(per line)	1Ω	1Ω
Residual current I_{PE}	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21
Certification		
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Functional safety certification	SIL3	SIL3
Order number	7045387	7066195

Dimensions



SIL3 IEC61508 Functional safety certification(SIL) | Lightning performance test | Ex NEPSI Explosion proof certificate

Typical applications

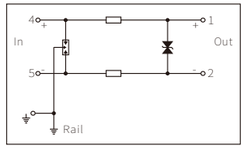


For 24V signal

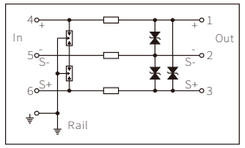
Features

- 7.6mm ultra-thin design.
- Small resistance, low impedance.
- Suitable for AI, AO, DI, DO, RS-232 and etc.
- Ground viaterminal or DIN 35mm rail.

CZLB-24 (B2)

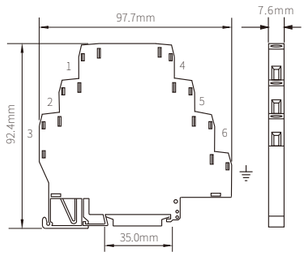


CZLB-24 (B3)



Technical data	2-wire	3-wire
Nominal operating voltage U_n	24V DC	24V DC
Max. continuous operating voltage U_c	32V DC	32V DC
Nominal operating current I_L	500mA	500mA
Nominal discharge current I_n(8/20μs)	5kA	5kA
Max. discharge current I_{max}(8/20μs)	10kA	10kA
Impulse current I_{imp}(10/350μs)	1kA	1kA
Voltage protection level U_p(8/20μs)	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V
Bandwidth(-0.5dB)	10MHz	10MHz
Response time	1ns	1ns
Resistance(per line)	1Ω	1Ω
Residual current I_{PE}	<10μA	<10μA
Housing protection grade(IEC60529)	IP 20	IP 20
Housing material/inflammability rating(UL94)	PA66/V0	PA66/V0
Testing standard	IEC 61643-21	IEC 61643-21
Certification		
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Functional safety certification	SIL3	SIL3
Order number	7062416	7025509

Dimensions

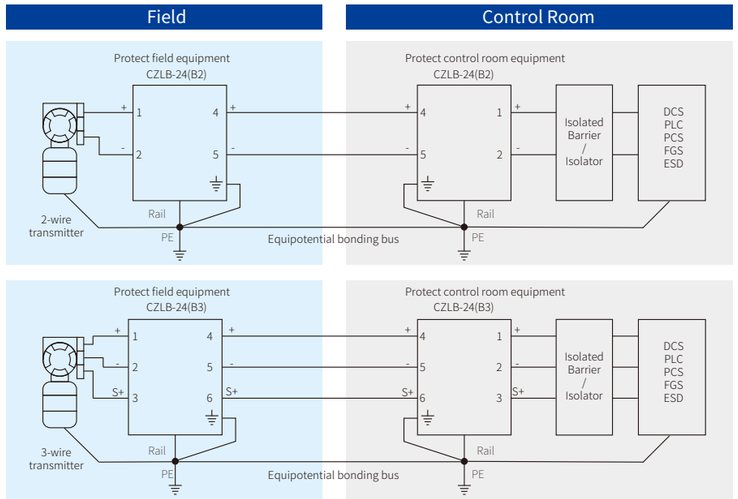


SIL3 IEC61508 Functional safety certification(SIL)

Lightning performance test

Ex NEPSI Explosion proof certificate

Typical applications

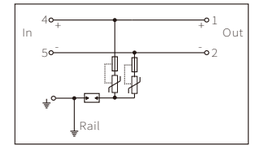


For low-voltage power supply(⩽10A)

Features

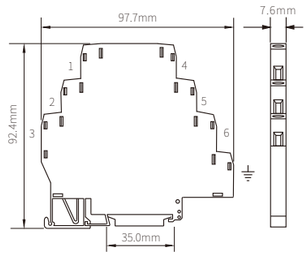
- 7.6mm ultra-thin design.
- Suitable for 24V power supply, solenoid valve and etc.
- Ground via terminal or DIN 35mm rail.

T-24-EX-L



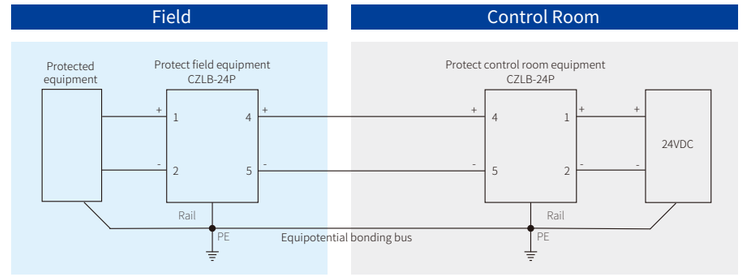
Technical data	
Nominal operating voltage U_n	24V DC
Max. continuous operating voltage U_c	60V DC
Nominal operating current I_L	10A
Nominal discharge current I_n(8/20μs)	5kA
Max. discharge current I_{max}(8/20μs)	10kA
Impulse current I_{imp}(10/350μs)	1kA
Voltage protection level U_p(8/20μs)	600V
Response time	10ns
Residual current I_{PE}	<10μA
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21
Order number	7029089

