

Future from Quality

Surge Protection Device
Catalogue 2011

Future from Quality

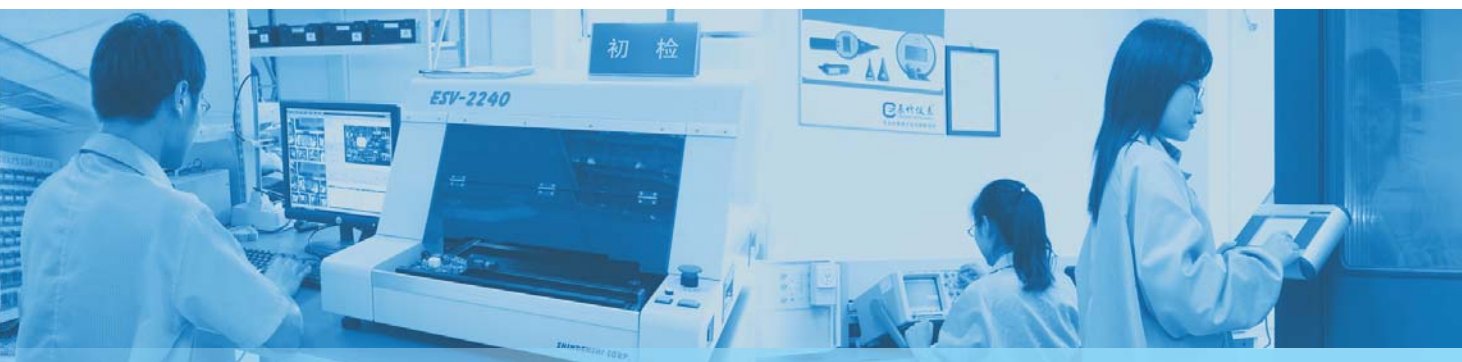
Shanghai Chenzhu Instrument Co. Ltd (Chenzhu) was founded in April, 2002 and was honored with the title of "Hi-Tech Enterprise of Shanghai". Before, it was the isolated barrier department of Shanghai Institute of Process Automation Instrument (SIPAI).

There is a professional and efficient R&D (Research & development) team in Chenzhu, based on the technology and experience accumulated in SIPAI in the field of automatic control, which is in charge of several state-level Key Programs for Science & Technology, and key projects of high-tech achievements transformation. All of our products have independent intellectual property rights.

We are now compliant with ISO 9001 : 2008 Quality Management System and ISO14001 : 2004 Environment Management System. All of our products achieved more than 10 international certificates including IECEx, ATEX, CE, UL, SIL, NEPSI, CCS, etc. Surge protection devices (SPD) have passed the test of Shanghai Lighting Protecting Device Testing Center.

Nowadays an effective manufacturing system has been established, including isolated barrier, signal isolator, electrical monitor and transducer, surge protection device and temperature transmitter and so on, covering 10 categories, hundreds of product Types. A comprehensive network of marketing, sales & technical service has been established in Chenzhu. In the past several years, our production and sales are increasing by 50% per year. Now Chenzhu has become a leading supplier of isolation barriers in the domestic automation market.

We insist about "Future from quality" and we'll keep improving.



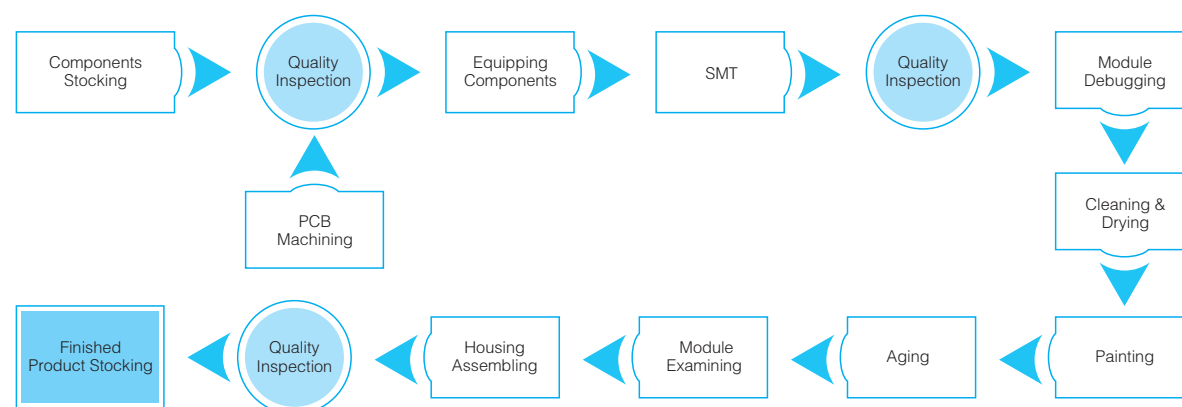
Our R&D Team and Manufacturing System

Innovation is the internal impetus for the corporation to grow constantly in the competitive market

We have a professional R&D Team and well-equipped laboratory in Chenzhu. 30% of our employees are engaged in R&D department, and half of them are Senior & Intermediate engineers. Since 2006, Chenzhu has made a huge investment in the lab, in which we have several equipments used in testing performance of our products, such as environmental adaptation, EMC, function safety and so on. Based on a strong reserves of manpower and advanced hardware establishment, we will continue to enhance technology level.

Advanced manufacture system and management are the basics of the products with stable quality

There is an assembly manufacturing line, with several advanced equipments, such as new YAMAHA (Japan) SMT automatic product line, automatic ultrasonic cleaning system, PVA (U.S.A.) painting system, on-line system aging monitoring, automatic detecting & noting system etc. ERP enterprise resources management is implemented in the whole manufacturing system, putting information management into every craft work flow, production data and production task. Based on rigid production management, Chenzhu supplies the perfect products for customers.



Domestic and International Certificates

"Everyone attach, constant innovation, pursuing brilliance and customer satisfaction" is our policy of quality, the company makes every staff implement the policy of quality consciously to establish continuous improvement of product and service of the long-standing mechanism.

We are now compliant with ISO 9001 : 2008 Quality Management System and ISO14001 : 2004 Environment Management System. All of our products achieved more than 10 international authentications including IECEx, ATEX, CE, UL, SIL, NEPSI, CCS etc.



Certificate of quality management system according to ISO9001: 2008
China Quality Mark Certification Group (CQM)



Certificate of factory quality guarantee ability requisition for explosion-proof electric production (equivalent of IECEx certificate)
China Quality Mark Certification Group (CQM)



Ex-proof certification according to NEPSI
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI)



Ex-proof certification according to Europe ATEX
Germany Physikalisch Technische Bundesanstalt (PTB)



CE certificate
CCQS UK Ltd



Functional safety certificate (SIL)
Shanghai Inspection and Testing Institute of Instruments and Automatic Systems



Certification of type approval
China Classification Society (CCS)



Application certificate of the explosion proof elevators
Elevator Examines Center of Shanghai Jiao Tong University



The isolator barriers with surge protection and surge protection device passed lightning protection performance test
Shanghai Lightning Protection Center



Products have passed the performance test about EMC, environment adaptability and safety etc.
Shanghai Inspection and Testing Institute of Instruments and Automatic Systems

Note: For more information about approvals see the page of product description

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Selection Guide

SPDs for Potentially Explosive Areas

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Version	Page
CZLB-5-EX(R2)	5V	6V	5kA	10kA	40V	2-wire, thermocouple	7
CZLB-5-EX(R3)	5V	6V	5kA	10kA	40V	3-wire, thermal resistance	7
CZLB-12-EX(K2)	12V	15V	5kA	10kA	50V	2-wire, switch	8
CZLB-12-EX(K3)	12V	15V	5kA	10kA	50V	3-wire, switch	8
CZLB-24-EX(B2)	24V	32V	5kA	10kA	60V	2-wire transmitter	9
CZLB-24-EX(B3)	24V	32V	5kA	10kA	60V	3-wire transmitter	9
CZLB-5-EX(T2)	5V	6V	5kA	10kA	40V	2-wire, RS-485	10
CZLB-12-EX(T3)	12V	15V	5kA	10kA	50V	3-wire, RS-232	10

SPDs for Signal Circuits

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Version	Page
CZLB-5(R2)	5V	6V	5kA	10kA	40V	2-wire, thermocouple	11
CZLB-5(R3)	5V	6V	5kA	10kA	40V	3-wire, thermal resistance	11
CZLB-12(K2)	12V	15V	5kA	10kA	50V	2-wire, switch	12
CZLB-12(K3)	12V	15V	5kA	10kA	50V	3-wire, switch	12
CZLB-24(B2)	24V	32V	5kA	10kA	60V	2-wire transmitter	13
CZLB-24(B3)	24V	32V	5kA	10kA	60V	3-wire transmitter	13
CZLB-5(T2)	5V	6V	5kA	10kA	40V	2-wire, RS-485	14
CZLB-12(T3)	12V	15V	5kA	10kA	50V	3-wire, RS-232	14

SPDs for Field Devices

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Protection level Up(8/20 μs)	Version	Page
CZLBX-48	24V	48V	5kA	10kA	85V	2/3/4-wire transmitter	15
CZLBX-48-EX	24V	48V	5kA	10kA	85V	2/3/4-wire transmitter	16

SPDs for DC Power Supply Systems

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Protection level Up(8/20 μs)	Version	Page
CZLB-24P	24V	32V	5kA	10kA	85V	24VDC	17
CZLB-48P	48V	60V	5kA	10kA	85V	48VDC	17

SPDs for DC Power Supply Systems

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Protection level Up(8/20 μs)	Version	Page
CZLB-110P	110VDC	220VDC	20kA	40kA	700V	110VDC	18
CZLB-220P	220VDC	320VDC	20kA	40kA	800V	220VDC	18

SPDs – Class I (High capacity)

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Surge protection combination for	Page
CZLB-100/440/1P	220VAC	440VAC	65kA	100kA	2900V	2-wire networks	19
CZLB-100/440/2P	220VAC	440VAC	65kA	100kA	2900V	2-wire or 3-wire networks	19
CZLB-100/440/3P	220VAC	440VAC	65kA	100kA	2900V	4-wire networks (TN-C system)	20
CZLB-100/440/4P	220VAC	440VAC	65kA	100kA	2900V	5-wire networks (TN-S system)	20

SPDs – Class I

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Surge protection combination for	Page
CZLB-65/440/1P	220VAC	440VAC	40kA	65kA	2800V	2-wire networks	21
CZLB-65/440/1P+1	220VAC	440VAC	40kA	65kA	2800V	2-wire networks	21
CZLB-65/440/2P	220VAC	440VAC	40kA	65kA	2800V	2-wire or 3-wire networks	21
CZLB-65/440/3P	220VAC	440VAC	40kA	65kA	2800V	4-wire networks (TN-C system)	22
CZLB-65/440/3P+1	220VAC	440VAC	40kA	65kA	2800V	4-wire networks (TT system)	22
CZLB-65/440/4P	220VAC	440VAC	40kA	65kA	2800V	5-wire networks (TN-S system)	22

SPDs – Class II

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Surge protection combination for	Page
CZLB-40/440/1P	220VAC	440VAC	20kA	40kA	2200V	2-wire networks	23
CZLB-40/440/1P+1	220VAC	440VAC	20kA	40kA	2200V	2-wire networks	23
CZLB-40/440/2P	220VAC	440VAC	20kA	40kA	2200V	2-wire or 3-wire networks	23
CZLB-40/440/3P	220VAC	440VAC	20kA	40kA	2200V	4-wire networks (TN-C system)	24
CZLB-40/440/3P+1	220VAC	440VAC	20kA	40kA	2200V	4-wire networks (TT system)	24
CZLB-40/440/4P	220VAC	440VAC	20kA	40kA	2200V	5-wire networks (TN-S system)	24

