



【Alibaba】



【Taobao】



CZYB-E09.01/2019.11

Catalogue

( 2 0 1 9 )

Surge Protective Device



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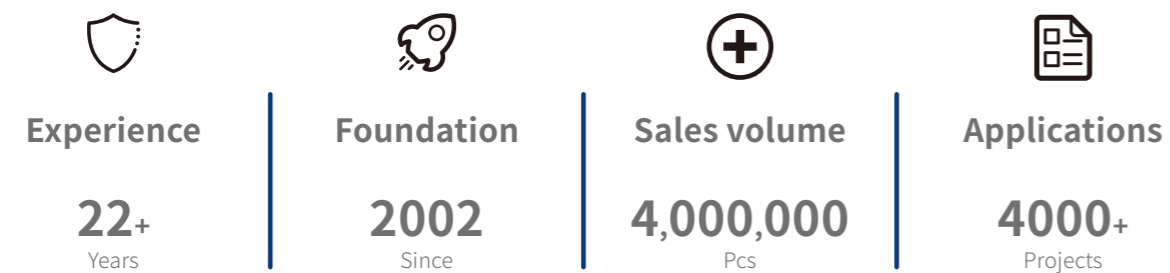
Web:www.chenzhu-asean.com

## COMPANY OVERVIEW



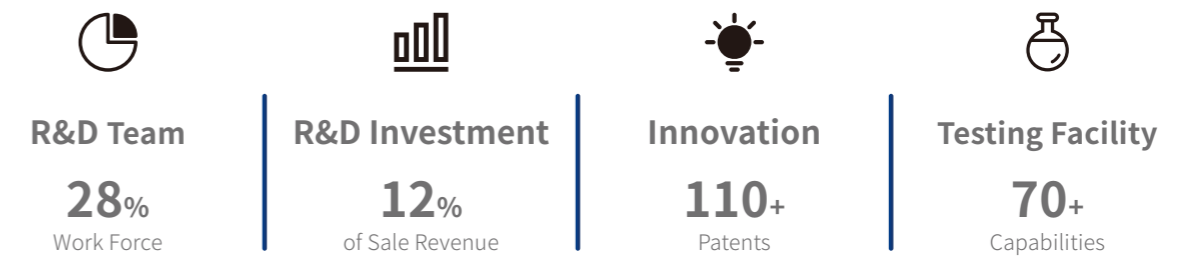
CHENZHU's headquarter is located at Shanghai, China, with an area of 5000m<sup>2</sup>.

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.



## 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.



## 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.



# Catalogue

T series



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# Catalogue

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CZLB series



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## 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.

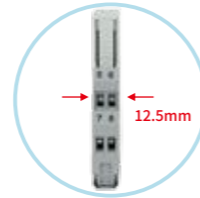


### Innovatively patented technology

- 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** NEPSU Explosion proof certificate

**Lightning** performance test

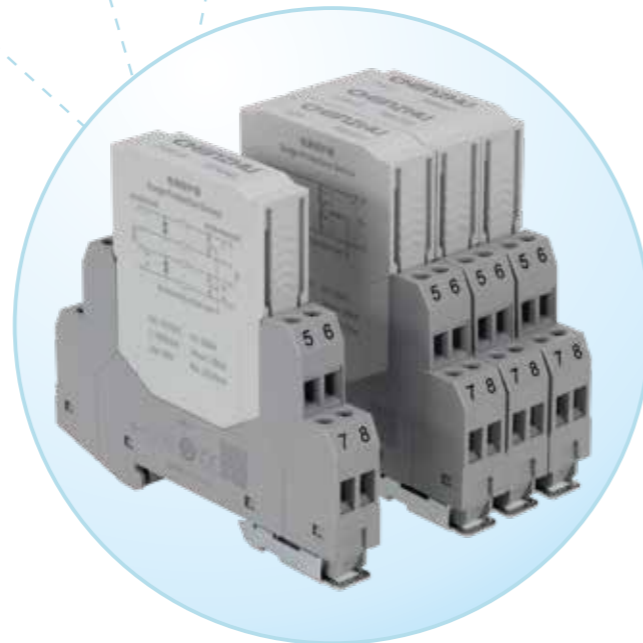
1 invention patent(Patent number: ZL201310585812.2)  
4 utility model patents(Patent number: ZL201320735795.1, ZL201320735794.7, ZL201320735776.9, ZL201320735791.3)

**CE** CE certification

Qualified supplier of PetroChina  
中国石化

Test reports approved by SINOPEC

Insurance provided by CPIC



**2.5kA** Reliable discharging(D1)  
**20kV/10kA** Reliable discharging(C2)

### Features

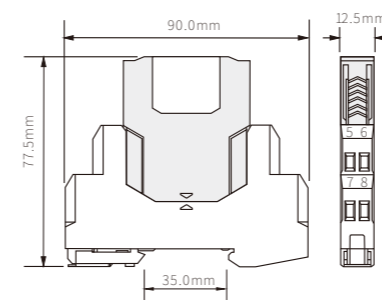
- 12.5mm 2-channel ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for TC, RTD, CAN, RS-485, RS-422 and etc.
- Ground via DIN 35mm rail.

### Technical data

Nominal operating voltage $U_n$	5V DC
Max. continuous operating voltage $U_c$	6V DC
Nominal operating current $I_l$	800mA
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
Total impulse current(10/350 $\mu s$ )	5kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 40V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	L-L: 20V/L-G: 600V
Bandwidth(-0.5dB)	10MHz
Response time	1ns
Resistance(per line)	1 $\Omega$
Residual current $I_{PE}$	<10 $\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21
<b>Certification</b>	
Functional safety certification	SIL3
<b>Order number</b>	7099647

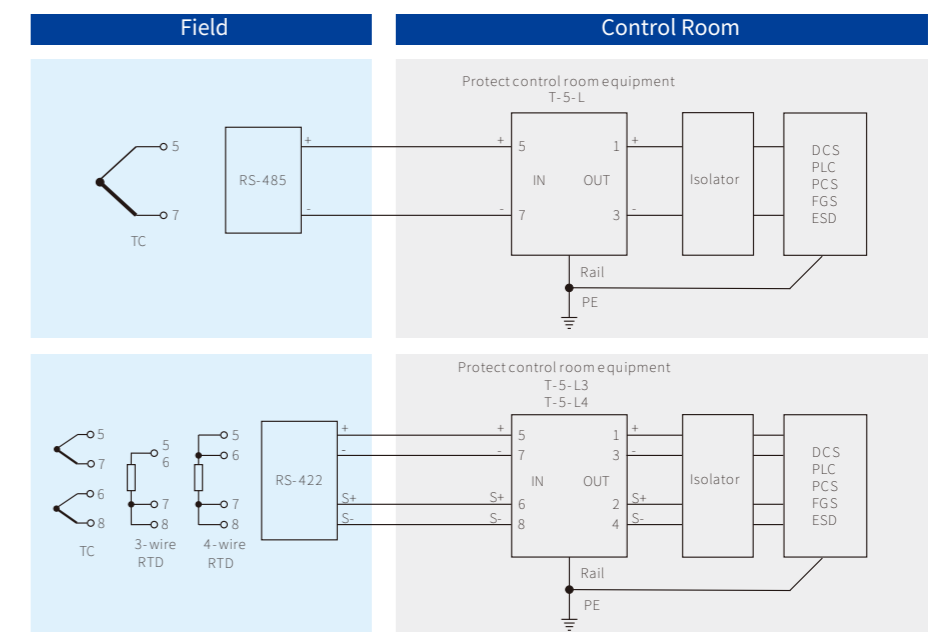
	T-5-L	T-5-L3	T-5-L4
<b>2-wire</b>			
Nominal operating voltage $U_n$	5V DC	5V DC	5V DC
Max. continuous operating voltage $U_c$	6V DC	6V DC	6V DC
Nominal operating current $I_l$	800mA	800mA	800mA
Nominal discharge current $I_n(8/20\mu s)$	10kA	10kA	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA	20kA	20kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA	2.5kA	2.5kA
Total impulse current(10/350 $\mu s$ )	5kA	7.5kA	10kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	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)	1 $\Omega$	1 $\Omega$	1 $\Omega$
Residual current $I_{PE}$	<10 $\mu A$	<10 $\mu A$	<10 $\mu A$
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
<b>Certification</b>			
Functional safety certification	SIL3	SIL3	SIL3
<b>Order number</b>	7099647	7050235	7029162

### Dimensions



**SIL3** IEC61508 Functional safety certification(SIL)  
**Lightning** performance test  
**CE** CE certification

### Typical applications



# For 24V signal

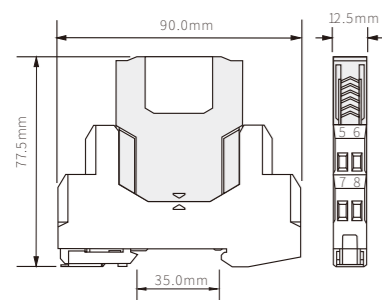
## Features

- 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.