Dimensions



Lightning performance test

Typical applications

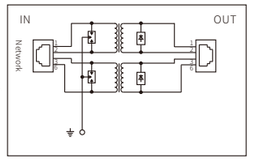


Network SPD

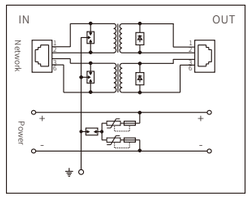
Features

- Quick response, low insertion loss.
- Fully aluminium alloy hoccsing, good electromagnetic shielding.
- Suitable for multiple kinds of network cameras.
- Grounded by DIN rail or screw terminals(both available)

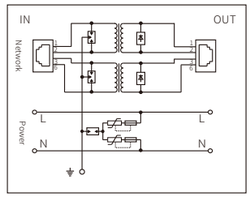
iFL-RJ45
Network



iFL-RJ45-2
Network, power 2 in 1

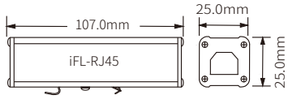


iFL-RJ45-2
Network, power 2 in 1



Technical data		Network	Power(24VAC)	Power(220VAC)
Nominal operating voltage U_n		5VDC	24VDC	220VAC
Max. continuous operating voltage U_c		8VDC	26VDC	320VAC
Nominal operating current I_L		0.5A	10A	10A
Nominal discharge current I_n		2kA	10kA	3kA
Voltage protection level U_p	L-L	100V	600V	600V
Voltage protection level U_p	L-G	300V	1kV	1.6kV
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		aluminium alloy	aluminium alloy	aluminium alloy
Testing standard		IEC 61643-21	IEC 61643-11	IEC 61643-11

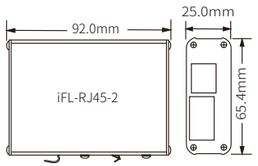
Dimensions



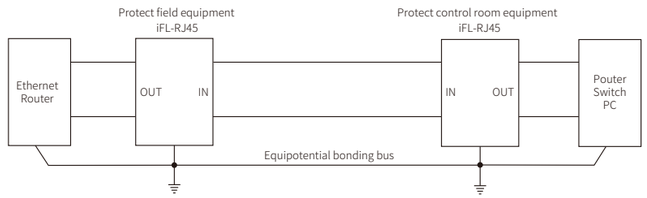
107.0mm×25.4mm×25.0mm

92.0mm×65.4mm×25.0mm

92.0mm×65.4mm×25.0mm



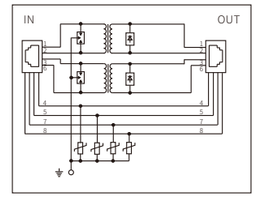
Typical applications



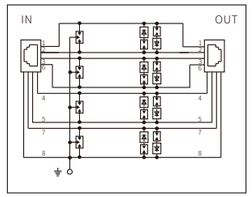
Features

- Quick response, low insertion loss.
- Fully aluminium alloy hoccsing, good electromagnetic shielding.
- Suitable for multiple kinds of network cameras.
- Grounded by DIN rail or screw terminals (both available)

iFL-RJ45/PoE
Network, PoE

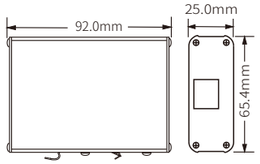


iFL-RJ45/GigE
GigE, PoE



Technical data		Network	PoE power	GigE	PoE power
Nominal operating voltage U_n		5VDC	48VDC	48VDC	48VDC
Max. continuous operating voltage U_c		8VDC	60VDC	60VDC	60VDC
Nominal operating current I_L		0.5A	0.5A	0.5A	0.5A
Nominal discharge current I_n		2kA	2kA	2kA	2kA
Voltage protection level U_p	L-L	100V	600V	600V	600V
Voltage protection level U_p	L-G	300V	1kV	1kV	1kV
Bandwidth		100MHz	-	500MHz	-
Insertion loss（0.1~50MHz）		⩽0.5dB	-	⩽0.5dB	-
Housing protection grade(IEC60529)			IP20		IP20
Housing material			aluminium alloy		aluminium alloy
Wires protected			+/-		1/2,3/6
Interface			RJ45		RJ45
Testing standard			IEC 61643-21		IEC 61643-21

