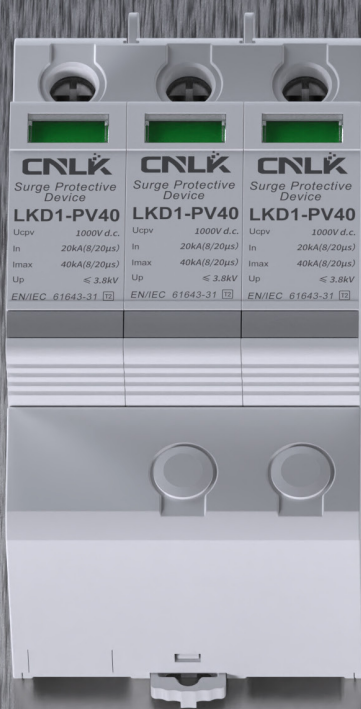


DC Surge Protective Devices

直流浪涌保护器



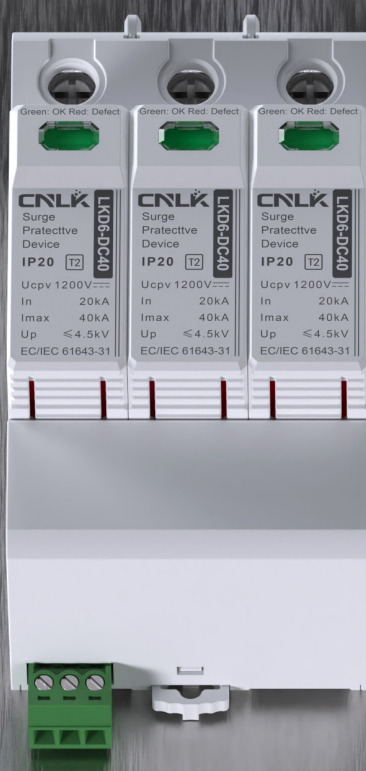
D1 Model



D3 Model



D4 Model

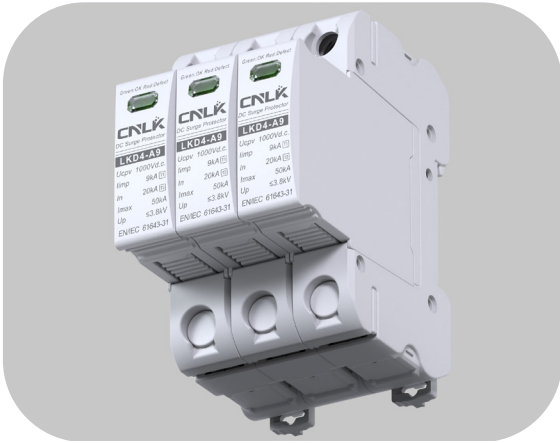


D6 Model



D8 Model

TYPE1+2 DC LKD4-9



可选模型

D1 Model

D3 Model

D4 Model



D6 Model

D8 Model

LKXX9系列采用压敏电阻(MOV)技术,适用于Type1+2直流浪涌保护,专为光伏系统及直流配电系统设计。提供600Vdc至1500Vdc多款型号,冲击电流最大12.5kA(10/350μs)。

The LKXX9 series adopts MOV technology for Type1+2 DC surge protection, designed for photovoltaic systems and DC power distribution. Available in 600Vdc to 1500Vdc models with impulse current up to 12.5kA (10/350us).

- Type 1+2 DC surge protection device
T1+T2型直流浪涌保护装置
- Impulse/maximum discharge current [Iimp/ Imax]:12.5kA / 50kA
脉冲/最大放电电流 [Iimp/Imax]: 9kA / 50kA
- Varistor voltage limiting technology, low residual voltage design
压敏电阻限压技术,低残余电压设计
- Pluggable design and internal thermal disconnection devices
可插拔式结构,内置热脱扣装置
- Operating /fault indication,optional remote signal
具备运行/故障指示功能,可选远程信号输出
- Conform to IEC 61643-31,EN 61643-31,GB/T 18802.31
符合IEC 61643-31、EN 61643-31、GB/T 18802.31标准