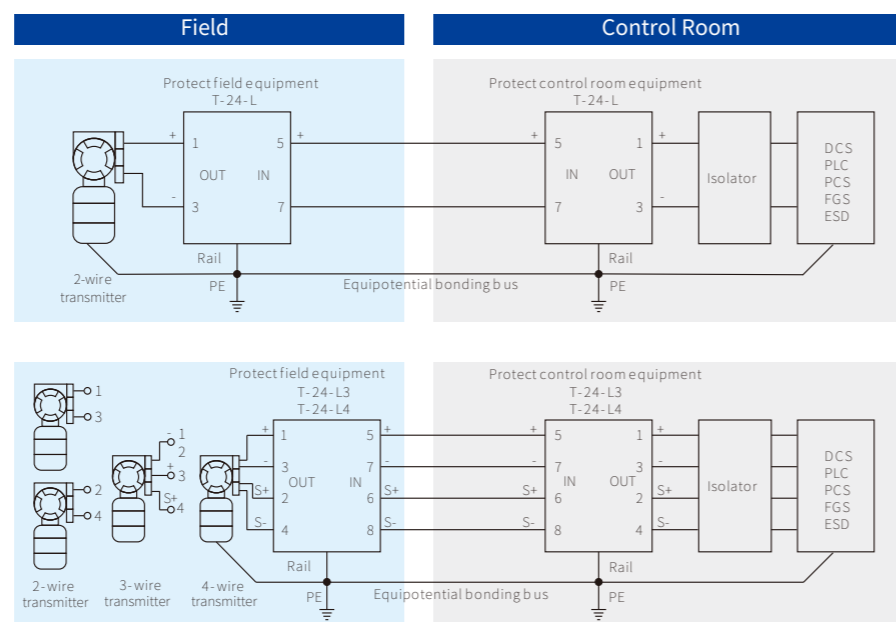
## Technical data

	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 $I_n(8/20\mu s)$	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
Total impulse current(10/350 $\mu s$ )	5kA	7.5kA	10kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V	L-L: 60V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	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)	1 $\Omega$	1 $\Omega$	1 $\Omega$
Residual current $I_{PE}$	<1 $\mu A$	<1 $\mu A$	<1 $\mu A$
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
<b>Certification</b>			
Functional safety certification	SIL3	SIL3	SIL3
<b>Order number</b>	7023959	7091758	7074245

## Dimensions



## Typical applications



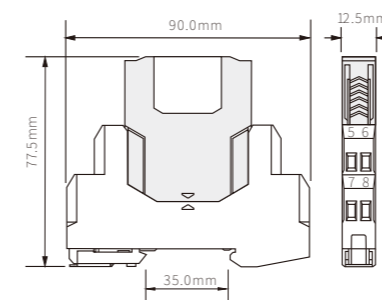
## Features

- 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.

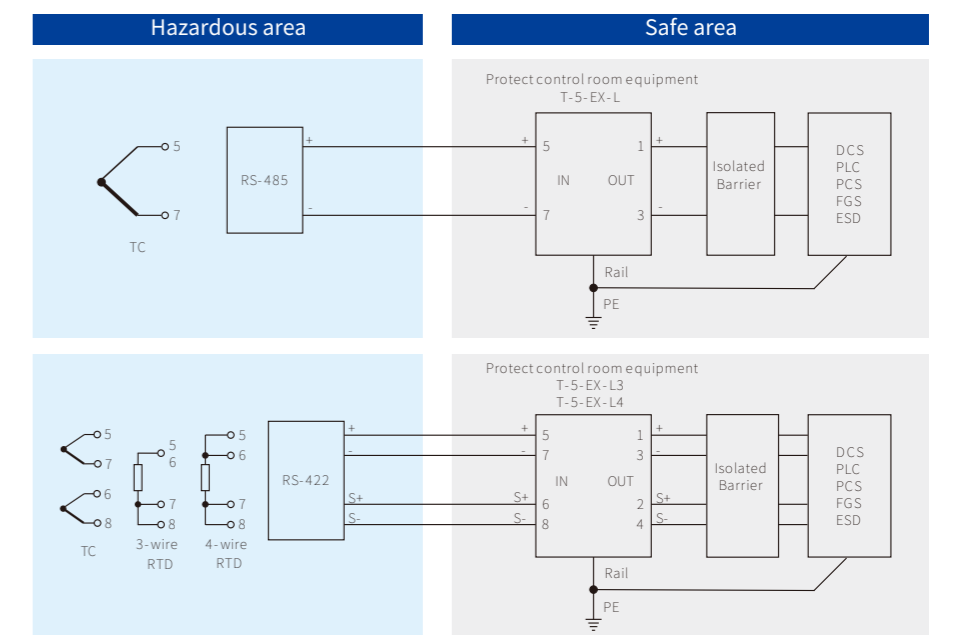
## Technical data

	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 $I_n(8/20\mu s)$	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
Total impulse current(10/350 $\mu s$ )	5kA	5kA	5kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V	L-L: 40V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	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)	1 $\Omega$	1 $\Omega$	1 $\Omega$
Residual current $I_{PE}$	<10 $\mu A$	<10 $\mu A$	<10 $\mu A$
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
<b>Certification</b>			
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
<b>Order number</b>	7086993	7025543	7019501

## Dimensions



## Typical applications



# For 5V IS system

# 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.

## Technical data

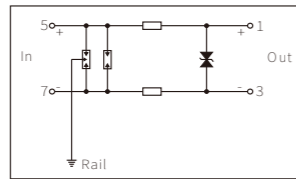
Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Impulse current $I_{imp}(10/350\mu s)$	2.5kA
Total impulse current(10/350 $\mu s$ )	5kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 60V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz
Response time	1ns
Resistance(per line)	1 $\Omega$
Residual current $I_{pe}$	<1 $\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21

## Certification

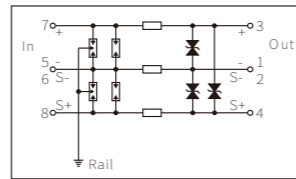
Intrinsic safety certification	Ex ia II C T4-T6 Ga
Functional safety certification	SIL3

## Order number

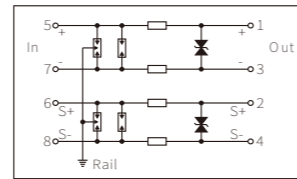
T-24-EX-L



T-24-EX-L3



T-24-EX-L4



## 2-wire

Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
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
Total impulse current(10/350 $\mu s$ )	5kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 60V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz
Response time	1ns
Resistance(per line)	1 $\Omega$
Residual current $I_{pe}$	<1 $\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21

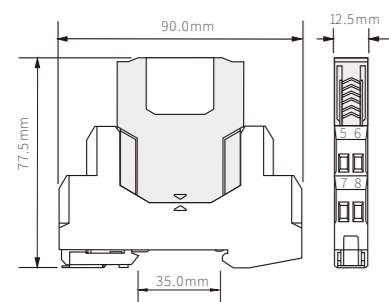
## 3-wire

Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
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
Total impulse current(10/350 $\mu s$ )	7.5kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 60V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz
Response time	1ns
Resistance(per line)	1 $\Omega$
Residual current $I_{pe}$	<1 $\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21

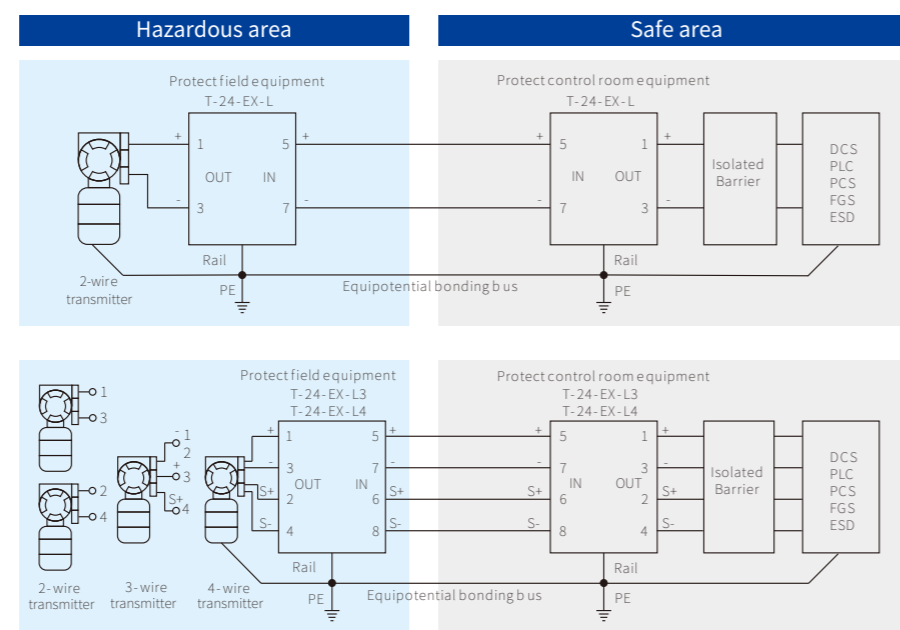
## 4-wire

Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
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
Total impulse current(10/350 $\mu s$ )	10kA
Voltage protection level $U_p(8/20\mu s)$	L-L: 60V/L-G: 600V
Voltage protection level $U_p(1kV/\mu s)$	L-L: 40V/L-G: 600V
Bandwidth(-0.5dB)	10MHz
Response time	1ns
Resistance(per line)	1 $\Omega$
Residual current $I_{pe}$	<1 $\mu A$
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-21

## Dimensions



## Typical applications



# For low-voltage power supply( $\leq 10A$ )

## Features

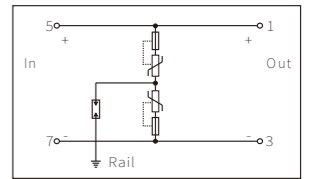
- 12.5mm ultra-thin design.
- Hot pluggable.
- SPD modules can be tested individually.
- Suitable for power supply, solenoid valve and etc.
- Ground via DIN 35mm rail.