SPDs – Class III

Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Surge protection combination for	Page
CZLB-20/320/1P	220VAC	320VAC	10kA	20kA	1500V	2-wire networks	25
CZLB-20/320/1P+1	220VAC	320VAC	10kA	20kA	1500V	2-wire networks	25
CZLB-20/320/2P	220VAC	320VAC	10kA	20kA	1500V	2-wire or 3-wire networks	25
CZLB-20/320/3P	220VAC	320VAC	10kA	20kA	1500V	4-wire networks (TN-C system)	26
CZLB-20/320/3P+1	220VAC	320VAC	10kA	20kA	1500V	4-wire networks (TT system)	26
CZLB-20/320/4P	220VAC	320VAC	10kA	20kA	1500V	5-wire networks (TN-S system)	26
CZLB-WB	220VAC	250VAC	5kA	10kA	1200V	2-wire networks	27

Data Surge Protection

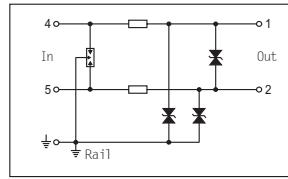
Type	Nominal voltage Un	Max. continuous operating voltage Uc	Nominal discharge current In(8/20 μs)	Max. discharge current I _{max} (8/20 μs)	Voltage Protection level Up(8/20 μs)	Surge protection combination for	Page
CZLB-RJ11	110V	170V	3kA	5kA	250V	RJ11	28
CZLB-RJ45	5V	8V	3kA	5kA	40V	RJ45	28
CZLB-5BNC	5V	8V	3kA	5kA	40V	video	29
CZLB-5BNC-2	220V	320V	5kA	10kA	900V	video and power	29
CZLB-5BNC-3	24V	32V	3kA	5kA	40V	video, power and control	29

SPDs for Potentially Explosive Areas (5V system)

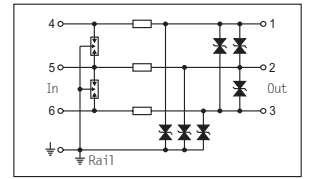
Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Intrinsically safe certification
- Suitable for RTD, TC, etc.

CZLB-5-EX (R2)



CZLB-5-EX (R3)



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level U_p
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

2-wire

5V
6V
250mA
5kA
10kA
40V
10MHz
10ns
4.7 Ω
-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
IP 20
PA66 / V2
GB/T 18802.21-2004

3-wire

5V
6V
250mA
5kA
10kA
40V
10MHz
10ns
4.7 Ω
-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
IP 20
PA66 / V2
GB/T 18802.21-2004

Certification

Intrinsically safe certification
NEPSI
Lighting protection performance test

Ex ia IIC T4 ~ T6

$U_i=6V, I_i=250mA, P_i=1.3W$

$L_i=0mH, C_i=0\mu F$

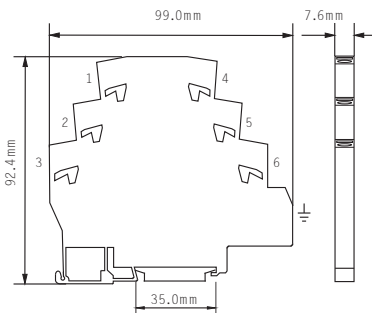
Ex ia IIC T4 ~ T6

$U_i=6V, I_i=250mA, P_i=1.3W$

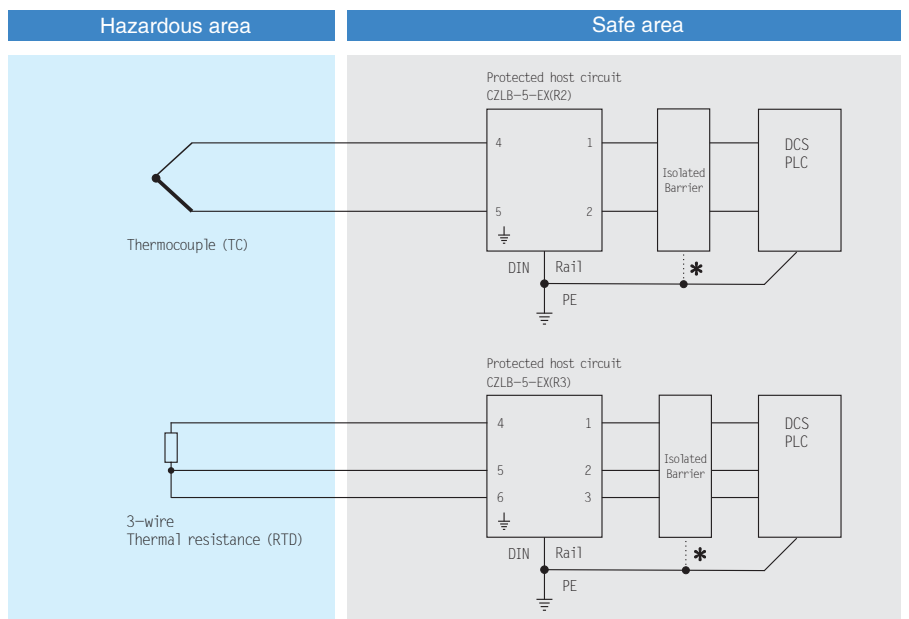
$L_i=0mH, C_i=0\mu F$

Shanghai Lightning Protection Center

Dimensions



Typical application



* Note: grounding of Zenzer barrier should be connected with SPD ground.



SPDs for Potentially Explosive Areas (12V system)

Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Intrinsically safe certification
- Suitable for proximity switch, etc.

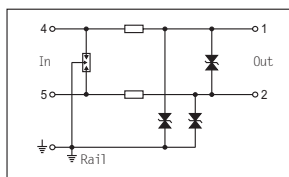
Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level U_p
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

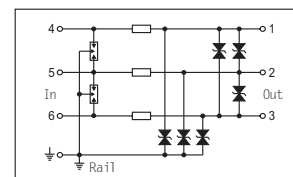
Certification

Intrinsically safe certification
NEPSI
Lighting protection performance test

CZLB-12-EX (K2)



CZLB-12-EX (K3)

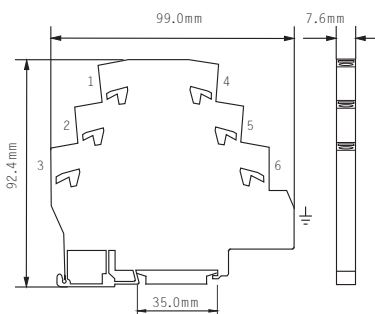


	2-wire	3-wire
Nominal voltage U_n (DC)	12V	12V
Max. continuous operating voltage U_c (DC)	15V	15V
Rated load current I_L (DC)	250mA	250mA
Nominal discharge current I_n (8/20 μ s)	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA
Protection level U_p	50V	50V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz
Response time	10ns	10ns
Resistance per path	4.7 Ω	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PA66 / V2	PA66 / V2
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

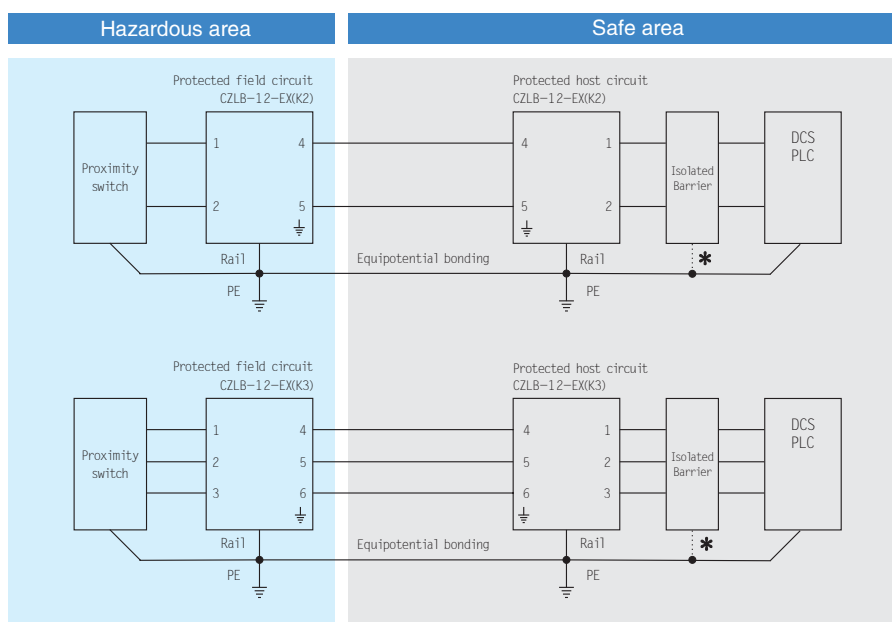
Intrinsically safe certification	Ex ia IIC T4 ~ T6	Ex ia IIC T4 ~ T6
NEPSI	$U_i=1.5V, I_i=250mA, P_i=1.3W$	$U_i=1.5V, I_i=250mA, P_i=1.3W$
Lighting protection performance test	$L_i=0mH, C_i=0\mu F$	$L_i=0mH, C_i=0\mu F$

Shanghai Lightning Protection Center

Dimensions



Typical application



* Note: grounding of Zenzer barrier should be connected with SPD ground.



SPDs for Potentially Explosive Areas (24V system)

Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Intrinsically safe certification
- Suitable for transmitter, switch, flowmeter, valve positioner, etc.

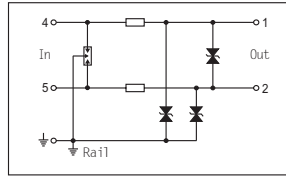
Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level Up
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

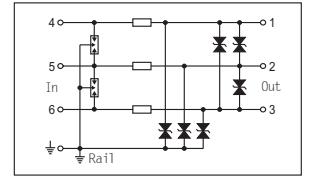
Certification

Intrinsically safe certification
NEPSI
Lighting protection performance test

CZLB-24-EX (B2)



CZLB-24-EX (B3)

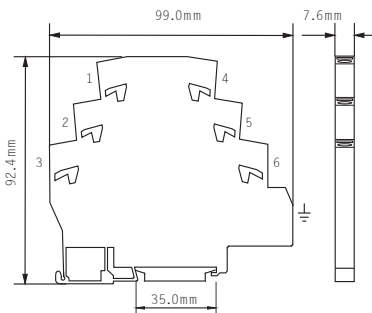


	2-wire	3-wire
Nominal voltage U_n (DC)	24V	24V
Max. continuous operating voltage U_c (DC)	32V	32V
Rated load current I_L (DC)	250mA	250mA
Nominal discharge current I_n (8/20 μ s)	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA
Protection level Up	60V	60V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz
Response time	10ns	10ns
Resistance per path	4.7 Ω	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PA66 / V2	PA66 / V2
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

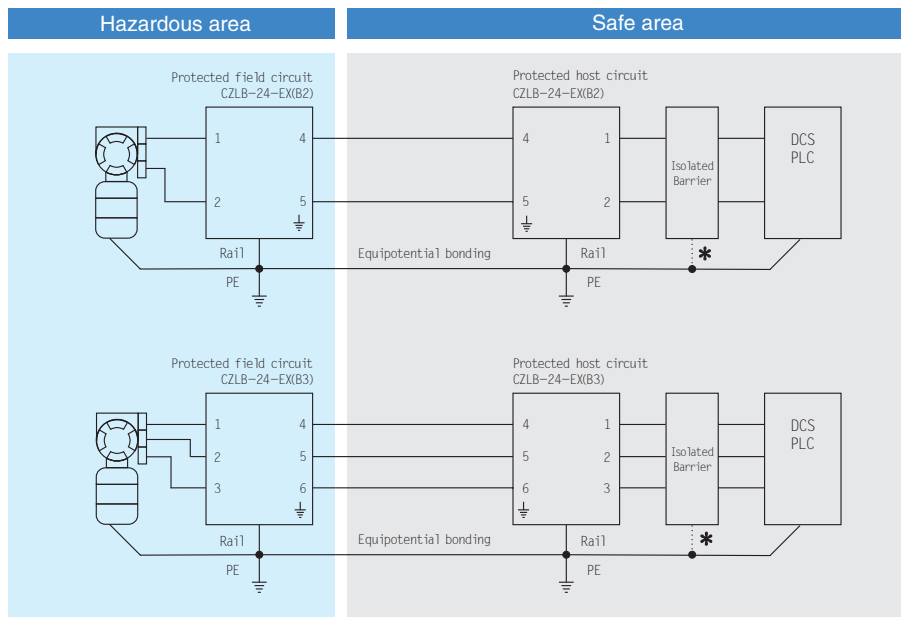
Intrinsically safe certification	Ex ia IIC T4 ~ T6	Ex ia IIC T4 ~ T6
NEPSI	$U_i=32V, I_i=250mA, P_i=1.3W$	$U_i=32V, I_i=250mA, P_i=1.3W$
Lighting protection performance test	$L_i=0mH, C_i=0\mu F$	$L_i=0mH, C_i=0\mu F$

Shanghai Lightning Protection Center

Dimensions



Typical application



* Note: grounding of Zenzer barrier should be connected with SPD ground.



