

ComProtect

LSA-PLUS® quick connection technology we have set the benchmark worldwide for over a quarter of a century. We have been continuously incorporating the know-how and experience we acquire with LSA-PLUS® into the wide variety of application areas based on connection technology for copper networks. Thereby, Comprotect product family is fully compatible with our LSA-PLUS® Series 2 and LSA-PLUS® HD180.

Protection systems are used wherever communication lines are distributed and connected. Overvoltage protection fulfils various requirements, depending on the type of installation to be protected. In conventional switching equipment, overvoltage protection is used primarily to protect people. In highly sensitive electronic switching equipment installations, however, comprehensive protection measures are necessary in order to protect not just people, but also the valuable installation itself.

Overvoltage is undoubtedly the primary cause of faults, i.e. interference caused by electrical energy disturbances in communication lines. The term “overvoltage” often calls to mind thunderstorms releasing vast amounts of energy. However, even static discharges, which may appear to be harmless, can seriously affect signal transmission or even paralyze entire networks.

Regardless of the series and circuit used, overvoltage protection components are all based on the same working principle: any excessive voltages are discharged to earth. Depending on the component, the energy consumption in the protection device is relatively small. One precondition for this is the protection component’s low-resistance earthing.

Choosing protection components

The mechanical interface where the protection components is going to be installed has to be taken into account. CommScope offers a large number of complete magazine solutions and flexible single-pair protection plugs. Our product portfolio offers various levels of protection with extended features that have a direct influence on the severity of the network downtime and the associated commercial loss. The CommScope portfolio includes a broad range of performance classes:

- Basic protection plugs
- Intermediate protection plugs
- Advanced protection plugs
- Maintenance-free advanced protection plugs

Single Pair Overvoltage Protection

Intermediate Protection Plugs for LSA-PLUS® Series 2 Blocks

These plugs are recommended for protection of switching and terminal equipment in conjunction with already installed secondary overvoltage protection. The use of reversible overcurrent protection elements can enhance the response behavior of the basic overvoltage protection component. The plug is designed for the partial or complete equipping of LSA-PLUS® or connection or disconnection modules in conjunction with earth bars and earth contact clips. The protection circuit consists of a 3-pole overvoltage arrester, fail-safe and overcurrent protection components.

Features and benefits

- Flexible 1-pair form
- Limits overvoltage and overcurrent
- Provides measurement and test access
- Installation height is approximately 33mm above the LSA-PLUS® block
- 10 pieces per pack, including 1 earth bar 2/10

Ordering information

Description	Order No.
Intermediate protection plug for LSA-PLUS® Series 2 Blocks, CP HGB180A1 Maximum operating voltage: 180V, nominal resistance 8 Ohm	59091063-40*

*NOTE: Direct upcoming replacement for future will be **CP-59091063-40**

Advanced Protection Plugs for LSA-PLUS® Series 2 Blocks

These plugs are recommended for protection of distribution and terminal equipment in analog, ADSL2+ / VDSL2 / G.FAST compliant telecommunication systems. The plug is designed for partial or complete equipping of LSA-PLUS® disconnection or switching modules in conjunction with earth bars and earth contact clips. The protection circuit consists of a 3-pole overvoltage arrester, fail-safe contact, reversible overcurrent protection components and diodes for secondary protection.

Features and benefits

- Flexible 1-pair form
- Short response time
- Lower voltage variants are available for extended applications
- Installation height is approximately 33mm above the LSA-PLUS® module
- 10 per pack, including 1 earth bar 2/10

Ordering information

Description	Order No.
Advanced protection plug for LSA-PLUS® Series 2 blocks, CP I70A2 Maximum operating voltage: 70V	CP-59091082-01
Advanced protection plug for LSA-PLUS® Series 2 blocks, CP I180A1 Maximum operating voltage: 180V	CP-59091076-00

Maintenance-Free Protection Plug for LSA-PLUS® Series 2 Blocks

This plug is recommended for protection of distribution and terminal equipment in analog, ADSL2+ / VDSL2 / G.FAST compliant telecommunications systems. The plug is designed for the partial or complete equipping of LSA-PLUS® disconnection or switching modules in conjunction with earth bars and earth contact clips. The protection circuit consists of a 3-pole overvoltage arrester, reversible overcurrent protection components and diodes for secondary overvoltage protection. The overcurrent protection functions as a reversible line fuse.

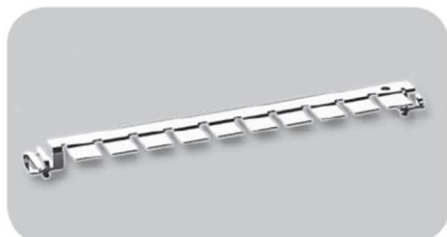
Features and benefits

- Flexible 1-pair form
- Fast response time
- Optimized service life-time
- Installation height is approximately 33mm above the LSA-PLUS® module.
- 10 per pack, including 1 earth bar 2/10