## 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 $I_n(8/20\mu s)$	L-G: 10kA
Max. discharge current $I_{max}(8/20\mu s)$	L-G: 20kA
Impulse current $I_{imp}(10/350\mu s)$	L-G: 2kA
Total impulse current(10/350 $\mu s$ )	L-G: 4kA
Voltage protection level $U_p(8/20\mu s)$	800V
Voltage protection level $U_p(1kV/\mu s)$	600V
Residual current $I_{pe}$	<10 $\mu A$
Response time	10ns
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-11

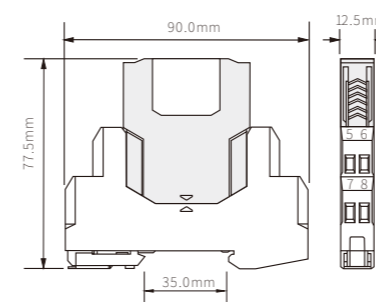
## Order number

T-24

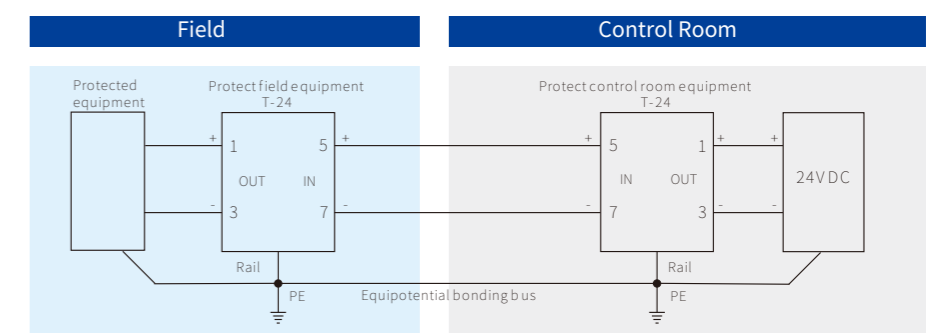


Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	60V DC
Nominal operating current $I_L$	10A
Nominal discharge current $I_n(8/20\mu s)$	L-G: 10kA
Max. discharge current $I_{max}(8/20\mu s)$	L-G: 20kA
Impulse current $I_{imp}(10/350\mu s)$	L-G: 2kA
Total impulse current(10/350 $\mu s$ )	L-G: 4kA
Voltage protection level $U_p(8/20\mu s)$	800V
Voltage protection level $U_p(1kV/\mu s)$	600V
Residual current $I_{pe}$	<10 $\mu A$
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



## Typical applications



## 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  
中国石油

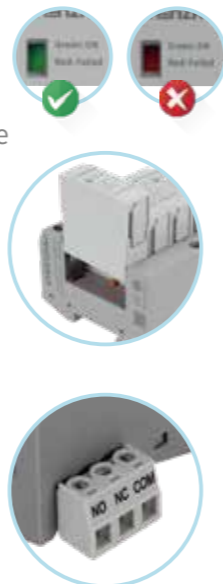
Test reports approved by SINOPEC  
SINOPEC

Insurance provided by CPIC

**40/80kA**  
Reliable discharging (T2)

**1000A**  
Short-circuit withstand

**-40~110°C**  
Extreme temperature endurance



### Features

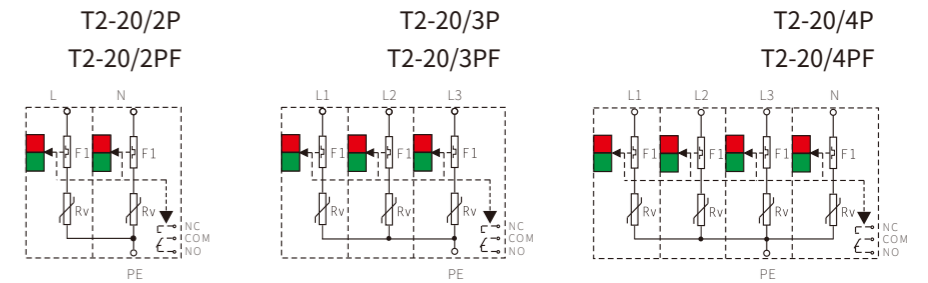
- Status indication:
  - Green: OK
  - Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with "F".
- It is normally installed at the boundary of LPZ1 and LPZ2 or subsequent LPZs.

### Technical data

Max. continuous operating voltage $U_c$	320VAC
Nominal discharge current $I_n$ (8/20 $\mu$ s)	10kA
Max. discharge current $I_{max}$ (8/20 $\mu$ s)	20kA
Voltage protection level $U_p$	1.2kV
Recommended backup fuse	40A gG
Recommended grounding cable	4~35mm <sup>2</sup>
Response time	25ns
Residual current $I_{pe}$	<10 $\mu$ A
Remote alarm output	250VAC/0.5A;24VDC/0.5A
Housing protection grade(IEC60529)	IP 20
Housing material/inflammability rating(UL94)	PA66/V0
Testing standard	IEC 61643-11
Suitable for power supply system	TN system(single phase)

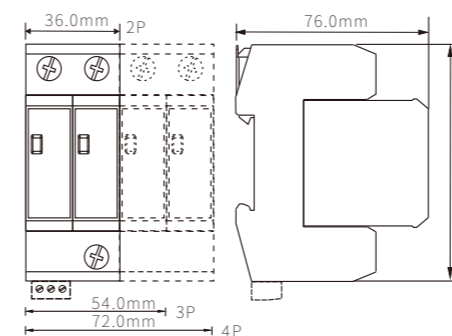
### Order number

T2-20/2P:7044946	T2-20/3P:7060683	T2-20/4P:7065597
T2-20/2PF:7046947	T2-20/3PF:7095809	T2-20/4PF:7030095

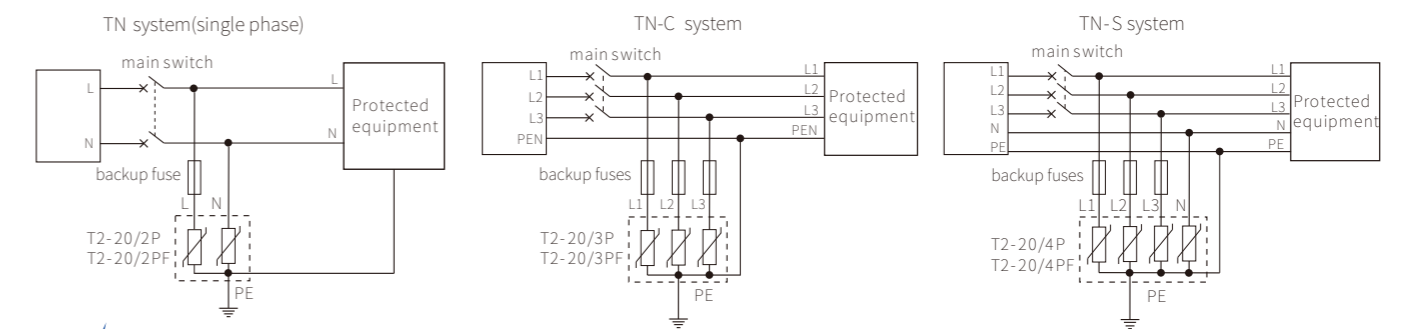


Max. continuous operating voltage $U_c$	320VAC	320VAC	320VAC
Nominal discharge current $I_n$ (8/20 $\mu$ s)	10kA	10kA	10kA
Max. discharge current $I_{max}$ (8/20 $\mu$ s)	20kA	20kA	20kA
Voltage protection level $U_p$	1.2kV	1.2kV	1.2kV
Recommended backup fuse	40A gG	40A gG	40A gG
Recommended grounding cable	4~35mm <sup>2</sup>	4~35mm <sup>2</sup>	4~35mm <sup>2</sup>
Response time	25ns	25ns	25ns
Residual current $I_{pe}$	<10 $\mu$ A	<10 $\mu$ A	<10 $\mu$ A
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
Order number	T2-20/2PF:7046947	T2-20/3PF:7095809	T2-20/4PF:7030095

### Dimensions



### Typical applications



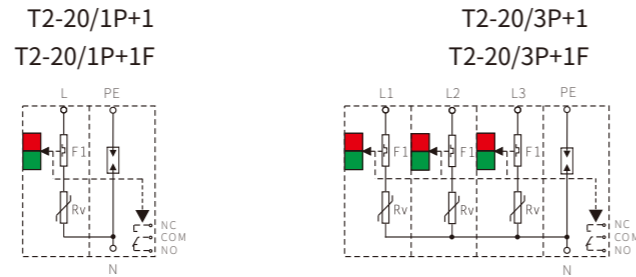
**Cautions:**  
Backup fuses are recommended to be installed in case SPD get short-circuited. For connecting to L/N, cables with a cross-sectional area  $\geq 2.5\text{mm}^2$  are recommended. For connecting to PE, cables with a cross-sectional area  $\geq 4\text{mm}^2$  are recommended.