SPDs for Potentially Explosive Areas (industrial communication system)

Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Intrinsically safe certification
- Suitable for RS-232/RS-485 interfaces, etc.

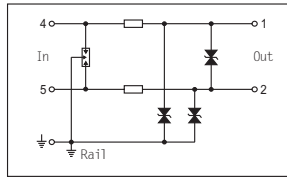
Technical Data

Nominal voltage U_n (DC)	5V
Max. continuous operating voltage U_c (DC)	6V
Rated load current I_L (DC)	250mA
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	40V
Voltage bandwidth (-0.5 dB)	10MHz
Response time	10ns
Resistance per path	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PA66 / V2
Testing standard	GB/T 18802.21-2004

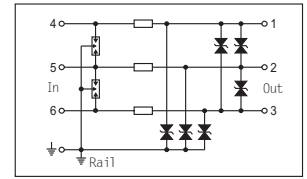
Certification

Intrinsically safe certification	Ex ia IIC T4 ~ T6
NEPSI	$U_i=6V, I_i=250mA, P_i=1.3W$
Lighting protection performance test	$L_i=0mH, C_i=0\mu F$

CZLB-5-EX (T2)



CZLB-12-EX (T3)



2-wire, RS-485

Nominal voltage U_n (DC)	5V
Max. continuous operating voltage U_c (DC)	6V
Rated load current I_L (DC)	250mA
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	40V
Voltage bandwidth (-0.5 dB)	10MHz
Response time	10ns
Resistance per path	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PA66 / V2
Testing standard	GB/T 18802.21-2004

3-wire, RS-232

Nominal voltage U_n (DC)	12V
Max. continuous operating voltage U_c (DC)	15V
Rated load current I_L (DC)	250mA
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	50V
Voltage bandwidth (-0.5 dB)	10MHz
Response time	10ns
Resistance per path	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PA66 / V2
Testing standard	GB/T 18802.21-2004

Ex ia IIC T4 ~ T6

$U_i=6V, I_i=250mA, P_i=1.3W$

$L_i=0mH, C_i=0\mu F$

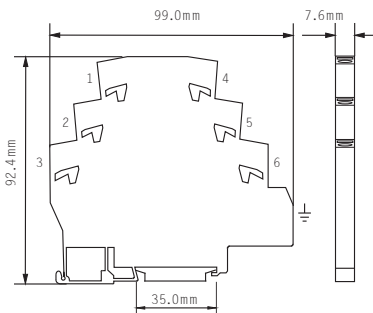
Ex ia IIC T4 ~ T6

$U_i=15V, I_i=250mA, P_i=1.3W$

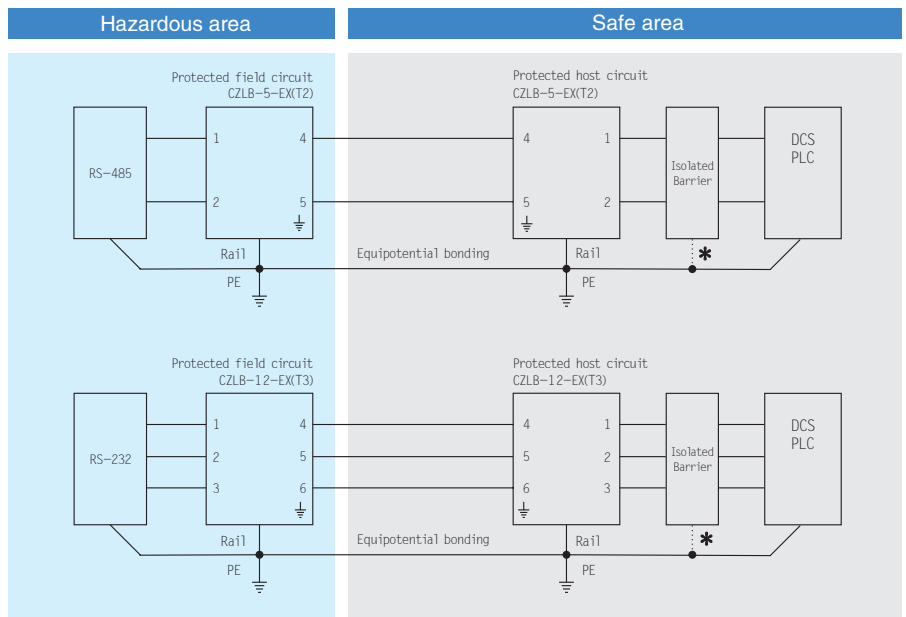
$L_i=0mH, C_i=0\mu F$

Shanghai Lightning Protection Center

Dimensions



Typical application



* Note: grounding of Zenzer barrier should be connected with SPD ground.

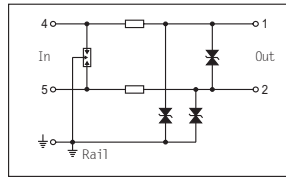


SPDs for Signal Circuits (5V system)

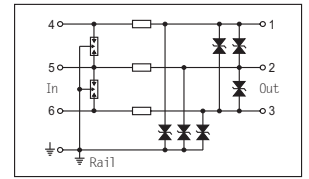
Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Suitable for RTD, TC, etc.

CZLB-5 (R2)



CZLB-5 (R3)



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level Up
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

2-wire

5V
6V
250mA
5kA
10kA
40V
10MHz
10ns
4.7 Ω
-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
IP 20
PA66 / V2
GB/T 18802.21-2004

3-wire

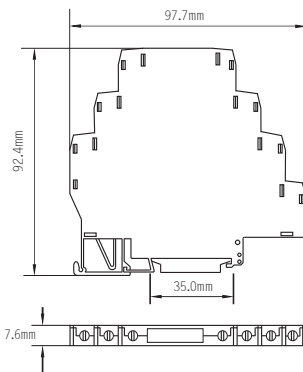
5V
6V
250mA
5kA
10kA
40V
10MHz
10ns
4.7 Ω
-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
IP 20
PA66 / V2
GB/T 18802.21-2004

Certification

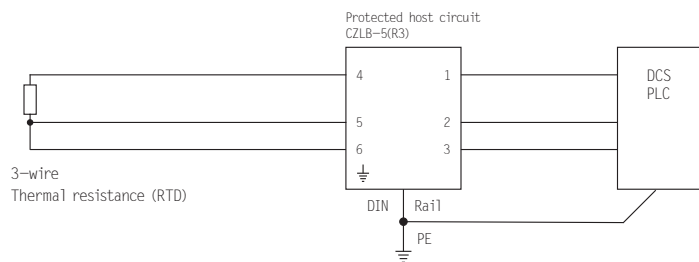
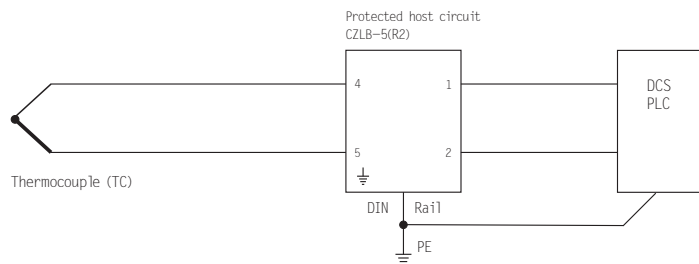
Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions



Typical application

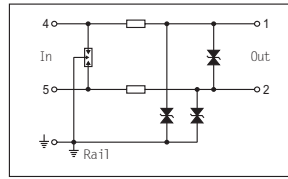


SPDs for Signal Circuits (12V system)

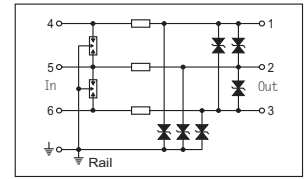
Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Suitable for RS-232/RS-485 interfaces, etc.

CZLB-12 (K2)



CZLB-12 (K3)



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level U_p
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

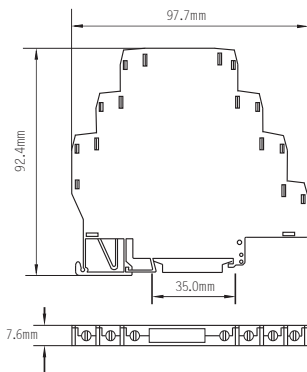
	2-wire	3-wire
Nominal voltage U_n (DC)	12V	12V
Max. continuous operating voltage U_c (DC)	15V	15V
Rated load current I_L (DC)	250mA	250mA
Nominal discharge current I_n (8/20 μ s)	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA
Protection level U_p	50V	50V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz
Response time	10ns	10ns
Resistance per path	4.7 Ω	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PA66 / V2	PA66 / V2
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

Certification

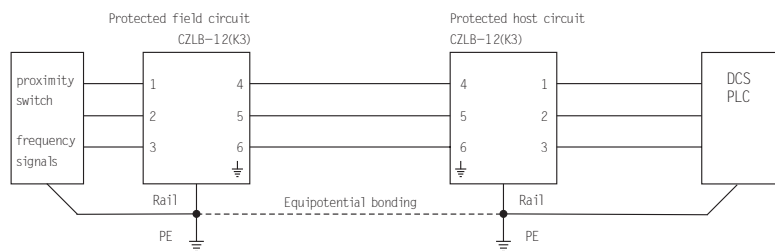
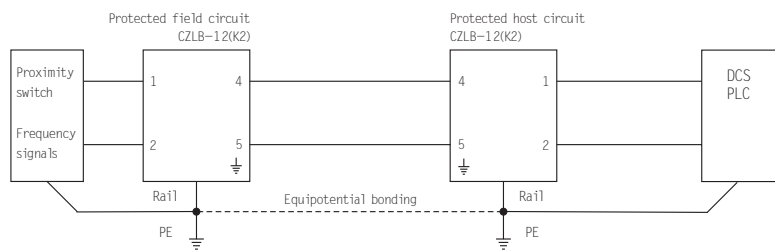
Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions



Typical application

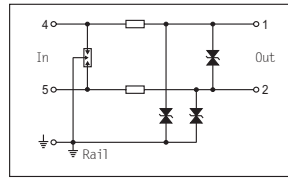


SPDs for Signal Circuits (24V system)

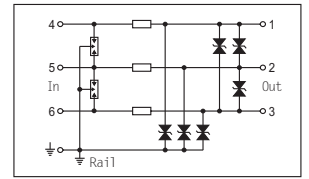
Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Suitable for transmitter, switch, flowmeter, valve positioner, etc.