LK XX - 9 - XXX - R
1 2 3 4

1 Model/模型

2 Iimp/冲击放电电流

3 Maximum Continuous Operating Voltage/最大持续工作电压

4 Remote Signal(Optional)/远程信号 (可选)

TECHNOLOGY PARAMETER / 技术参数

Model / 型号	Sym	LKXX9-DC600	LKXX9-DC800	LKXX9-DC1000	LKXX9-DC1200	LKXX9-DC1500
DC Max. Continuous Operating Voltage / 直流最大持续工作电压	[Ucpv]	600Vdc	800Vdc	1000Vdc	1200Vdc	1500Vdc
Nominal Discharge Current [8/20us] / 标称放电电流	[In]	20kA	20kA	20kA	20kA	20kA
Max. Discharge Current [8/20us] / 最大放电电流	[Imax]	50kA	50kA	50kA	50kA	50kA
Impulse Discharge Current [10/350us] / 冲击放电电流	[Iimp]	12.5kA	12.5kA	9kA	6.25kA	6.25kA
Total Discharge Current [10/350us] / 总放电电流	[Itotal]	25kA	25kA	18kA	12.5kA	12.5kA
Voltage Protection Level / 电压保护水平	[Up]	≤2.6kV	≤3.2kV	≤3.8kV	≤4.5kV	≤5.2kV
Short-circuit Current Rating / 短路耐受电流	[Iscpv]	10kA	10kA	10kA	10kA	10kA
Response Time / 响应时间	[tA]	≤25ns	≤25ns	≤25ns	≤25ns	≤25ns
Max. Backup Fuse / 最大后备熔断器	[I]	125A~160A gPV	125A~160A gPV	125A~160A gPV	125A~160A gPV	125A~160A gPV

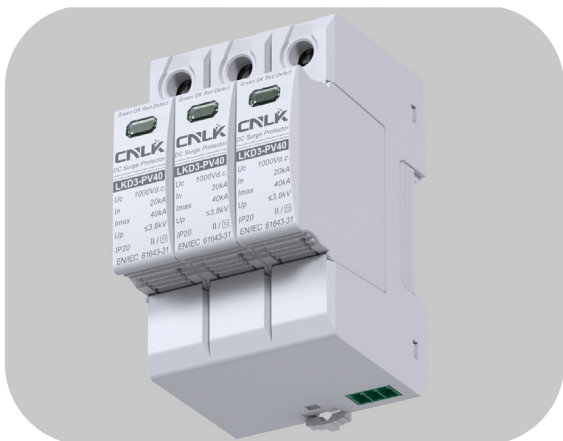
MECHANICAL DATA / 机械数据

Item / 项目	Description / 描述
Wiring Method / 接线方式	Screw terminal 2.5-25mm ²
Status Indication / 状态指示	Green(OK)/Red(Fault)
Remote Signal / 遥信	Optional / 可选
Installation / 安装方式	35mm DIN rail / 35mm导轨
Operating Temp. / 工作温度	-40~+85°C
Protection Level / 防护等级	IP20
Enclosure Material / 外壳材料	UL94-V0

ORDER INFORMATION / 订购信息

MODEL	PROT.MODE	Iimp	Iimp TOTAL	Up(L-PE)	Up(N-PE)	Up(L-N)
LKXX9-DC600/3+0	+/-→PE	12.5kA	25kA	≤2.6kV	/	/
LKXX9-DC800/3+0	+/-→PE	12.5kA	25kA	≤3.2kV	/	/
LKXX9-DC1000/3+0	+/-→PE	9kA	18kA	≤3.8kV	/	/
LKXX9-DC1200/3+0	+/-→PE	6.25kA	12.5kA	≤4.5kV	/	/
LKXX9-DC1500/3+0	+/-→PE	6.25kA	12.5kA	≤5.2kV	/	/

TYPE1+2 DC LKXX-6.25



可选模型

D1 Model



D6 Model



D3 Model



D8 Model



D4 Model

LKXX6.25系列采用压敏电阻(MOV)技术,适用于Type1+2直流浪涌保护,专为分布式光伏及中小型直流供电系统设计。紧凑型结构,冲击电流最大6.25kA(10/350μs),提供600Vdc至1500Vdc多款型号。

The LKXX6.25 series adopts MOV technology for Type1+2 DC surge protection, ideal for distributed photovoltaic systems and small-scale DC power applications. Compact design with impulse current up to 6.25kA (10/350us), available in 600Vdc to 1500Vdc models.