# 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.

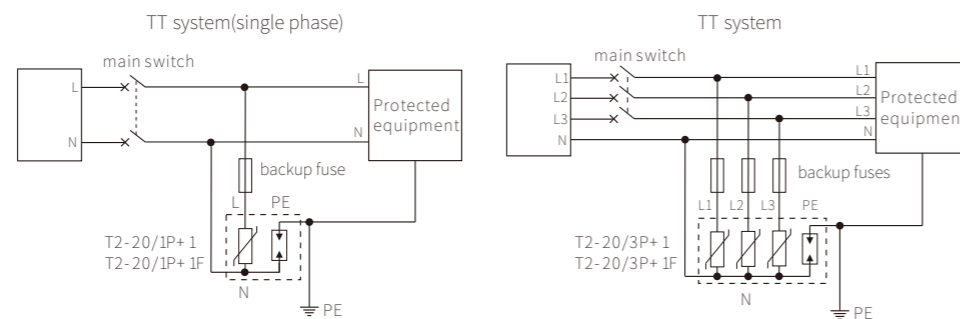


Technical data	T2-80G	T2-20	T2-80G	T2-20
Max. continuous operating voltage $U_c$	255VAC	320VAC	255VAC	320VAC
Nominal discharge current $I_n(8/20\mu s)$	40kA	10kA	40kA	10kA
Max. discharge current $I_{max}(8/20\mu s)$	80kA	20kA	80kA	20kA
Voltage protection level $U_p$	1.2kV	1.2kV	1.2kV	1.2kV
Recommended backup fuse		40A gG		40A gG
Recommended grounding cable		4~35mm <sup>2</sup>		4~35mm <sup>2</sup>
Response time		25ns		25ns
Residual current $I_{FE}$		<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 T2-20/1P+1F:7044393		T2-20/3P+1:7093873 T2-20/3P+1F:7061114

## Dimensions



## Typical applications



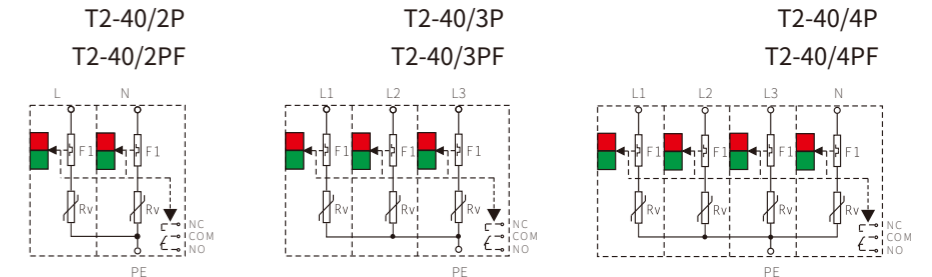
Cautions:  
Backup fuses are recommended to be installed in case SPD get short-circuited.  
For connecting to L/N, cables with a c cross-sectional area  $\geq 2.5\text{mm}^2$  are recommended.  
For connecting to PE, cables with a c cross-sectional area  $\geq 6\text{mm}^2$  are recommended.



# 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.

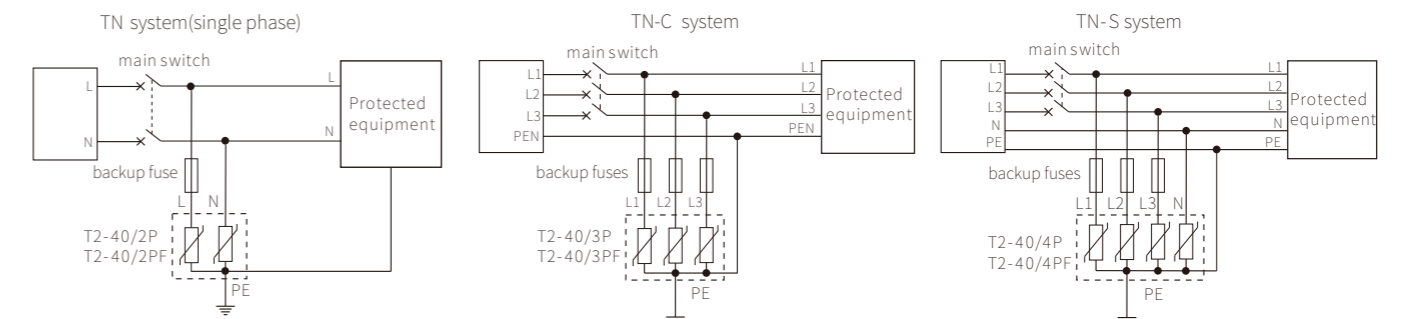


Technical data	T2-40/2P	T2-40/3P	T2-40/4P
Max. continuous operating voltage $U_c$	385VAC	385VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA	40kA
Voltage protection level $U_p$	1.7kV	1.7kV	1.7kV
Recommended backup fuse	80A gG	80A gG	80A gG
Recommended grounding cable	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>
Response time	25ns	25ns	25ns
Residual current $I_{FE}$	<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 T2-40/2PF:7062709	T2-40/3P:7079704 T2-40/3PF:7046181	T2-40/4P:7085466 T2-40/4PF:7018432

## Dimensions



## Typical applications



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

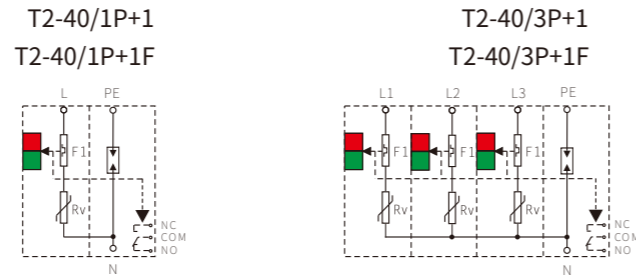




# AC power SPD (40kA)

## 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.

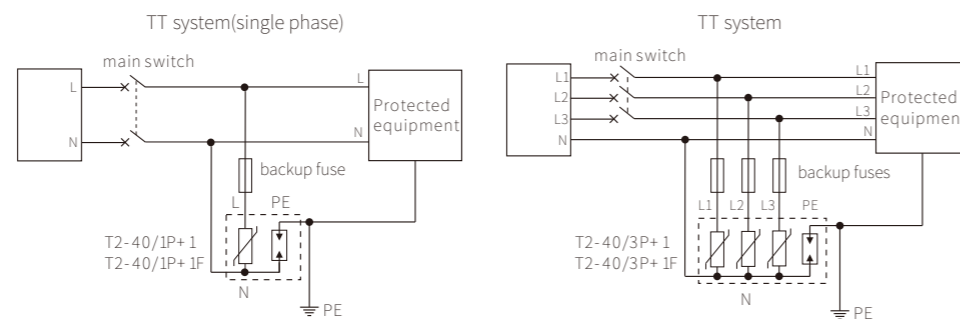


Technical data	T2-80G	T2-40	T2-80G	T2-40
Max. continuous operating voltage $U_c$	255VAC	385VAC	255VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	40kA	20kA	40kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	80kA	40kA	80kA	40kA
Voltage protection level $U_p$	1.2kV	1.7kV	1.2kV	1.7kV
Recommended backup fuse		80A gG		80A gG
Recommended grounding cable		6~35mm <sup>2</sup>		6~35mm <sup>2</sup>
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 T2-40/1P+1F:7070280		T2-40/3P+1:7085025 T2-40/3P+1F:7081984

## Dimensions



## Typical applications



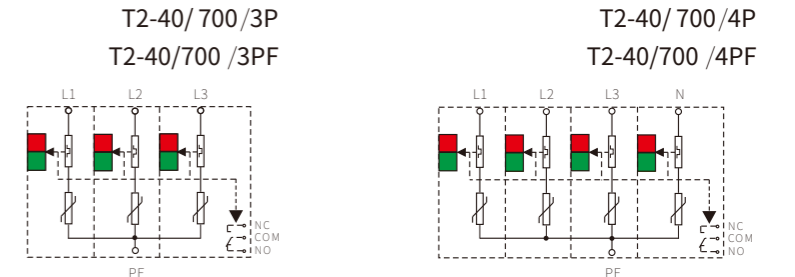
**Cautions:**  
 Backup fuses are recommended to be installed in case SPD get short-circuited.  
 For connecting to L/N, cables with a cross-sectional area  $\geq 4\text{mm}^2$  are recommended.  
 For connecting to PE, cables with a cross-sectional area  $\geq 6\text{mm}^2$  are recommended.