CZLB-24 (B2)



CZLB-24 (B3)



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level U_p
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

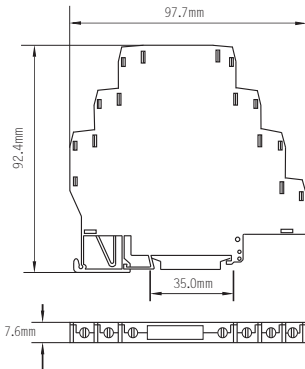
	2-wire	3-wire
Nominal voltage U_n (DC)	24V	24V
Max. continuous operating voltage U_c (DC)	32V	32V
Rated load current I_L (DC)	250mA	250mA
Nominal discharge current I_n (8/20 μ s)	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA
Protection level U_p	60V	60V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz
Response time	10ns	10ns
Resistance per path	4.7 Ω	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PA66 / V2	PA66 / V2
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

Certification

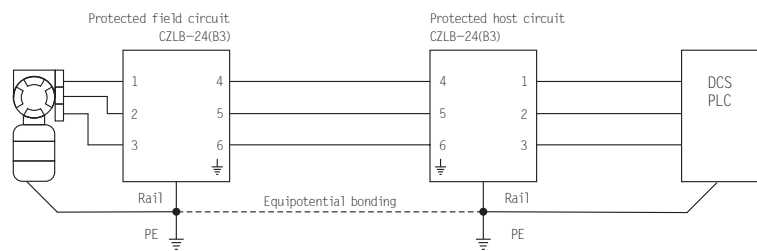
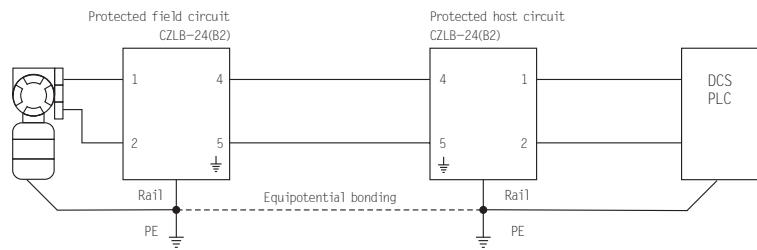
Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions



Typical application

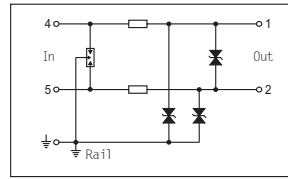


SPDs for Signal Circuits (industrial communication system)

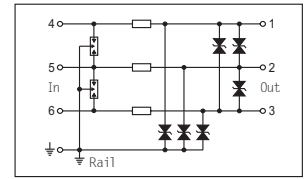
Features

- Space-saving width of just 7.6mm
- Low resistance, high bandwidth
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Suitable for RS-232/RS-485 interfaces, etc.

CZLB-5 (T2)



CZLB-12 (T3)



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Rated load current I_L (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level U_p
Voltage bandwidth (-0.5 dB)
Response time
Resistance per path
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard

2-wire, RS-485

Nominal voltage U_n (DC)	5V
Max. continuous operating voltage U_c (DC)	6V
Rated load current I_L (DC)	250mA
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	40V
Voltage bandwidth (-0.5 dB)	10MHz
Response time	10ns
Resistance per path	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PA66 / V2
Testing standard	GB/T 18802.21-2004

3-wire, RS-232

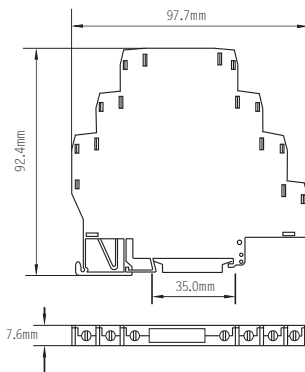
Nominal voltage U_n (DC)	12V
Max. continuous operating voltage U_c (DC)	15V
Rated load current I_L (DC)	250mA
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	50V
Voltage bandwidth (-0.5 dB)	10MHz
Response time	10ns
Resistance per path	4.7 Ω
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PA66 / V2
Testing standard	GB/T 18802.21-2004

Certification

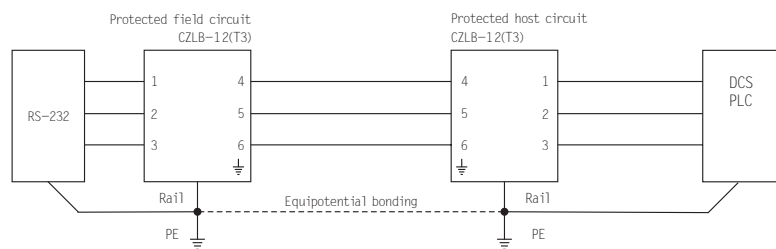
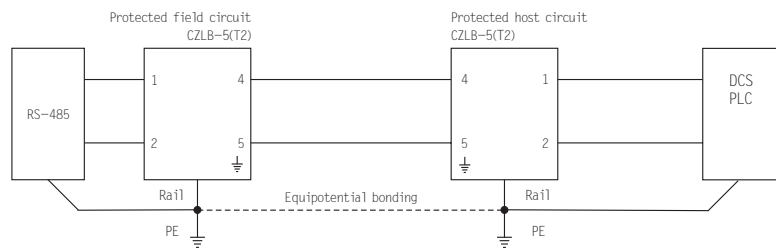
Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions



Typical application



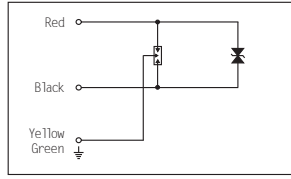
Shanghai Lightning Protection Center

SPDs for Field Devices

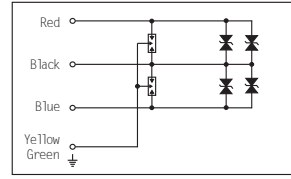
Features

- Easy installation in a separate cable gland of field devices
- Parallel connection avoids introducing any resistance into loop
- 10kA (8/20 μs) maximum surge current
- Protects 2/3/4-wire transmitters, etc.

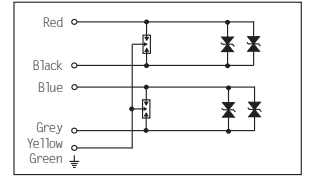
CZLBX-48-□



CZLBX-48-□3



CZLBX-48-□4



Technical Data

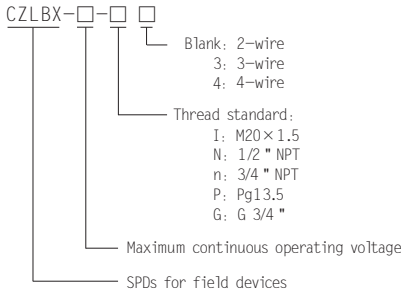
	2-wire	3-wire	4-wire
Nominal voltage U_n (DC)	24V	24V	24V
Max. continuous operating voltage U_c (DC)	48V	48V	48V
Rated load current I_L (DC)	5kA	5kA	5kA
Max. discharge current I_{max} (8/20 μs)	10kA	10kA	10kA
Protection level U_p (line to line)	85V	85V	85V
Protection level U_p (line to ground)	600V	600V	600V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz	10MHz
Response time	10ns	10ns	10ns
Ambient temperature (working)	-40°C ~ +80°C	-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 65	IP 65	IP 65
Housing material	ANSI 304 stainless steel	ANSI 304 stainless steel	ANSI 304 stainless steel
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004	GB/T 18802.21-2004

Certification

Lighting protection performance test

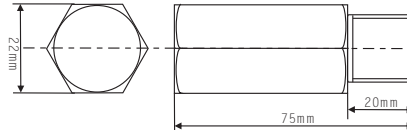
Shanghai Lightning Protection Center

Model Designations

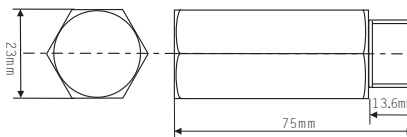


Dimensions

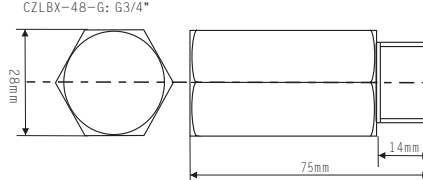
CZLBX-48-I: M20×1.5
CZLBX-48-P: Pg13.5



CZLBX-48-N: 1/2"NPT



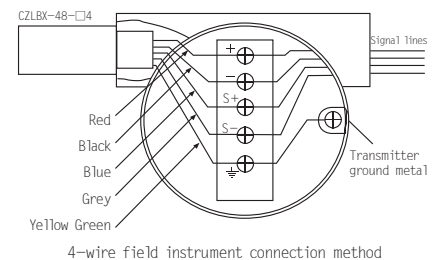
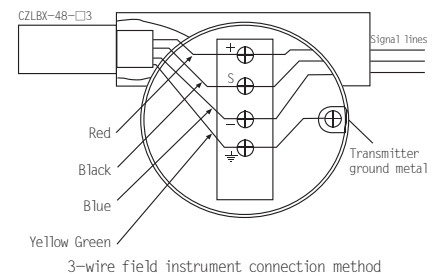
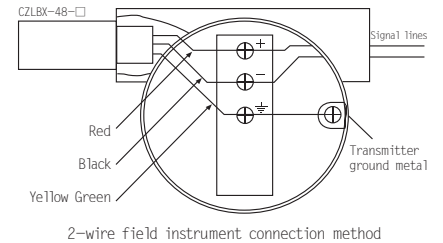
CZLBX-48-n: 3/4"NPT
CZLBX-48-G: G3/4"



Note: Wire size 32/0.2 (1.0mm², 18AWG), length 150mm;
Tin at the end of 10mm.



Typical application



SPDs for Field Devices (potentially explosive areas)

Features

- Easy installation on the space cable gland of field devices
- Parallel connection avoids introduction of any resistance into loop
- 10kA (8/20 μ s) maximum surge current
- Intrinsically safe and flameproof certification
- Protects 2/3/4-wire transmitters, etc.

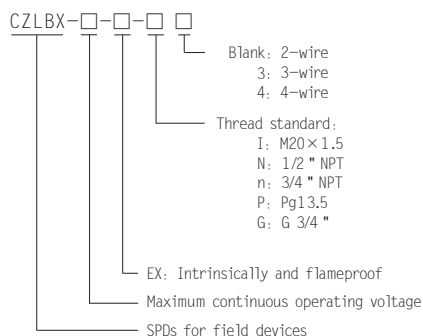
Technical Data

	2-wire	3-wire	4-wire
Nominal voltage U_n (DC)	24V	24V	24V
Max. continuous operating voltage U_c (DC)	48V	48V	48V
Rated load current I_L (DC)	5kA	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA	10kA
Protection level U_p (line to line)	85V	85V	85V
Protection level U_p (line to ground)	600V	600V	600V
Voltage bandwidth (-0.5 dB)	10MHz	10MHz	10MHz
Response time	10ns	10ns	10ns
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 65	IP 65	IP 65
Housing material	ANSI 304 stainless steel	ANSI 304 stainless steel	ANSI 304 stainless steel
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004	GB/T 18802.21-2004

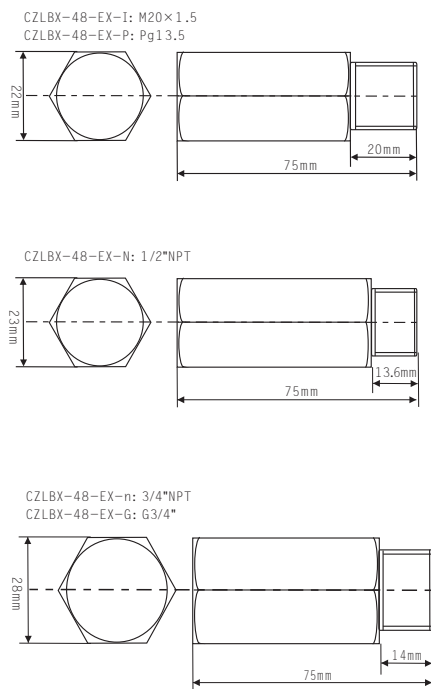
Certification

Intrinsically safe certification	Ex d IIC T4 ~ T6; Ex ia IIC T4 ~ T6	Ex d IIC T4 ~ T6; Ex ia IIC T4 ~ T6	Ex d IIC T4 ~ T6; Ex ia IIC T4 ~ T6
NEPSI	$U_i=50V, I_i=32mA, P_i=0.4W$ $L_i=0mH, C_i=0\mu F$	$U_i=50V, I_i=32mA, P_i=0.4W$ $L_i=0mH, C_i=0\mu F$	$U_i=50V, I_i=32mA, P_i=0.4W$ $L_i=0mH, C_i=0\mu F$
Lighting protection performance test	Shanghai Lightning Protection Center		