- Type 1+2 DC surge protection device
T1+T2型直流浪涌保护装置
- Impulse/maximum discharge current [Iimp/ Imax]:6.25kA / 50kA
脉冲/最大放电电流 [Iimp/Imax]: 6.25kA / 50kA
- Varistor voltage limiting technology, low residual voltage design
压敏电阻限压技术,低残余电压设计
- Pluggable design and internal thermal disconnection devices
可插拔式结构,内置热脱扣装置
- Operating /fault indication,optional remote signal
具备运行/故障指示功能,可选远程信号输出
- Conform to IEC 61643-31,EN 61643-31,GB/T 18802.31
符合IEC 61643-31、EN 61643-31、GB/T 18802.31标准

LK XX - 6.25 - XXX - R
1 2 3 4

1 Model/模型

2 Iimp/冲击放电电流

3 Maximum Continuous Operating Voltage/最大持续工作电压

4 Remote Signal(Optional)/远程信号 (可选)

TECHNOLOGY PARAMETER / 技术参数

Model / 型号	Sym	LKXX6.25-DC600	LKXX6.25-DC800	LKXX6.25-DC1000	LKXX6.25-DC1200	LKXX6.25-DC1500
DC Max. Continuous Operating Voltage / 直流最大持续工作电压	[Ucpv]	600Vdc	800Vdc	1000Vdc	1200Vdc	1500Vdc
Nominal Discharge Current [8/20us] / 标称放电电流	[In]	20kA	20kA	20kA	20kA	20kA
Max. Discharge Current [8/20us] / 最大放电电流	[Imax]	50kA	50kA	50kA	50kA	50kA
Impulse Discharge Current [10/350us] / 冲击放电电流	[Iimp]	6.25kA	6.25kA	6.25kA	5kA	3kA
Total Discharge Current [10/350us] / 总放电电流	[Itotal]	12.5kA	12.5kA	12.5kA	10kA	6kA
Voltage Protection Level / 电压保护水平	[Up]	≤2.6kV	≤3.2kV	≤3.8kV	≤4.5kV	≤5.2kV
Short-circuit Current Rating / 短路耐受电流	[Iscpv]	10kA	10kA	10kA	10kA	10kA
Response Time / 响应时间	[tA]	≤25ns	≤25ns	≤25ns	≤25ns	≤25ns
Max. Backup Fuse / 最大后备熔断器	[I]	125A gPV	125A gPV	125A gPV	125A gPV	125A gPV

MECHANICAL DATA / 机械数据

Item / 项目	Description / 描述
Wiring Method / 接线方式	Screw terminal 2.5-25mm ²
Status Indication / 状态指示	Green(OK)/Red(Fault)
Remote Signal / 遥信	Optional / 可选
Installation / 安装方式	35mm DIN rail / 35mm导轨
Operating Temp. / 工作温度	-40~+85°C
Protection Level / 防护等级	IP20
Enclosure Material / 外壳材料	UL94-V0

ORDER INFORMATION / 订购信息

MODEL	PROT.MODE	Iimp	Iimp TOTAL	Up(L-PE)	Up(N-PE)	Up(L-N)
LKXX6.25-DC600/3+0	+/-→PE	6.25kA	12.5kA	≤2.6kV	/	/
LKXX6.25-DC800/3+0	+/-→PE	6.25kA	12.5kA	≤3.2kV	/	/
LKXX6.25-DC1000/3+0	+/-→PE	6.25kA	12.5kA	≤3.8kV	/	/
LKXX6.25-DC1200/3+0	+/-→PE	5kA	10kA	≤4.5kV	/	/
LKXX6.25-DC1500/3+0	+/-→PE	3kA	6kA	≤5.2kV	/	/

TYPE2 DC LKXX-40 2+0



可选模型

D1 Model



D6 Model



D3 Model



D8 Model



D4 Model

LKXX40-DC 2+0系列采用压敏电阻(MOV)技术,适用于Type2直流浪涌保护,专为光伏系统分配电设计。2极结构,放电容量20kA/40kA,提供500Vdc至1000Vdc多款型号。

The LKXX40-DC 2+0 series adopts MOV technology for Type2 DC surge protection, designed for sub-distribution of photovoltaic systems. 2-pole configuration with discharge capacity 20kA/40kA, available in 500Vdc to 1000Vdc models.