# 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".

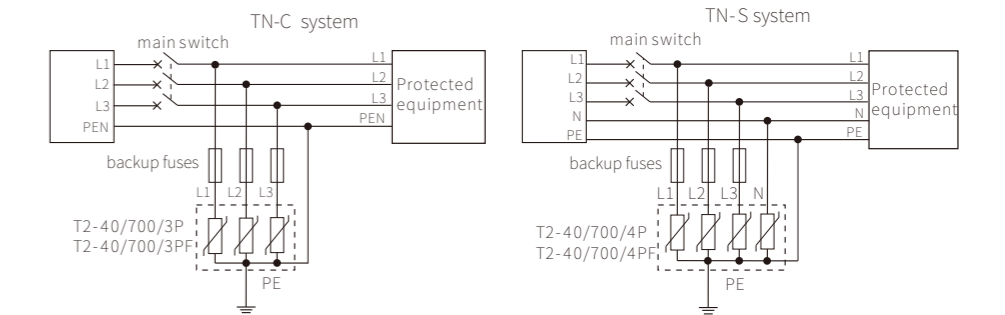


Technical data	T2-40/700/3P T2-40/700/3PF	T2-40/700/4P T2-40/700/4PF
Max. continuous operating voltage $U_c$	700VAC	700VAC
Nominal discharge current $I_n(8/20\mu s)$	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA
Voltage protection level $U_p$	2.8kV	2.8kV
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>
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 T2-20/700/3PF:7028674	T2-40/700/4P:7087771 T2-20/700/4PF:7020165

## Dimensions



## Typical applications



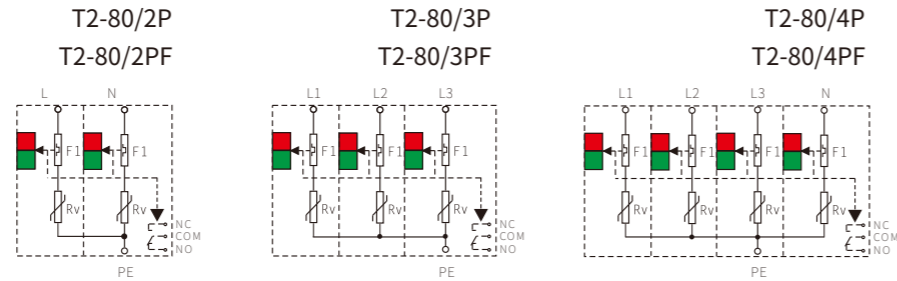
**Cautions:**  
 Backup fuses are recommended to be installed in case SPD get short-circuited.  
 For connecting to L/N, cables with a cross-sectional area  $\geq 4\text{mm}^2$  are recommended.  
 For connecting to PE, cables with a cross-sectional area  $\geq 6\text{mm}^2$  are recommended.



# 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.



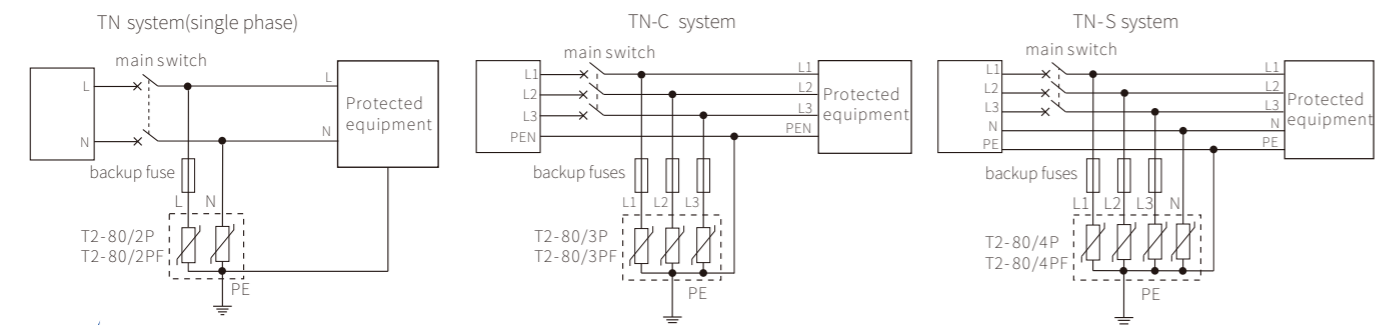
## Technical data

	T2-80/2P	T2-80/3P	T2-80/4P
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
Recommended grounding cable	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>
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 T2-80/2PF:7066780	T2-80/3P:7025082 T2-80/3PF:7038693	T2-80/4P:7018734 T2-80/4PF:7088870

## Dimensions



## Typical applications

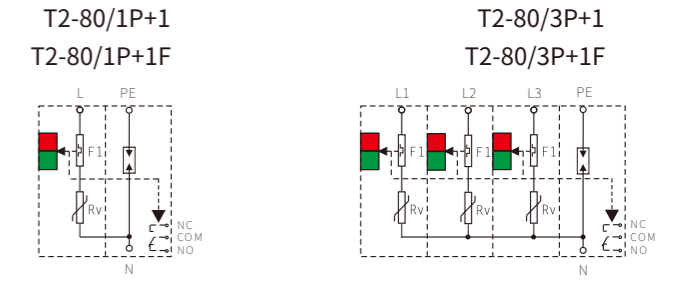


**Cautions:**  
Backup fuses are recommended to be installed in case SPD get short-circuited.  
For connecting to L/N, cables with a cross-sectional area  $\geq 4mm^2$  are recommended.  
For connecting to PE, cables with a cross-sectional area  $\geq 6mm^2$  are recommended.

# 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.



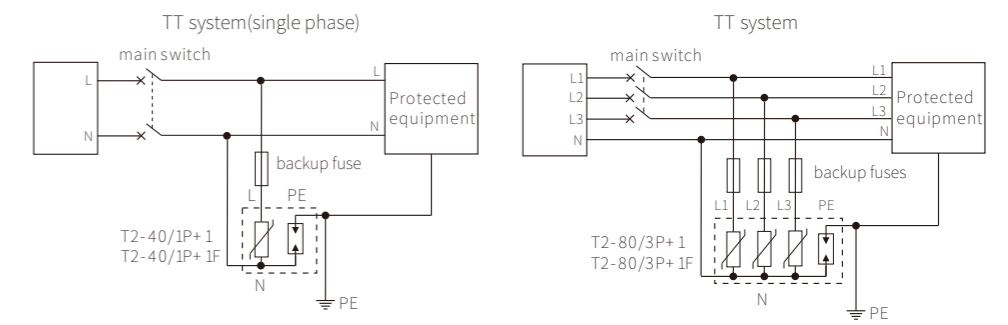
## Technical data

	T2-80G	T2-80	T2-80G	T2-40
Max. continuous operating voltage $U_c$	255VAC	385VAC	255VAC	385VAC
Nominal discharge current $I_n(8/20\mu s)$	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
Recommended grounding cable		6~35mm <sup>2</sup>		6~35mm <sup>2</sup>
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 T2-80/1P+1F:7042357		T2-80/3P+1:7055729 T2-80/3P+1F:7058261

## Dimensions



## 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  $\geq 4mm^2$  are recommended.  
For connecting to PE, cables with a cross-sectional area  $\geq 6mm^2$  are recommended.

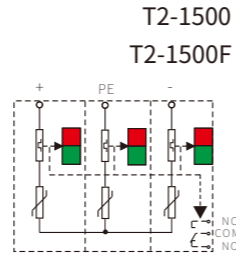
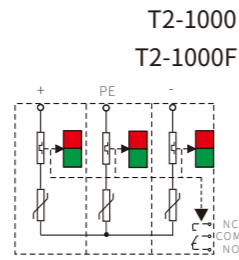
# DC power SPD (photovoltaic)

## Features

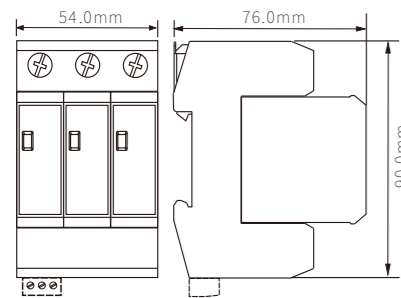
- Status indication:
  - Green: OK
  - Red: Failed
- Surge protective modules can be replaced online.
- Remote alarm output is optional, named with "F" .

## 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 $I_n(8/20\mu s)$	20kA	20kA
Max. discharge current $I_{max}(8/20\mu s)$	40kA	40kA
Voltage protection level $U_p$	4kV	6kV
Recommended backup fuse	80A gG	80A gG
Recommended grounding cable	6~35mm <sup>2</sup>	6~35mm <sup>2</sup>
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 T2-1000F:7065508	T2-1500:7094994 T2-1500F:7067731



## Dimensions

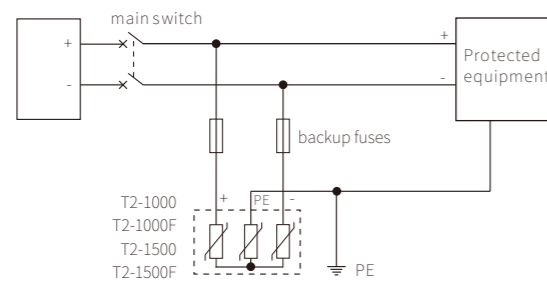


76.0mm×90.0mm×54.0mm



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.