Model Designations

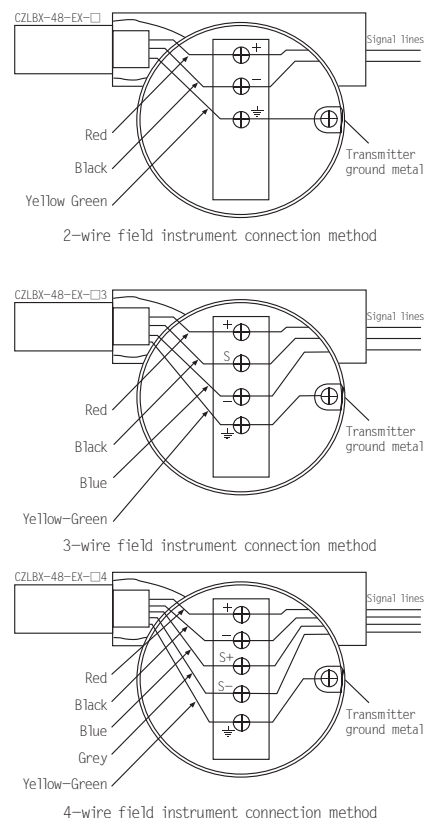


Dimensions



Note: Wire size 32/0.2 (1.0mm², 18AWG), length 150.0mm;
Tin at the end of 10.0mm.

Typical application

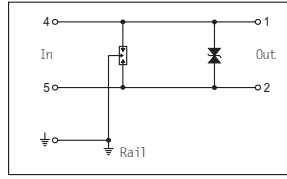


SPDs for DC Power Supply Systems (24V/48V)

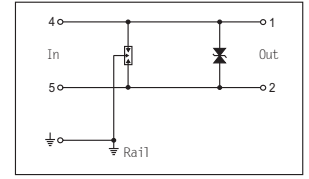
Features

- Space-saving width of just 7.6mm
- 10kA (8/20 μ s) maximum surge current
- Earthing via terminal or DIN rail
- Suitable for DC power supply system

CZLB-24P



CZLB-48P



Technical Data

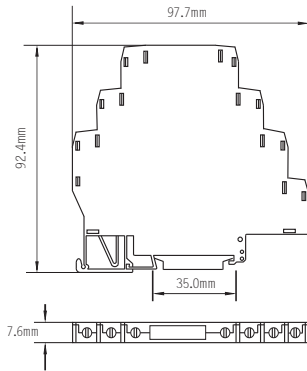
Nominal voltage U_n (DC)	24V	48V
Max. continuous operating voltage U_c (DC)	32V	60V
Rated load current I_L (DC)	5A/10A	5A/10A
Nominal discharge current I_n (8/20 μ s)	5kA	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA	10kA
Protection level U_p (line to line)	85V	85V
Protection level U_p (line to ground)	600V	600V
Response time	10ns	10ns
Ambient temperature (working)	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PA66 / V2	PA66 / V2
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

Certification

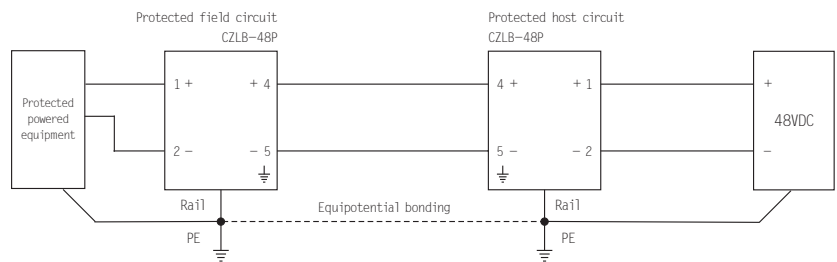
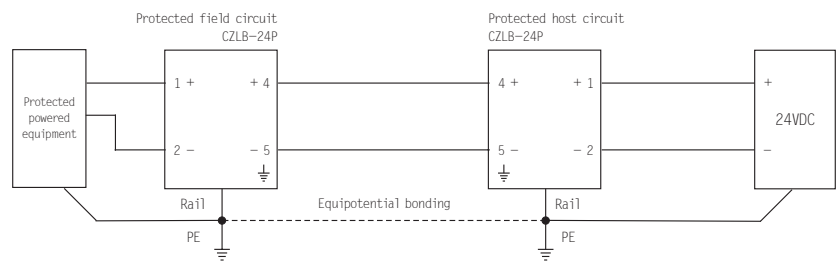
Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions



Typical application

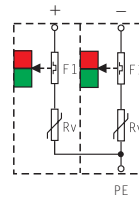


SPDs for DC Power Supply Systems (110V/220V)

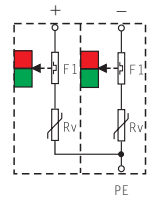
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for DC power supply system

CZLB-110P



CZLB-220P



Technical Data

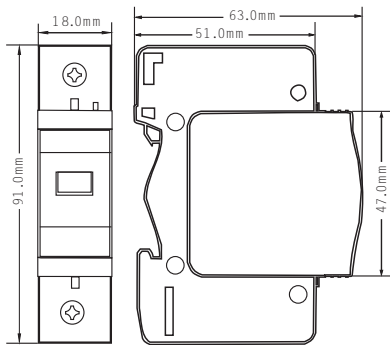
Nominal voltage U_n (DC)	110V	220V
Max. continuous operating voltage U_c (DC)	220V	320V
Nominal discharge current I_n (8/20 μ s)	20kA	20kA
Max. discharge current I_{max} (8/20 μ s)	40kA	40kA
Protection level U_p	700V	800V
Overcurrent protection	25~40A	25~40A
Response time	25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002	GB 18802.1-2002

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)

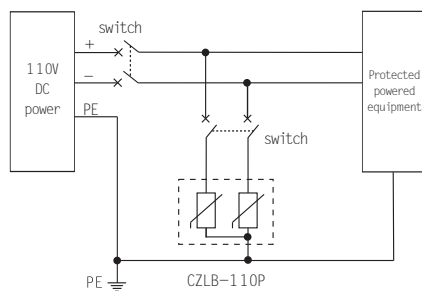


63.0mm × 91.0mm × 36.0mm

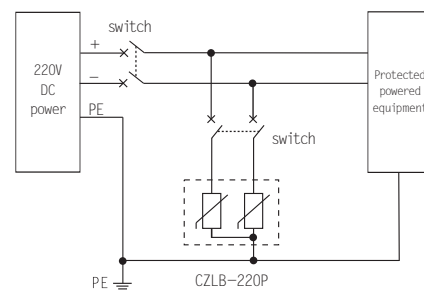


63.0mm × 91.0mm × 36.0mm

Typical application



110VDC power supply system



220VDC power supply system



Shanghai Lightning Protection Center

SPDs – Class I (High capacity)

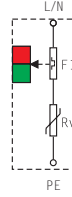
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

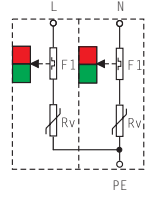
Technical Data

Nominal voltage U_n (DC)	220VAC
Max. continuous operating voltage U_c (DC)	440VAC
Nominal discharge current I_n (8/20 μ s)	65kA
Max. discharge current I_{max} (8/20 μ s)	100kA
Protection level Up	<2900V
Overcurrent protection	100A
Response time	25ns
Ambient temperature (working)	-40°C ~ +80°C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PBT / V0
Testing standard	GB 18802.1-2002
Network type	

CZLB-100/440/1P



CZLB-100/440/2P

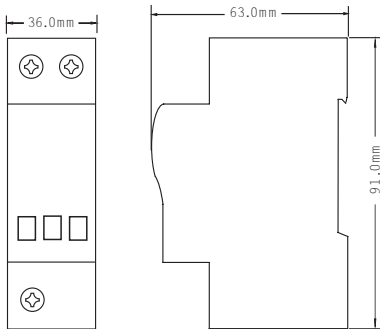


Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)

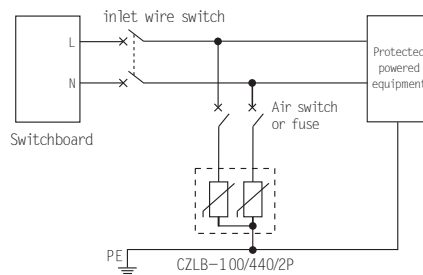


63.0mm × 91.0mm × 36.0mm

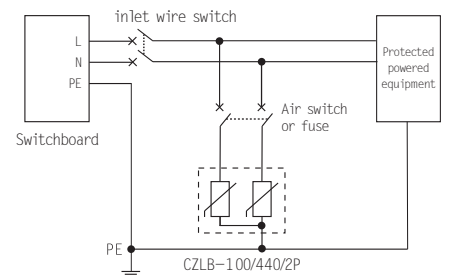


63.0mm × 91.0mm × 72.0mm

Typical application



Single-phase, 2-wire network



Single-phase, 3-wire network



Shanghai Lightning Protection Center

SPDs – Class I (High capacity)

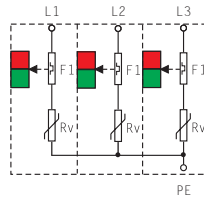
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

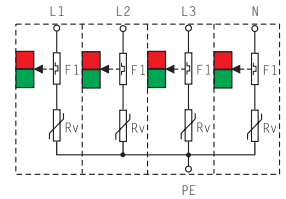
Technical Data

Nominal voltage Un (DC)
Max. continuous operating voltage Uc (DC)
Nominal discharge current In (8/20 μs)
Max. discharge current Imax (8/20 μs)
Protection level Up
Overcurrent protection
Response time
Ambient temperature (working)
Protection rating
Housing material / Case flammability (UL94)
Testing standard
Network type

CZLB-100/440/3P



CZLB-100/440/4P



220VAC
440VAC
65kA
100kA
<2900V
100A
25ns
-40°C ~ +80°C
IP 20
PBT / V0
GB 18802.1-2002
Three-phase, 3-wire network (IT system)
Three-phase, 4-wire network (TN-C system)

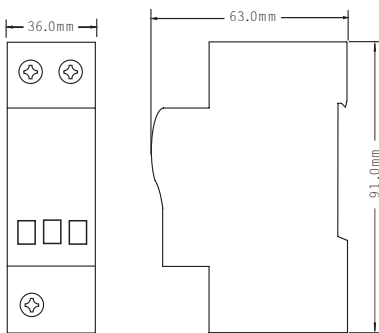
220VAC
440VAC
65kA
100kA
<2900V
100A
25ns
-40°C ~ +80°C
IP 20
PBT / V0
GB 18802.1-2002
Three-phase, 5-wire network (TN-S system)

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)