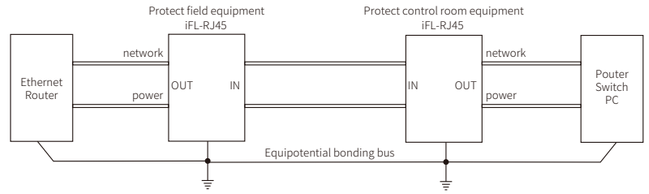
Dimensions



92.0mm×65.4mm×25.0mm

92.0mm×65.4mm×25.0mm

Typical applications

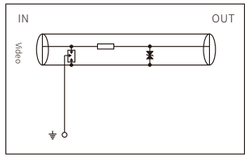


Network SPD

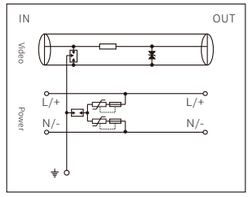
Features

- Quick response, low insertion loss.
- Suitable for video signal
- Grounded by DIN rail or screw terminals(both available)

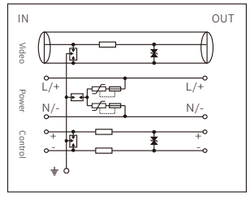
iFL-BNC
Video



iFL-BNC-2
Video, power 2 in 1

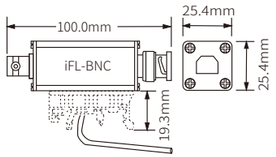


iFL-BNC-3
Video, power, control 3 in 1



Technical data	Video	Power(24VAC)	Power(220VAC)	Control
Nominal operating voltage U_n	5VDC	24VDC	220VAC	24VDC
Max. continuous operating voltage U_c	6VDC	60VDC	320VAC	32VDC
Nominal discharge current I_n(8/20μs)	10kA	10A	10A	10kA
Max. discharge current I_{max}(8/20μs)	20kA	10kA	3kA	20kA
Voltage protection level U_p(8/20μs)	40V	600V	600V	60V
Voltage protection level U_p(8/20μs)	600V	1kV	1.6kV	600V
Bandwidth	20MHz		-	-
Response time	1ns		10ns	1ns
Interface	BNC		plug-inwiring	plug-inwiring
Housing protection grade(IEC60529)	IP20		IP20	IP20
Housing material	aluminium alloy		aluminium alloy	aluminium alloy
Testing standard	IEC 61643-21		IEC 61643-11	IEC 61643-21

Dimensions

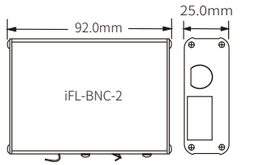


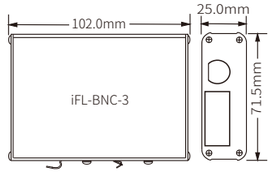
Grounding cable 0.5m

100.0mm×25.4mm×25.4mm

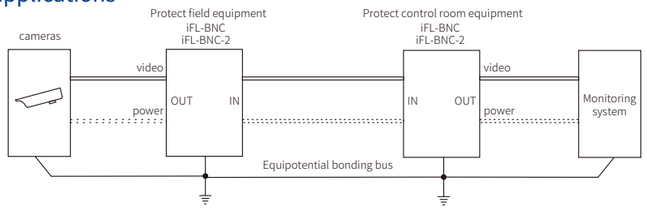
92.0mm×65.4mm×25.0mm

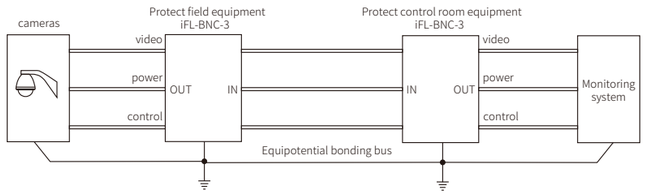
102.0mm×71.5mm×25.0mm





Typical applications



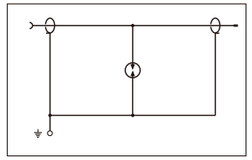


SPD for antennas and feeders

Features

- Strong discharging ablity.
- Quick respanse.
- Low insertion loss and standing wave ratio.

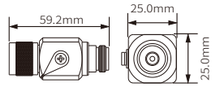
iFL-RF



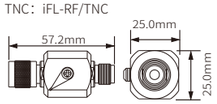
Technical data	
Max. continuous operating voltage U_c	24V
Nominal discharge current I_n(8/20μs)	10kA
Max. discharge current I_{max}(8/20μs)	20kA
Voltage protection level U_p	450V
Frequency range	0~4GHz
Response time	100ns
Interface	SMA、N、F、TNC、BNC
Insertion loss	⩽1.5GHz(0.1dB)/⩽4GHz(2dB)
Characteristic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

Dimensions

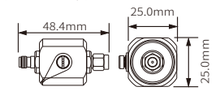
N：iFL-RF/N



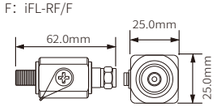
TNC：iFL-RF/TNC



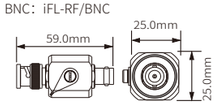
SMA：iFL-RF/SMA



F：iFL-RF/F



BNC：iFL-RF/BNC



N：iFL-RF/N

TNC：iFL-RF/TNC

SMA：iFL-RF/SMA

F：iFL-RF/F

BNC：iFL-RF/BNC

Typical applications