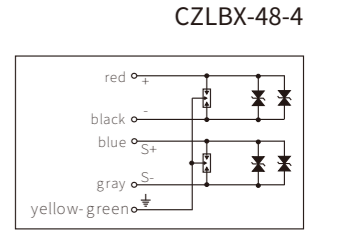
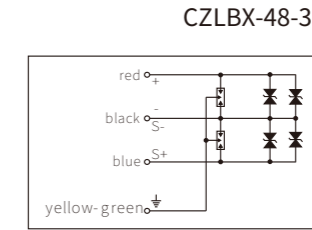
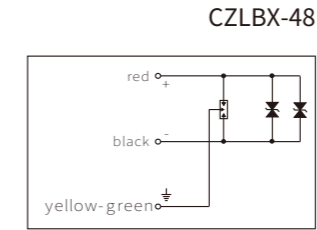
# Screw mounting SPD(parallel connection)

## Features

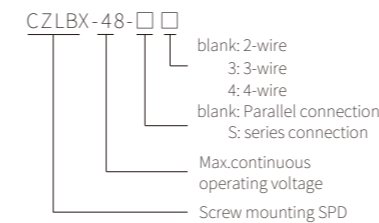
- Intrinsic safety certification;explosion proof electrical product certification.
- Suitable for 2, 3, 4-wire transmitter, thermal resistor, thermocouple, flow meter, solenoid valve, RS-485, RS-232 and etc.

## 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
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 $U_p(8/20\mu s)$	85V	85V	85V
Voltage protection level $U_p(1kV/\mu s)$	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
<b>Certification</b>			
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
<b>Order number</b>	1/2" NPT: 7041233 3/4" NPT: 7030261 M20×1.5: 7019156	1/2" NPT: 7024477 3/4" NPT: 7079620 M20×1.5: 7018599	1/2" NPT: 7060125 3/4" NPT: 7031784 M20×1.5: 7020401



## Naming

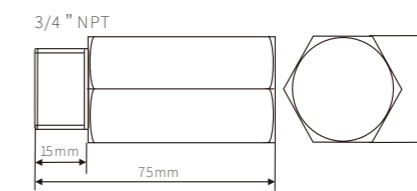
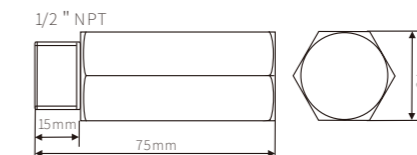
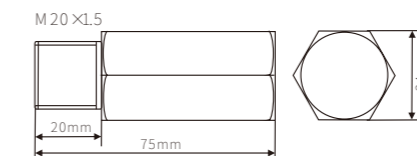


Male thread need to be specified in orders.  
M20×1.5  
1/2" NPT  
3/4" NPT ... ..

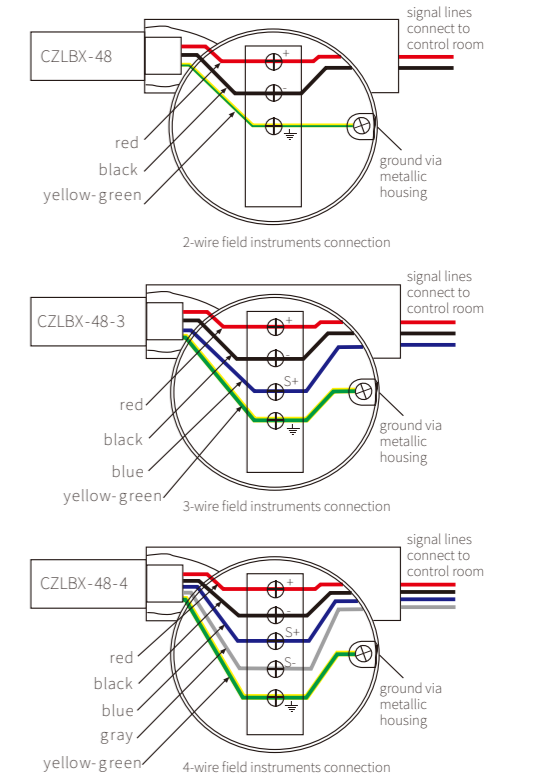
Wire specification:16AWG,200mm



## Dimensions



## Typical applications



# Screw mounting SPD(series connection)

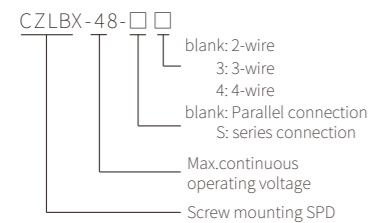
For 5V signal

## Features

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

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 operating current $I_L$	500mA	500mA	500mA
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: 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	10Ω
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
<b>Certification</b>			
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
<b>Order number</b>			
	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

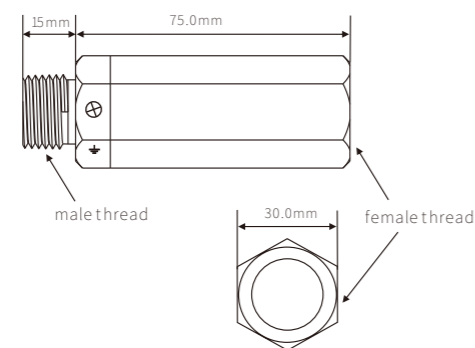


Male thread need to be specified in orders.  
M20×1.5  
1/2" NPT  
3/4" NPT .....