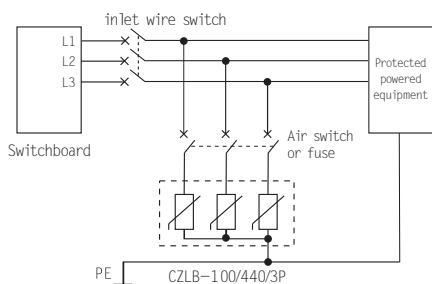


63.0mm × 91.0mm × 108.0mm

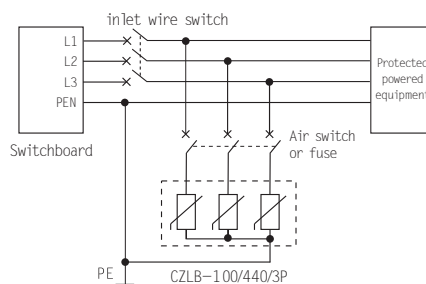


63.0mm × 91.0mm × 144.0mm

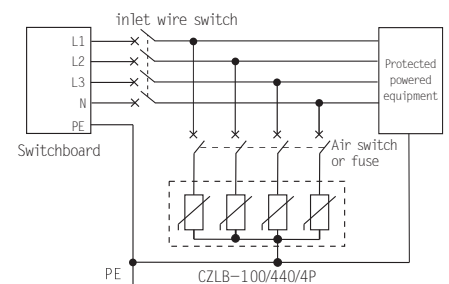
Typical application



Three-phase, 3-wire network (IT system)



Three-phase, 4-wire network (TN-C system)



Three-phase, 5-wire network (TN-S system)

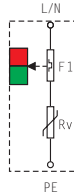


SPDs – Class I

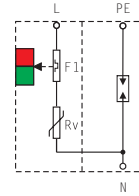
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

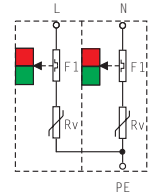
CZLB-65/440/1P



CZLB-65/440/1P+1



CZLB-65/440/2P



Technical Data

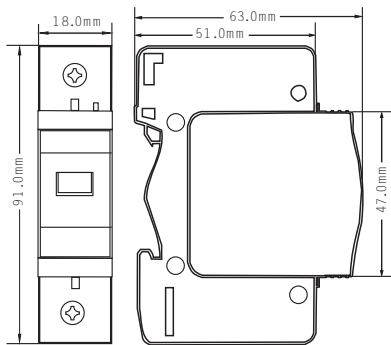
		CZLB-60/255	CZLB-65/440	
Nominal voltage U_n (DC)	220VAC		220VAC	220VAC
Max. continuous operating voltage U_c (DC)	440VAC	255VAC	440VAC	440VAC
Nominal discharge current I_n (8/20 μ s)	40kA	40kA	40kA	40kA
Max. discharge current I_{max} (8/20 μ s)	65kA	60kA	65kA	65kA
Protection level Up	<2800V	<1200V	<2800V	<2800V
Overcurrent protection	40A		40A	40A
Response time	25ns		25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C		-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20		IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0		PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002		GB 18802.1-2002	GB 18802.1-2002
Network type		Single-phase, 2-wire network		Single-phase, 2/3-wire network

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 18.0mm

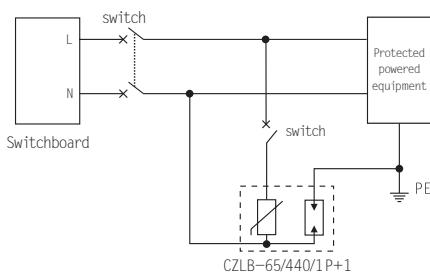


63.0mm × 91.0mm × 36.0mm

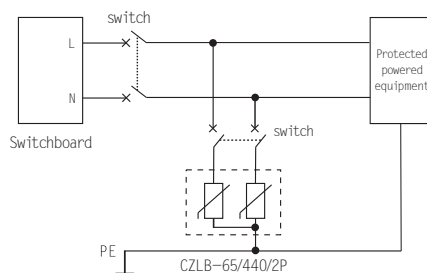


63.0mm × 91.0mm × 36.0mm

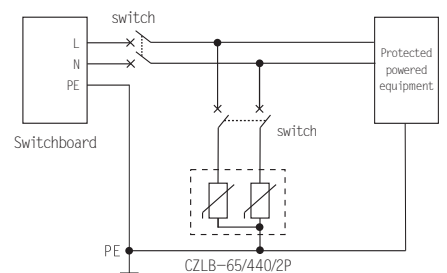
Typical application



Single-phase, 2-wire network



Single-phase, 2-wire network



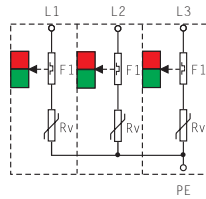
Single-phase, 3-wire network



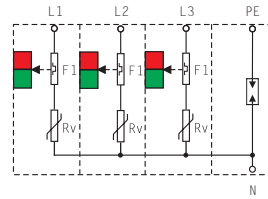
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

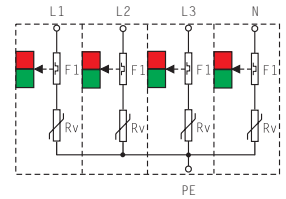
CZLB-65/440/3P



CZLB-65/440/3P+1



CZLB-65/440/4P



Technical Data

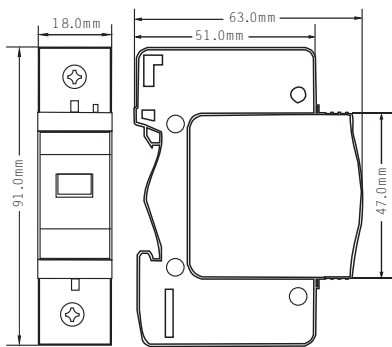
	CZLB-60/255	CZLB-65/440	
Nominal voltage U_n (DC)	220VAC	220VAC	220VAC
Max. continuous operating voltage U_c (DC)	440VAC	440VAC	440VAC
Nominal discharge current I_n (8/20 μ s)	40kA	40kA	40kA
Max. discharge current I_{max} (8/20 μ s)	65kA	65kA	65kA
Protection level Up	<2800V	<2800V	<2800V
Overcurrent protection	40A	40A	40A
Response time	25ns	25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C	-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20	IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0	PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002	GB 18802.1-2002	GB 18802.1-2002
Network type	Three-phase, 4-wire network (TN-C system)	Three-phase, 4-wire network (TT system)	Three-phase, 5-wire network (TN-S system)

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 54.0mm

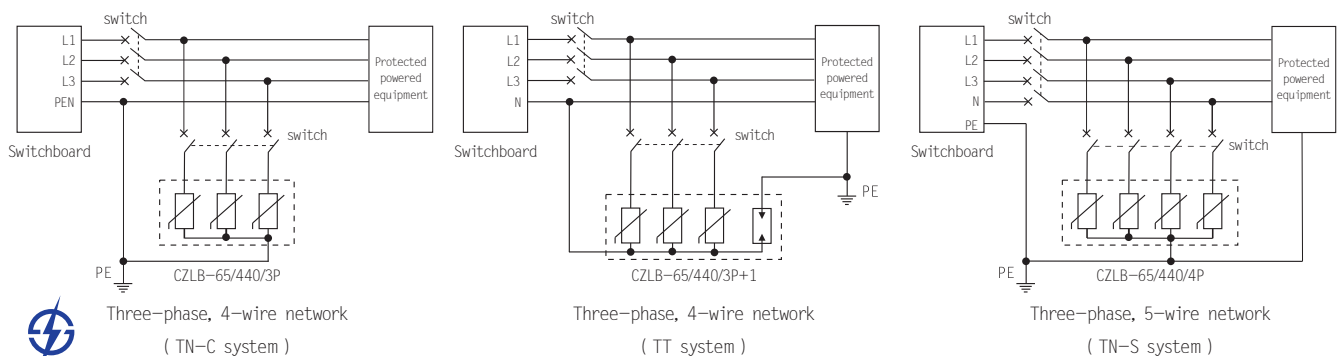


63.0mm × 91.0mm × 72.0mm



63.0mm × 91.0mm × 72.0mm

Typical application

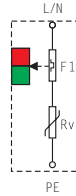


SPDs – Class II

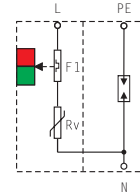
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

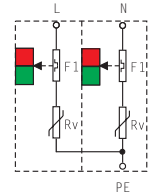
CZLB-40/440/1P



CZLB-40/440/1P+1



CZLB-40/440/2P



Technical Data

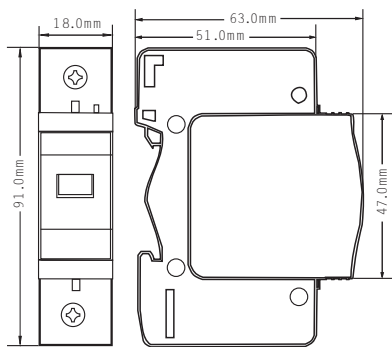
		CZLB-60/255	CZLB-40/440	
Nominal voltage U_n (DC)	220VAC		220VAC	220VAC
Max. continuous operating voltage U_c (DC)	440VAC	255VAC	440VAC	440VAC
Nominal discharge current I_n (8/20 μ s)	20kA	40kA	20kA	20kA
Max. discharge current I_{max} (8/20 μ s)	40kA	60kA	40kA	40kA
Protection level Up	<2200V	<1200V	<2200V	<2200V
Overcurrent protection	25~40A		25~40A	25~40A
Response time	25ns		25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C		-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20		IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0		PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002		GB 18802.1-2002	GB 18802.1-2002
Network type		Single-phase, 2-wire network		Single-phase, 2/3-wire network

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 18.0mm

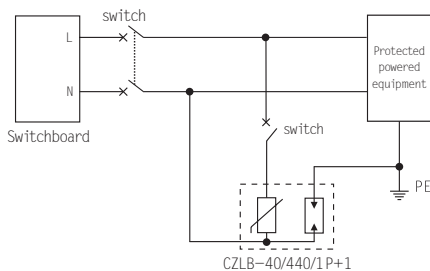


63.0mm × 91.0mm × 36.0mm

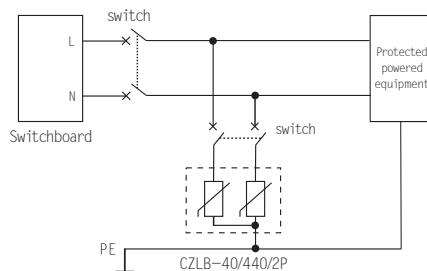


63.0mm × 91.0mm × 36.0mm

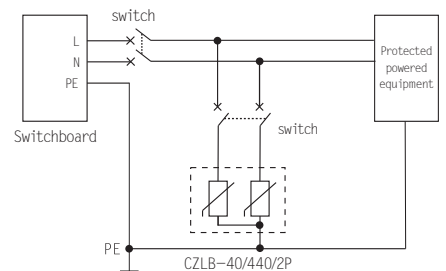
Typical application



Single-phase, 2-wire network



Single-phase, 2-wire network



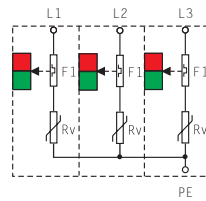
Single-phase, 3-wire network



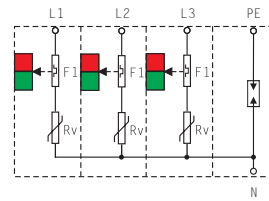
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

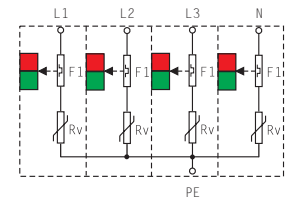
CZLB-40/440/3P



CZLB-40/440/3P+1



CZLB-40/440/4P



Technical Data

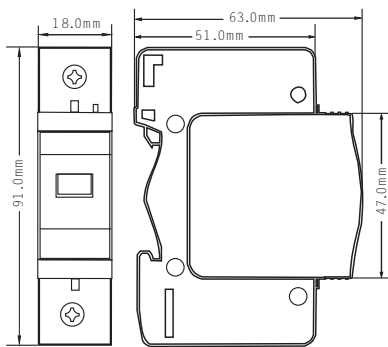
	CZLB-60/255	CZLB-40/440	
Nominal voltage U_n (DC)	220VAC	220VAC	220VAC
Max. continuous operating voltage U_c (DC)	440VAC	440VAC	440VAC
Nominal discharge current I_n (8/20 μ s)	20kA	40kA	20kA
Max. discharge current I_{max} (8/20 μ s)	40kA	60kA	40kA
Protection level Up	<2200V	<2200V	<2200V
Overcurrent protection	25~40A	25~40A	25~40A
Response time	25ns	25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C	-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20	IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0	PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002	GB 18802.1-2002	GB 18802.1-2002
Network type	Three-phase, 4-wire network (TN-C system)	Three-phase, 4-wire network (TT system)	Three-phase, 5-wire network (TN-S system)