- Type 2 DC surge protection device
T2型直流浪涌保护装置
- Impulse/maximum discharge current [Iimp/ I_{max}]:6.25kA / 50kA
脉冲/最大放电电流 [Iimp/I_{max}]: 6.25kA / 50kA
- Varistor voltage limiting technology, low residual voltage design
压敏电阻限压技术,低残余电压设计
- Pluggable design and internal thermal disconnection devices
可插拔式结构,内置热脱扣装置
- Operating /fault indication,optional remote signal
具备运行/故障指示功能,可选远程信号输出
- Conform to IEC 61643-31,EN 61643-31,GB/T 18802.31
符合IEC 61643-31、EN 61643-31、GB/T 18802.31标准

LK XX - 40 - XXX - R
1 2 3 4

1 Model/模型

2 I_{max}/最大放电电流

3 Maximum Continuous Operating Voltage/最大持续工作电压

4 Remote Signal(Optional)/远程信号 (可选)

TECHNOLOGY PARAMETER / 技术参数

Model / 型号	Sym	LKXX40-DC500	LKXX40-DC600	LKXX40-DC800	LKXX40-DC1000
DC Max. Continuous Operating Voltage / 直流最大持续工作电压	[Ucpv]	500Vdc	600Vdc	800Vdc	1000Vdc
Nominal Discharge Current [8/20us] / 标称放电电流	[In]	20kA	20kA	20kA	20kA
Max. Discharge Current [8/20us] / 最大放电电流	[I _{max}]	40kA	40kA	40kA	40kA
Voltage Protection Level / 电压保护水平	[Up]	≤2.2kV	≤2.8kV	≤3.2kV	≤3.8kV
Short-circuit Current Rating / 短路耐受电流	[Iscpv]	10kA	10kA	10kA	10kA
Response Time / 响应时间	[tA]	≤25ns	≤25ns	≤25ns	≤25ns
Max. Backup Fuse / 最大后备熔断器	[I]	63A gPV	63A gPV	63A gPV	63A gPV

MECHANICAL DATA / 机械数据

Item / 项目	Description / 描述
Wiring Method / 接线方式	Screw terminal 2.5-25mm ²
Status Indication / 状态指示	Green(OK)/Red(Fault)
Remote Signal / 遥信	Optional / 可选
Installation / 安装方式	35mm DIN rail / 35mm导轨
Operating Temp. / 工作温度	-40~+85°C
Protection Level / 防护等级	IP20
Enclosure Material / 外壳材料	UL94-V0

ORDER INFORMATION / 订购信息

MODEL	PROT.MODE	Iimp	Iimp TOTAL	Up(L-PE)	Up(N-PE)	Up(L-N)
LKXX40-DC500/2+0	+/-→PE	20kA	40kA	≤2.2kV	/	/
LKXX40-DC600/2+0	+/-→PE	20kA	40kA	≤2.8kV	/	/
LKXX40-DC800/2+0	+/-→PE	20kA	40kA	≤3.2kV	/	/
LKXX40-DC1000/2+0	+/-→PE	20kA	40kA	≤3.8kV	/	/

TYPE2 DC LKXX-40 3+0



可选模型

D1 Model



D6 Model



D3 Model



D8 Model



D4 Model

LKXX40-DC 3+0系列采用压敏电阻(MOV)技术,适用于Type2直流浪涌保护,专为光伏系统分配电设计。3极结构,放电容量20kA/40kA,提供500Vdc至1000Vdc多款型号。

The LKXX40-DC 2+0 series adopts MOV technology for Type2 DC surge protection, designed for sub-distribution of photovoltaic systems. 3-pole configuration with discharge capacity 20kA/40kA, available in 500Vdc to 1000Vdc models.

- Type 2 DC surge protection device
T2型直流浪涌保护装置
- Impulse/maximum discharge current [I_{imp} / I_{max}]:6.25kA / 50kA
脉冲/最大放电电流 [I_{imp} / I_{max}]: 6.25kA / 50kA
- Varistor voltage limiting technology, low residual voltage design
压敏电阻限压技术,低残余电压设计
- Pluggable design and internal thermal disconnection devices
可插拔式结构,内置热脱扣装置
- Operating /fault indication,optional remote signal
具备运行/故障指示功能,可选远程信号输出
- Conform to IEC 61643-31,EN 61643-31,GB/T 18802.31
符合IEC 61643-31、EN 61643-31、GB/T 18802.31标准