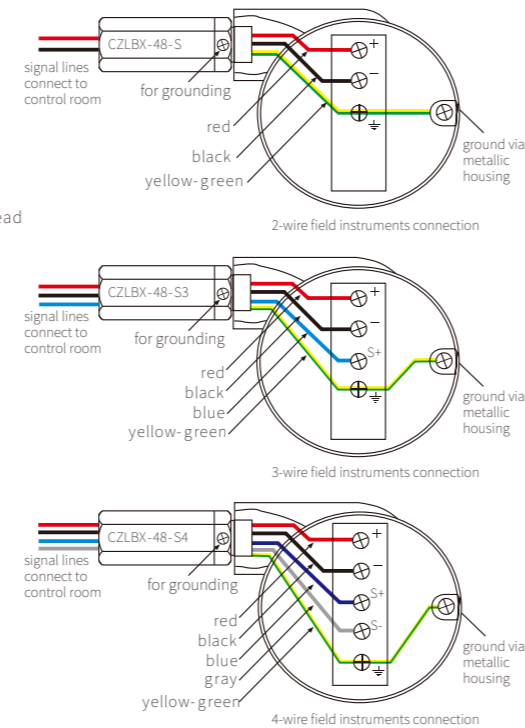
Wire specification: 16AWG, 180mm



## Dimensions



## Typical applications



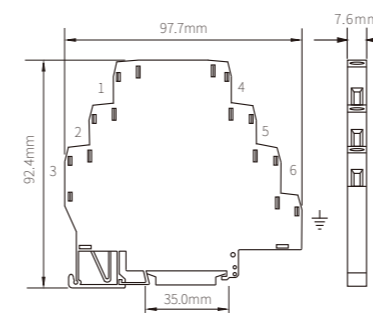
## Features

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

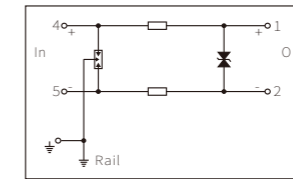
## Technical data

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

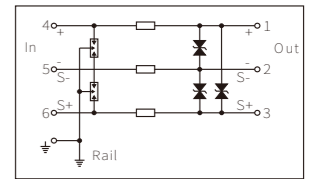
## Dimensions



## CZLB-5 ( T2 )

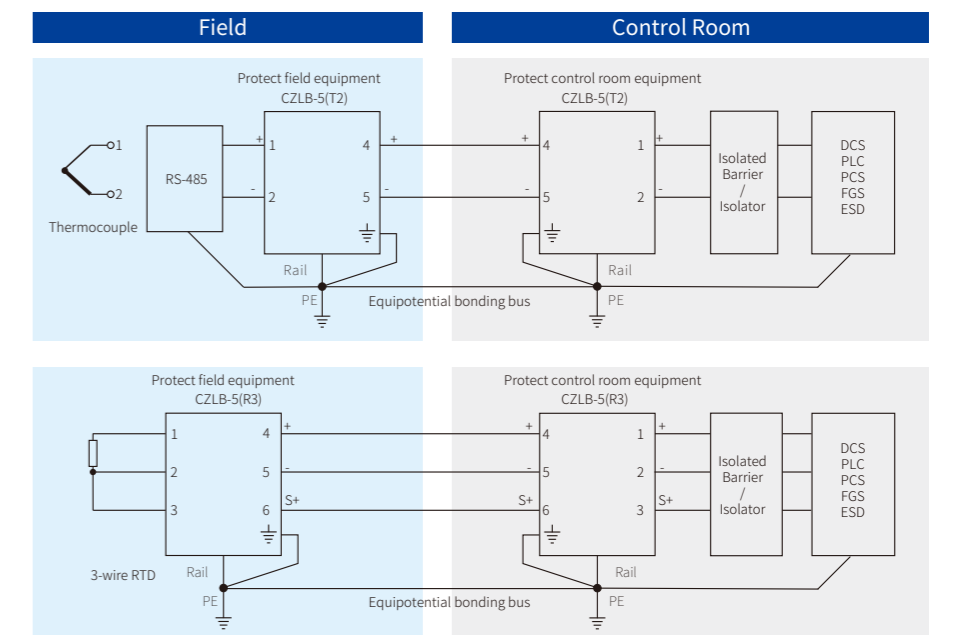


## CZLB-5 ( R3 )



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 $I_n(8/20\mu s)$	5kA	5kA
Max. discharge current $I_{max}(8/20\mu s)$	10kA	10kA
Impulse current $I_{imp}(10/350\mu s)$	1kA	1kA
Voltage protection level $U_p(8/20\mu s)$	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
<b>Certification</b>		
Intrinsic safety certification	Ex ia II C T4~T6 Ga	Ex ia II C T4~T6 Ga
Functional safety certification	SIL3	SIL3
<b>Order number</b>	7045387	7066195

## Typical applications



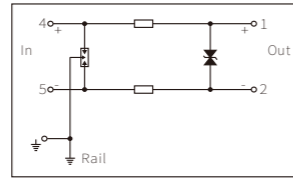


# For 24V signal

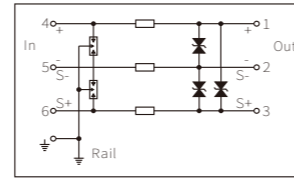
## Features

- 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 )

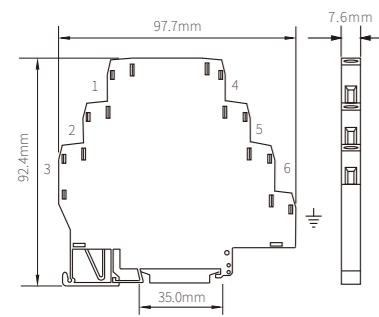


Technical data	
Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
Nominal discharge current $I_n(8/20\mu s)$	5kA
Max. discharge current $I_{max}(8/20\mu s)$	10kA
Impulse current $I_{imp}(10/350\mu s)$	1kA
Voltage protection level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

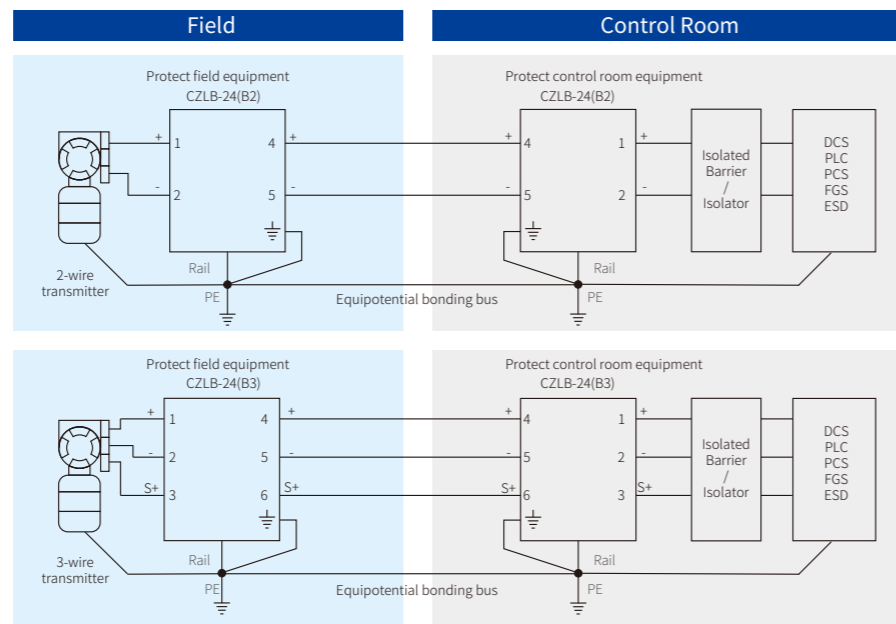
2-wire	
Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	32V DC
Nominal operating current $I_L$	500mA
Nominal discharge current $I_n(8/20\mu s)$	5kA
Max. discharge current $I_{max}(8/20\mu s)$	10kA
Impulse current $I_{imp}(10/350\mu s)$	1kA
Voltage protection level $U_p(8/20\mu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

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

## Dimensions



## Typical applications

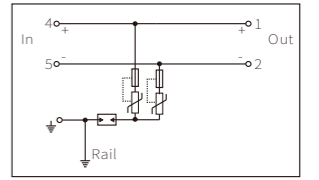


# For low-voltage power supply( $\leq 10A$ )

## Features

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

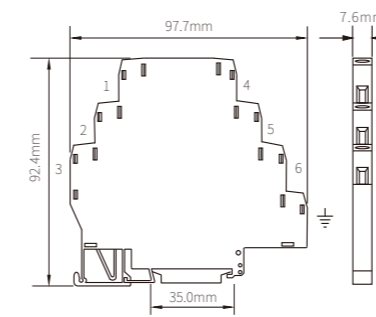
T-24-EX-L



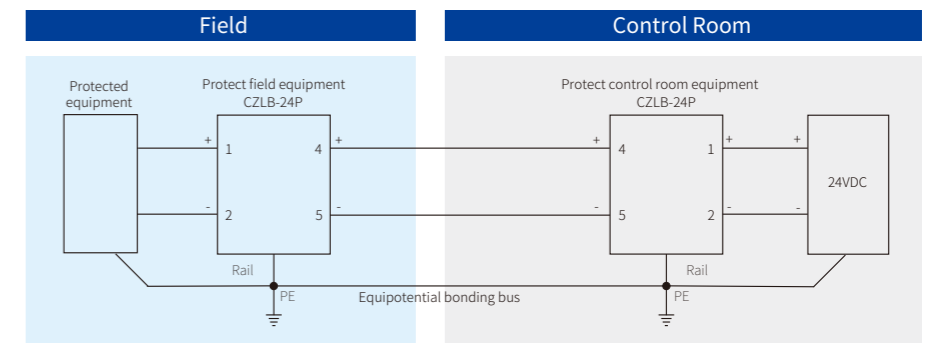
Technical data	
Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	60V DC
Nominal operating current $I_L$	10A
Nominal discharge current $I_n(8/20\mu s)$	5kA
Max. discharge current $I_{max}(8/20\mu s)$	10kA
Impulse current $I_{imp}(10/350\mu s)$	1kA
Voltage protection level $U_p(8/20\mu s)$	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

Nominal operating voltage $U_n$	24V DC
Max. continuous operating voltage $U_c$	60V DC
Nominal operating current $I_L$	10A
Nominal discharge current $I_n(8/20\mu s)$	5kA
Max. discharge current $I_{max}(8/20\mu s)$	10kA
Impulse current $I_{imp}(10/350\mu s)$	1kA
Voltage protection level $U_p(8/20\mu s)$	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



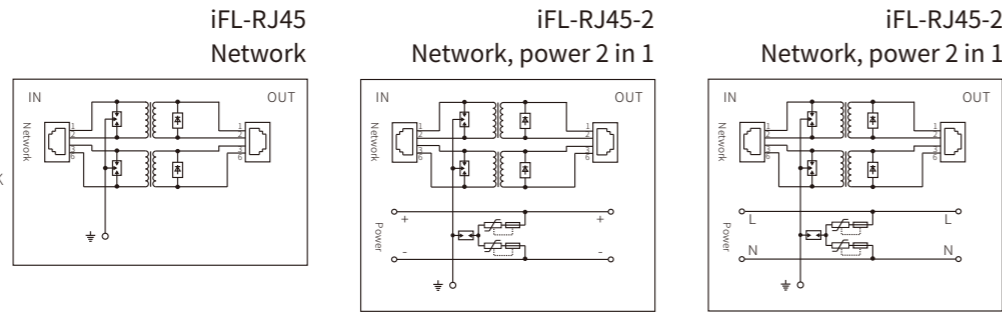
## Typical applications



# Network SPD

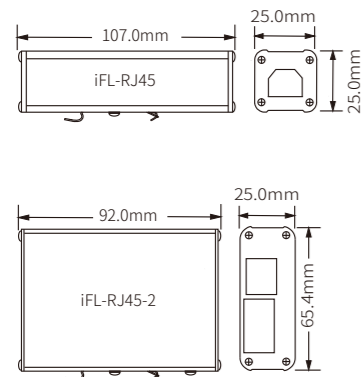
## Features

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

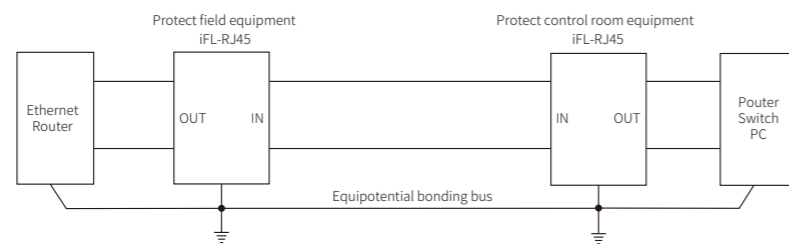


Technical data	Network	Power(24VAC)	Power(220VAC)
Nominal operating voltage $U_n$	5VDC	24VDC	220VAC
Max. continuous operating voltage $U_c$	8VDC	26VDC	320VAC
Nominal operating current $I_l$	0.5A	10A	10A
Nominal discharge current $I_n$	2kA	10kA	3kA
Voltage protection level $U_p$ L-L	100V	600V	600V
Voltage 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