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 54.0mm

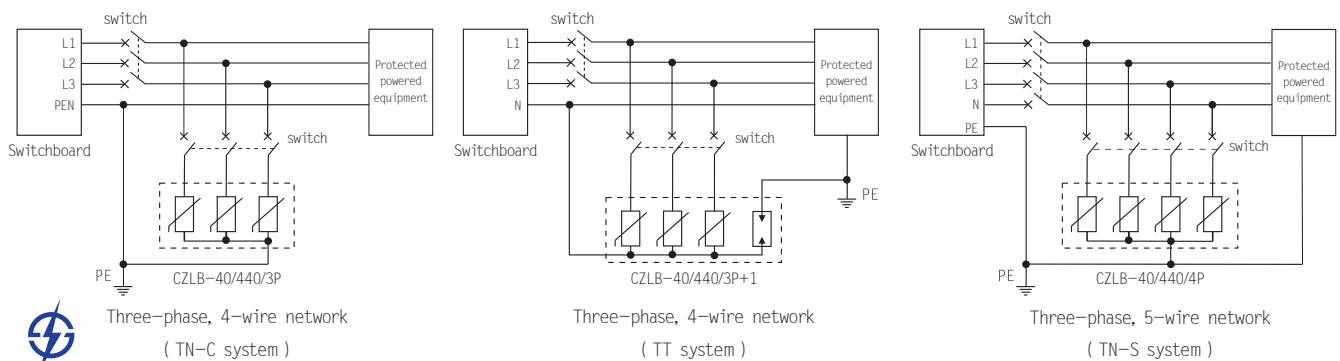


63.0mm × 91.0mm × 72.0mm



63.0mm × 91.0mm × 72.0mm

Typical application

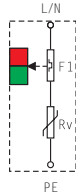


SPDs – Class III

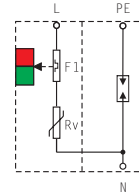
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

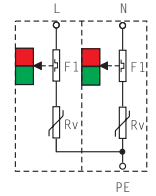
CZLB-20/320/1P



CZLB-20/320/1P+1



CZLB-20/320/2P



Technical Data

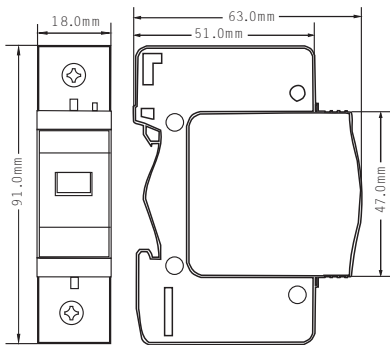
		CZLB-60/255	CZLB-20/320	
Nominal voltage U_n (DC)	220VAC		220VAC	220VAC
Max. continuous operating voltage U_c (DC)	320VAC	255VAC	440VAC	320VAC
Nominal discharge current I_n (8/20 μ s)	10kA	40kA	10kA	10kA
Max. discharge current I_{max} (8/20 μ s)	20kA	60kA	20kA	20kA
Protection level Up	<1500V	<1200V	<1500V	<1500V
Overcurrent protection	16~25A		16~25A	16~25A
Response time	25ns		25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C		-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20		IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0		PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002		GB 18802.1-2002	GB 18802.1-2002
Network type		Single-phase, 2-wire network		Single-phase, 2/3-wire network

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 18.0mm

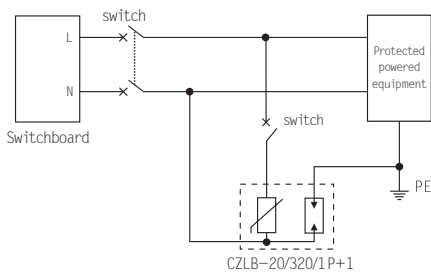


63.0mm × 91.0mm × 36.0mm

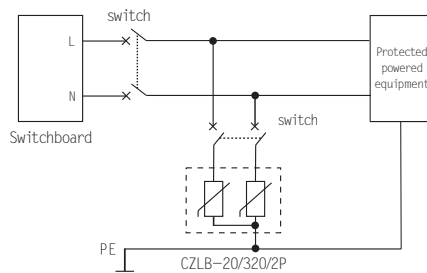


63.0mm × 91.0mm × 36.0mm

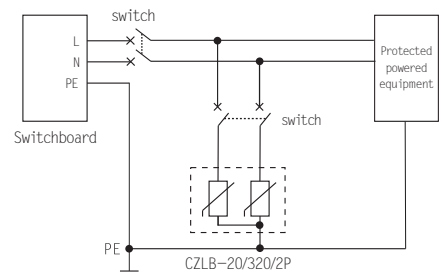
Typical application



Single-phase, 2-wire network



Single-phase, 2-wire network



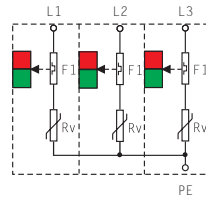
Single-phase, 3-wire network



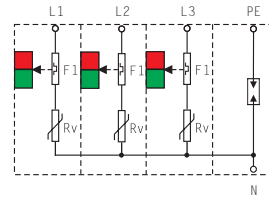
Features

- Operation status indication
- Dynamic cut-off unit
- Mounting on 35mm DIN rail
- Suitable for AC power supply system

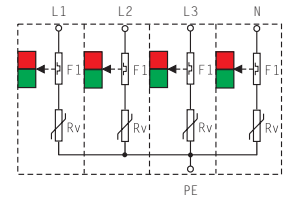
CZLB-20/320/3P



CZLB-20/320/3P+1



CZLB-20/320/4P



Technical Data

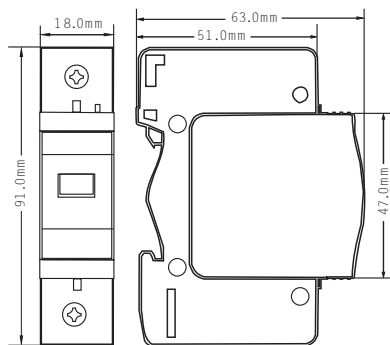
	CZLB-60/255	CZLB-20/320	
Nominal voltage U_n (DC)	220VAC	220VAC	220VAC
Max. continuous operating voltage U_c (DC)	320VAC	255VAC	320VAC
Nominal discharge current I_n (8/20 μ s)	10kA	40kA	10kA
Max. discharge current I_{max} (8/20 μ s)	20kA	60kA	20kA
Protection level Up	<1500V	<1200V	<1500V
Overcurrent protection	16~25A	16~25A	16~25A
Response time	25ns	25ns	25ns
Ambient temperature (working)	-40°C ~ +80°C	-40°C ~ +80°C	-40°C ~ +80°C
Protection rating	IP 20	IP 20	IP 20
Housing material / Case flammability (UL94)	PBT / V0	PBT / V0	PBT / V0
Testing standard	GB 18802.1-2002	GB 18802.1-2002	GB 18802.1-2002
Network type	Three-phase, 4-wire network (TN-C system)	Three-phase, 4-wire network (TT system)	Three-phase, 5-wire network (TN-S system)

Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions (Single piece)



63.0mm × 91.0mm × 54.0mm

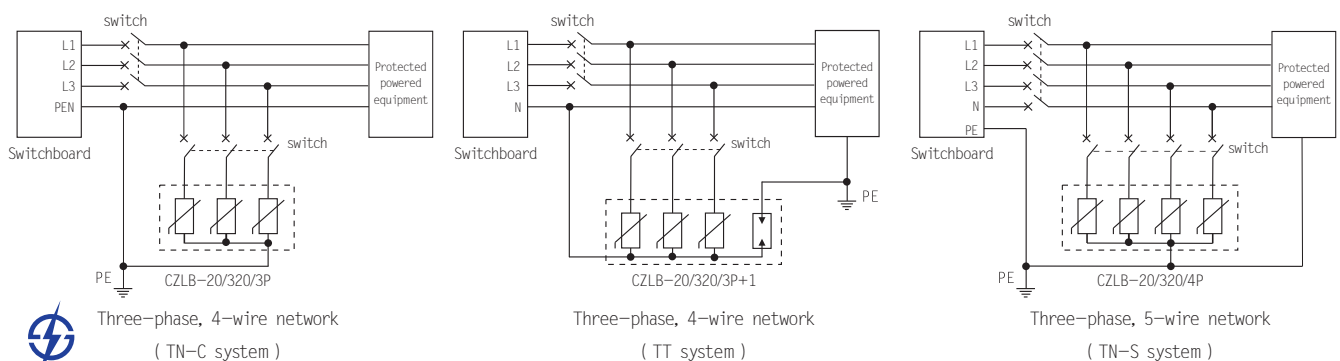


63.0mm × 91.0mm × 72.0mm



63.0mm × 91.0mm × 72.0mm

Typical application

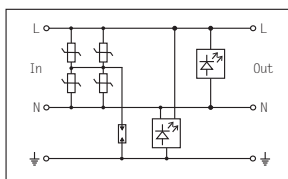


Wiring Board with Surge Protection

Features

- Operating LED indication
- Grounding LED indication
- 6 three-core universal sockets for protecting multiple devices at the same time
- Suitable for computer, printer, etc

CZLB-WB



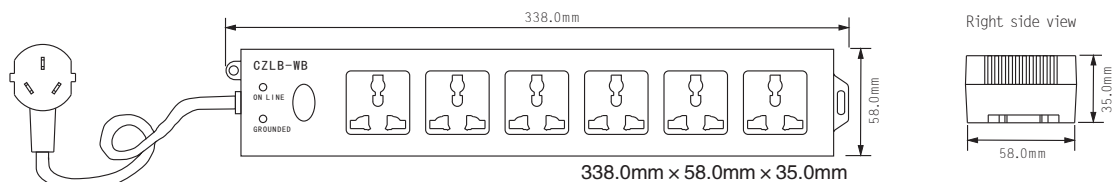
Technical Data

Nominal voltage U_n	220V
Max. continuous operating voltage U_c	320V
Rated power / Rated load current I_L (DC)	2500W / 10A
Nominal discharge current I_n (8/20 μ s)	5kA
Max. discharge current I_{max} (8/20 μ s)	10kA
Protection level U_p	700V
Response time	25ns
Ambient temperature (working)	-40°C ~ +80°C
Protection rating	IP 20
Housing material / Case flammability (UL94)	PBT / V0
Length of connection line	2m
Number of sockets	6
Connection system	Three-core universal socket
Testing standard	GB 18802.1-2002

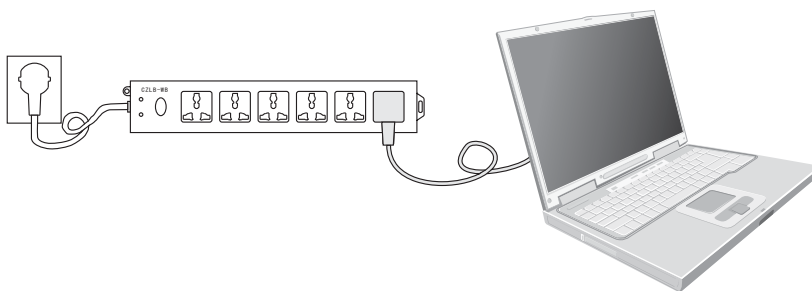
Product Certification

Lighting protection performance test	Shanghai Lightning Protection Center
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Dimensions