LK XX - 40 - XXX - R
1 2 3 4

1 Model/模型

2 I_{max} /最大放电电流

3 Maximum Continuous Operating Voltage/最大持续工作电压

4 Remote Signal(Optional)/远程信号 (可选)

TECHNOLOGY PARAMETER / 技术参数

Model / 型号	Sym	LKXX40-DC1000	LKXX40-DC1200	LKXX40-DC1500
DC Max. Continuous Operating Voltage / 直流最大持续工作电压	[Ucpv]	1000Vdc	1200Vdc	1500Vdc
Nominal Discharge Current [8/20us] / 标称放电电流	[In]	20kA	20kA	20kA
Max. Discharge Current [8/20us] / 最大放电电流	[Imax]	40kA	40kA	40kA
Voltage Protection Level / 电压保护水平	[Up]	$\leq 3.8kV$	$\leq 4.5kV$	$\leq 5.2kV$
Short-circuit Current Rating / 短路耐受电流	[Iscpv]	10kA	10kA	10kA
Response Time / 响应时间	[tA]	$\leq 25ns$	$\leq 25ns$	$\leq 25ns$
Max. Backup Fuse / 最大后备熔断器	[I]	63A gPV	63A gPV	63A gPV

MECHANICAL DATA / 机械数据

Item / 项目	Description / 描述
Wiring Method / 接线方式	Screw terminal 2.5-25mm ²
Status Indication / 状态指示	Green(OK)/Red(Fault)
Remote Signal / 遥信	Optional / 可选
Installation / 安装方式	35mm DIN rail / 35mm导轨
Operating Temp. / 工作温度	-40~+85°C
Protection Level / 防护等级	IP20
Enclosure Material / 外壳材料	UL94-V0

ORDER INFORMATION / 订购信息

MODEL	PROT.MODE	I_{imp}	I_{imp} TOTAL	$U_p(L-PE)$	$U_p(N-PE)$	$U_p(L-N)$
LKXX40-DC1000/3+0	+/-→PE	20kA	40kA	$\leq 3.8kV$	/	/
LKXX40-DC1200/3+0	+/-→PE	20kA	40kA	$\leq 4.5kV$	/	/
LKXX40-DC1500/3+0	+/-→PE	20kA	40kA	$\leq 5.2kV$	/	/

DC SPD Circuit Diagram and Schematic Diagram

直流浪涌保护器 接线方式及原理图

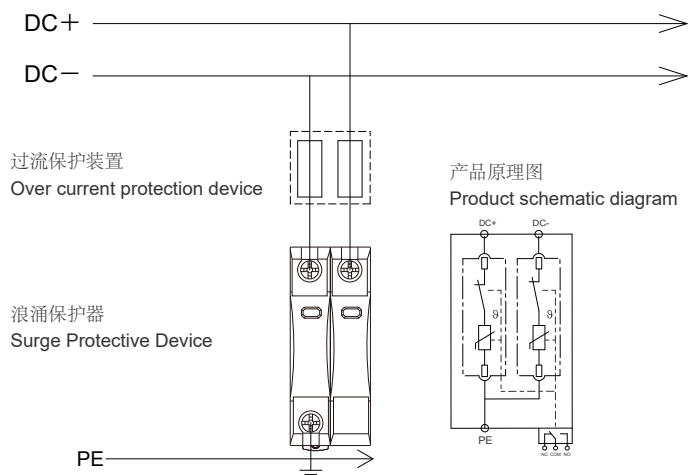


图1: 光伏直流电源系统2模块(2P)接线方式
Figure 1: PV DC Power System 2 module wiring

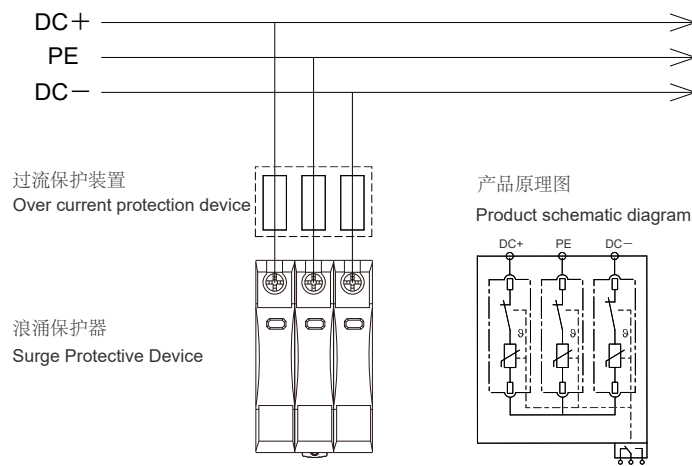


图1: 光伏直流电源系统3模块(3P)接线方式
Figure 2: PV DC Power System 3 module wiring