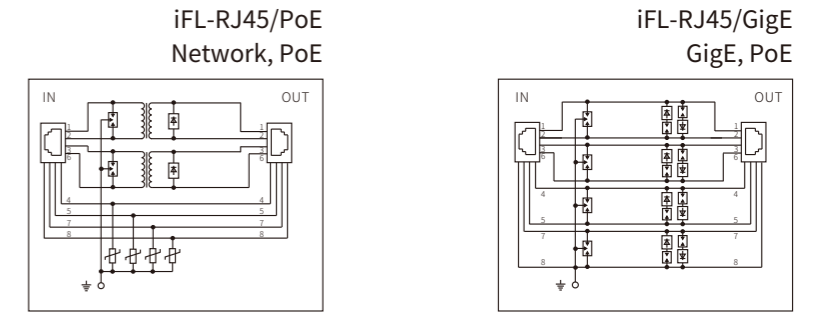
## Typical applications



# Network SPD

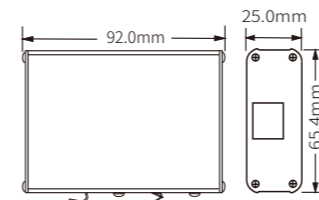
## Features

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

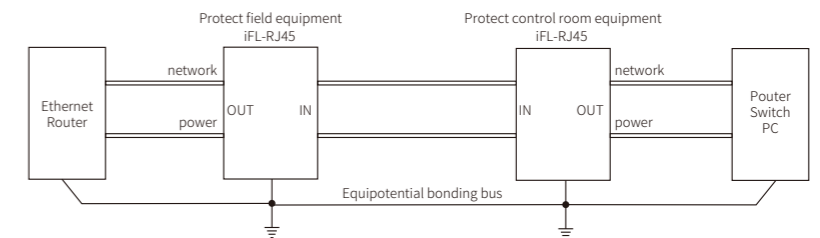


Technical data	Network	PoE power	GigE	PoE power
Nominal operating voltage $U_n$	5VDC	48VDC	48VDC	48VDC
Max. continuous operating voltage $U_c$	8VDC	60VDC	60VDC	60VDC
Nominal operating current $I_l$	0.5A	0.5A	0.5A	0.5A
Nominal discharge current $I_n$	2kA	2kA	2kA	2kA
Voltage protection level $U_p$ L-L	100V	600V	600V	600V
Voltage protection level $U_p$ L-G	300V	1kV	1kV	1kV
Bandwidth	100MHz	-	500MHz	-
Insertion loss (0.1~50MHz)	$\leq 0.5$ dB	-	$\leq 0.5$ dB	-
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



## Typical applications



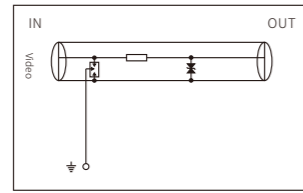
# Network SPD

## Features

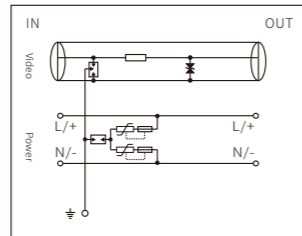
- Quick response, low insertion loss.
- Suitable for video signal
- Grounded by DIN rail or screw terminals(both available)

Technical data	
Nominal operating voltage $U_n$	5VDC
Max. continuous operating voltage $U_c$	6VDC
Nominal discharge current $I_n(8/20\mu s)$	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA
Voltage protection level $U_p(8/20\mu s)$	40V
Voltage protection level $U_p(8/20\mu s)$	600V
Bandwidth	20MHz
Response time	1ns
Interface	BNC
Housing protection grade(IEC60529)	IP20
Housing material	aluminium alloy
Testing standard	IEC 61643-21

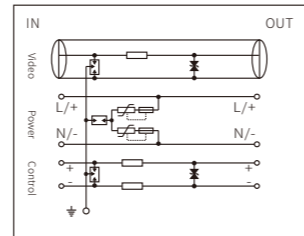
### iFL-BNC Video



### iFL-BNC-2 Video, power 2 in 1

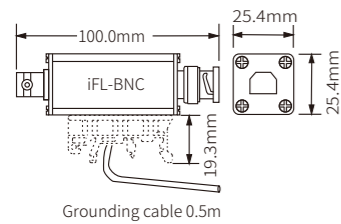


### iFL-BNC-3 Video, power, control 3 in 1



	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 $I_n(8/20\mu s)$	10kA	10A	10A	10kA
Max. discharge current $I_{max}(8/20\mu s)$	20kA	10kA	3kA	20kA
Voltage protection level $U_p(8/20\mu s)$	40V	600V	600V	60V
Voltage protection level $U_p(8/20\mu s)$	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



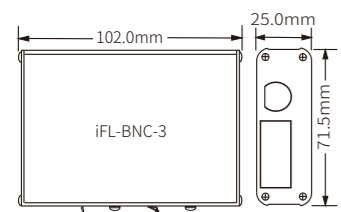
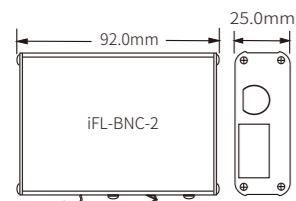
100.0mm × 25.4mm × 25.4mm



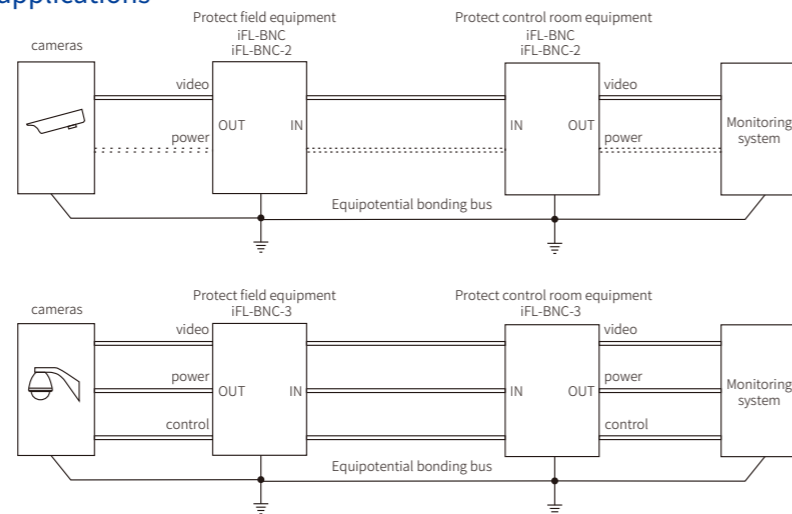
92.0mm × 65.4mm × 25.0mm



102.0mm × 71.5mm × 25.0mm



## Typical applications



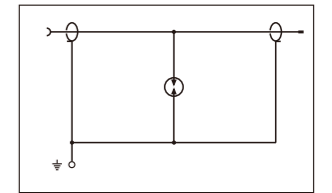
# SPD for antennas and feeders

## Features

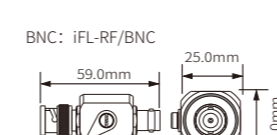
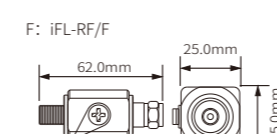
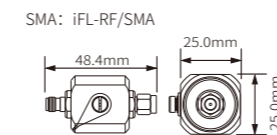
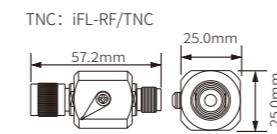
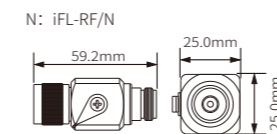
- Strong discharging ability.
- Quick response.
- Low insertion loss and standing wave ratio.

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	$\leq 1.5\text{GHz}(0.1\text{dB})/\leq 4\text{GHz}(2\text{dB})$
Characteristic impedance	50Ω
Housing protection grade(IEC60529)	IP 55
Housing material	aluminium alloy
Testing standard	IEC 61643-21

### iFL-RF



## Dimensions



N: iFL-RF/N



TNC: iFL-RF/TNC



SMA: iFL-RF/SMA



F: iFL-RF/F



BNC: iFL-RF/BNC

## Typical applications