Typical application

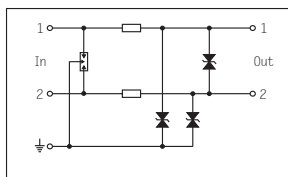


Features

- Good shielding properties with fully aluminum alloys housing
- Optional DIN rail mounting
- Suitable for telecommunication systems, fax, ADSL, ethernet, etc
- DIN rail module:
 - CZLB-RJ11/D
 - CZLB-RJ45/D

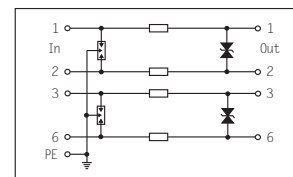
CZLB-RJ11 CZLB-RJ11/D

protection device for RJ11



CZLB-RJ45 CZLB-RJ45/D

protection device for RJ45



Technical Data

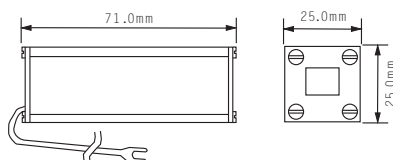
Nominal voltage U_n	110V	5V
Max. continuous operating voltage U_c	170V	8V
Nominal discharge current I_n (8/20 μ s)	3kA	3kA
Max. discharge current I_{max} (8/20 μ s)	5kA	5kA
Protection level U_p (line to line)	250V	40V
Protection level U_p (line to ground)	600V	600V
Voltage bandwidth (-0.5 dB)	10MHz	100MHz
Response time	10ns	10ns
Ambient temperature (working)	$-40^\circ\text{C} \sim +80^\circ\text{C}$	$-40^\circ\text{C} \sim +80^\circ\text{C}$
Protection rating	IP 20	IP 20
Housing material	Aluminum alloys	Aluminum alloys
Cores	2	4
Connection system	RJ11	RJ45
Testing standard	GB/T 18802.21-2004	GB/T 18802.21-2004

Product Certification

Lightning protection performance test

Shanghai Lightning Protection Center

Dimensions

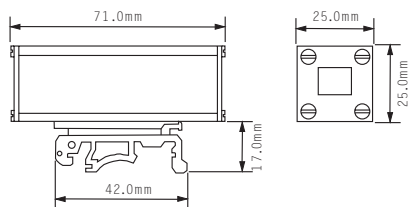


71.0mm × 25.0mm × 25.0mm

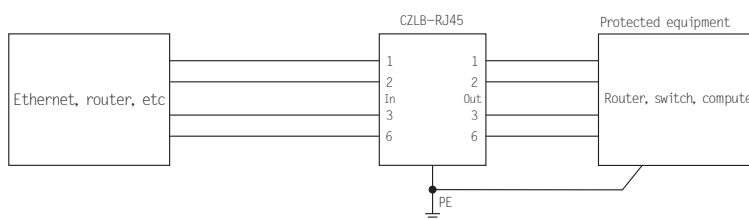
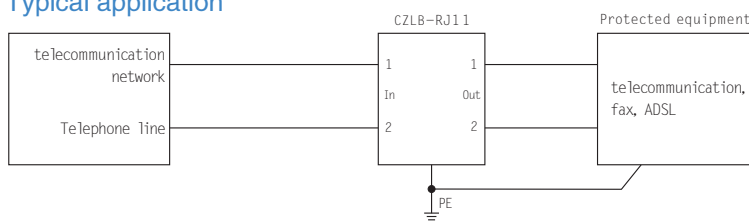


71.0mm × 25.0mm × 25.0mm

Dimensions (DIN rail module)



Typical application



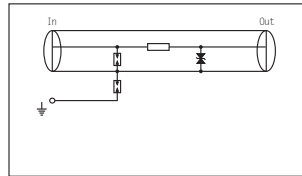
Shanghai Lightning Protection Center

SPDs for COAXIAL Connection

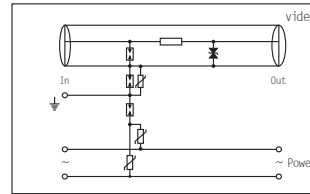
Features

- Good shielding properties with fully aluminum alloys housing
- Optional DIN rail mounting
- Suitable for video signal network
- DIN rail module
CZLB-5BNC/D

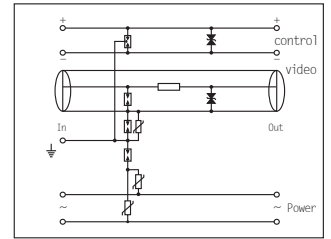
**CZLB-5BNC
CZLB-5BNC/D**
Surge protection
for video signal



CZLB-5BNC-2
Surge protection for
video signal and power supply



CZLB-5BNC-3
Surge protection for video signal,
power supply and control signal



Technical Data

Nominal voltage U_n (DC)
Max. continuous operating voltage U_c (DC)
Nominal discharge current I_n (8/20 μ s)
Max. discharge current I_{max} (8/20 μ s)
Protection level Up (line to line)
Protection level Up (line to ground)
Voltage bandwidth (-0.5 dB)
Response time
Ambient temperature (working)
Protection rating
Housing material
Connection system
Testing standard

Video
5V
8V
3kA
5kA
40V
600V
20MHz
10ns
-40°C ~ +80°C
IP 20
Aluminum alloys
BNC connection
GB/T 18802.21-2004

Power
220VAC
320VAC
5kA
10kA
40V
900V
10ns
-40°C ~ +80°C
IP 20
Aluminum alloys
Screw connection
GB 18802.1-2002

Control
24V
32V
3kA
5kA
40V
600V
10ns
-40°C ~ +80°C
IP 20
Aluminum alloys
Screw connection
GB/T 18802.21-2004

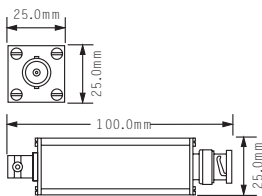
Product Certification

Lighting protection performance test

Shanghai Lightning Protection Center

Dimensions

CZLB-5BNC:



100.0mm × 25.0mm × 25.0mm

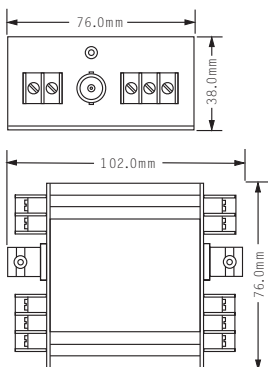


102.0mm × 76.0mm × 38.0mm

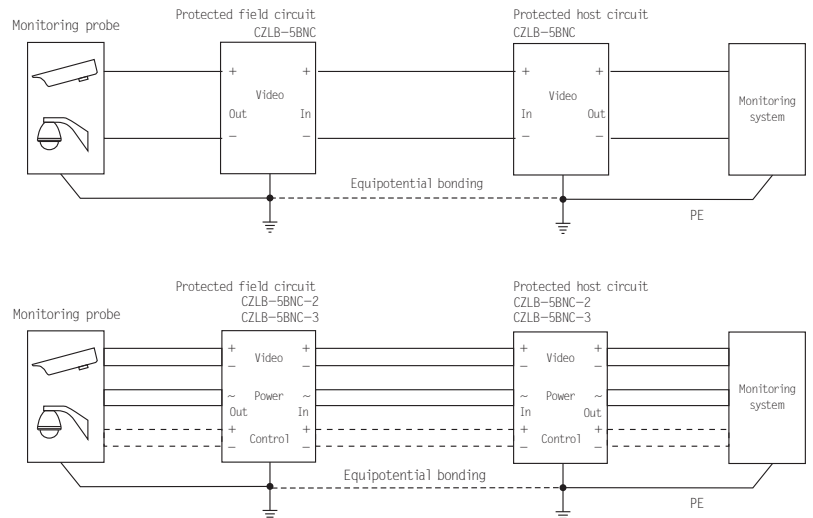


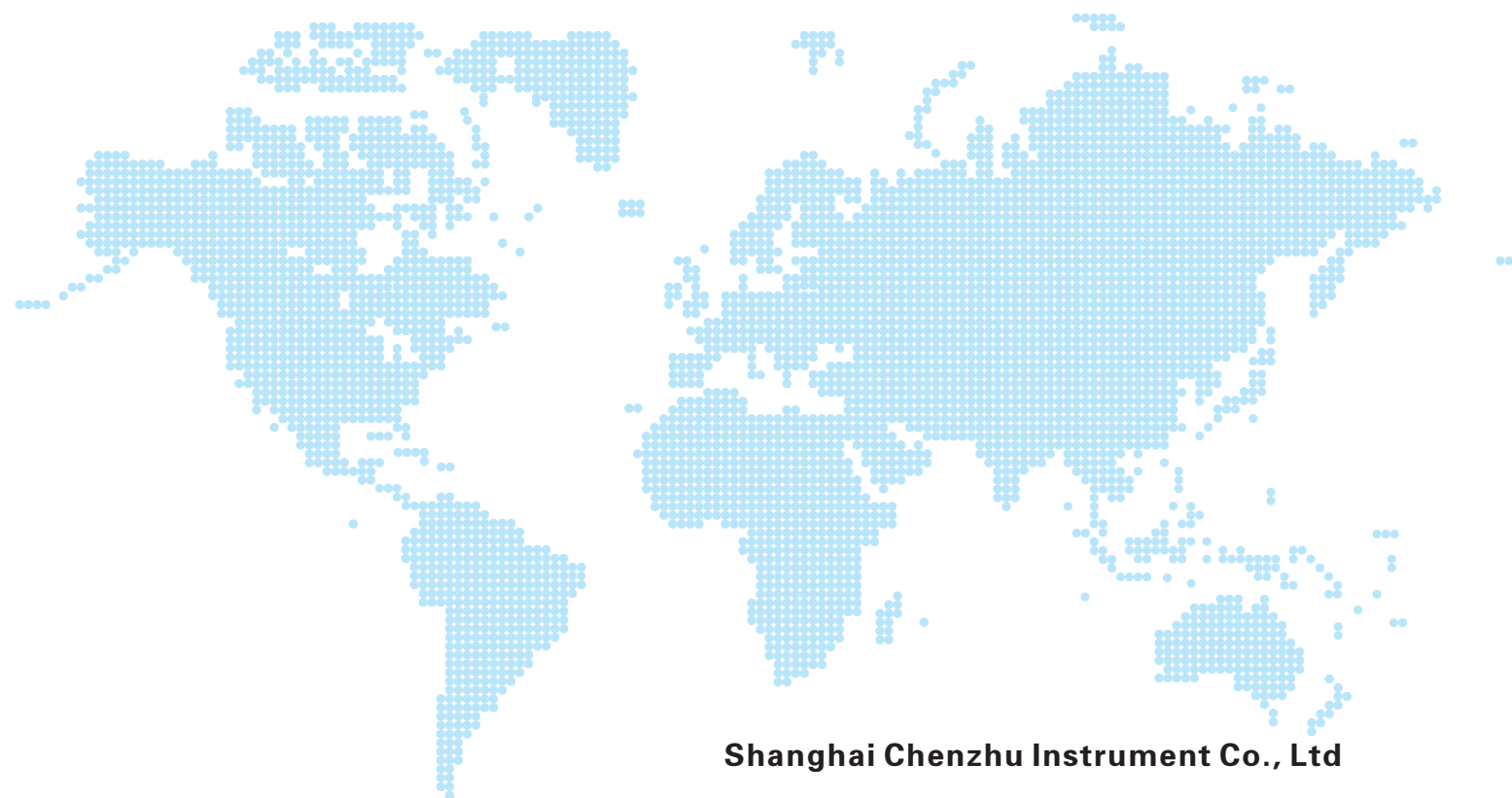
102.0mm × 76.0mm × 38.0mm

CZLB-5BNC-2
CZLB-5BNC-3:



Typical application





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