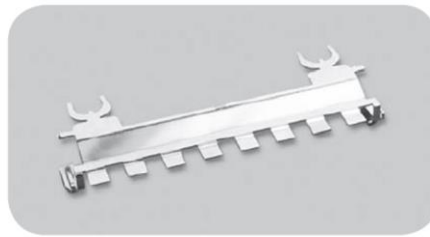
Ordering information

Description	Order No.
Maintenance-free protection plug for LSA-PLUS® Series 2 blocks, CP OD180A1 Maximum operating voltage: 180V	CP-59091078-00
Maintenance-free protection plug for LSA-PLUS® Series 2 blocks, CP OD270A1 Maximum operating voltage: 270V Used with PCM11 transmission codes with symmetric remote, feeding voltage 320V	CP-59091086-00

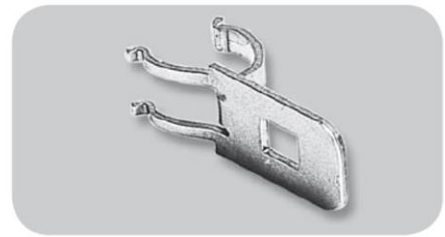
Earth Bars for LSA-PLUS® Modules



Earth bar for Series 2 and HighBand* 10 modules



Earth bar for disconnection module 2/8 x abs



Earth contact clip

The earth bar is used to establish earth connection between ComProtect protection plugs and LSA-PLUS® modules installed in a distribution frame. Installation in distribution frame using profile rods requires the additional installation of earth contact clips.

WARNING: Proper function of the protection plugs is not guaranteed without use of the earth bar. Installation instructions must be followed.

Ordering information

Description	Order No.
Earth bar for LSA-PLUS® Series 2 and HighBand 10 blocks Quantity: 1 per pack NOTE: a set of 10/100 ComProtect protection plugs includes 1/10 earth bars	
Earth bar for <u>10-pair</u> modules	59093041-00
Earth bar for <u>8-pair</u> modules	59093042-00
Earth bar for LSA-PLUS® Series 2 disconnection module - for profile rod installation, 8 x Line A, Line B, Shield (abs) Quantity: 1 per pack	59093201-00
Earth contact clip for LSA-PLUS® Series 2 modules - for profile rod installation provides contact between earth bar and profile rod. 2 clips required per module when protection modules are used with Series 2 modules mounted on 12 mm profile rods. Quantity per box: 1000	60893202-00

Basic Protection Plug for LSA-PLUS® HD180 Modules

This plug provides basic overvoltage protection in analog or digital telecommunication systems. The plug is designed for the partial or complete equipping of LSA-PLUS® HD180 disconnection or switching modules and is used in conjunction with 10-pair earth bar. The protective circuit consists of a 3-pole overvoltage arrester and fail-safe contact (for protection of the arrester against thermal overload).

Features and benefits

- Flexible 1-pair form
- Compact form
- Installation height is approximately 32mm above the LSA-PLUS® HD180 module.
- 10 per pack, including 1 earth bar HD180/10



Basic protection plug

Ordering information

Description	Order No.
Basic protection plug for LSA-PLUS® HD180 modules, HDP DA180A1 Maximum operating voltage 180V	70191215-00

Intermediate Protection Plugs for LSA-PLUS® HD180 Modules

These plugs are recommended for protection of switching and terminal equipment in conjunction with already installed secondary overvoltage protection. The plug is designed for the partial or complete equipping of LSA-PLUS® HD180 disconnection or switching modules and is used in conjunction with 10-pair earth bar. The protective circuit consists of a 3-pole overvoltage arrester (gas discharge tube), fail-safe contact and reversible overcurrent protection components. Overvoltage protection with 6-Ohm polymer PTC

Features and benefits

- Flexible 1-pair form
- Limits both overvoltage and overcurrent
- Installation height is approximately 32mm above the LSA-PLUS® HD180 module.
- Overvoltage protection with 6-Ohm polymer PTC
- 10 per pack, including 1 earth bar HD180/10



Intermediate protection plug

Ordering information

Description	Order No.
Intermediate protection plug for LSA-PLUS® HD180 modules, HDP GB180C1 Maximum operating voltage: 180V Installation height: @32 mm above module	70191013-02

Advanced Protection Plug for LSA-PLUS® HD180 Modules

This plug is recommended for protection of switching and terminal equipment in analog, ISDN, HDSL and ADSL telecommunication systems. The plug is designed for the partial or complete equipping of LSA-PLUS® HD180 disconnection or switching modules and is used in conjunction with 10-pair earth bar. The protection circuit consists of a 3-pole overvoltage arrester (gas discharge tube), fail-safe contact, reversible overcurrent protection components and diodes for secondary protection.

Features and benefits

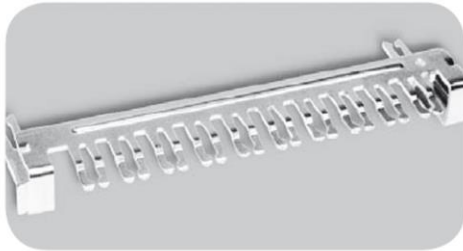
- Flexible 1-pair form
- Short response time
- Installation height is approximately 32mm above the LSA-PLUS® HD180 module.
- 10 per pack, including 1 earth bar HD180/10



Advanced protection plug

Ordering information	Order No.
Advanced protection plug for LSA-PLUS® HD180 modules, HDP I180A1 Maximum operating voltage: 180V	70191212-00

Accessories for LSA-PLUS® HD180 Module Overvoltage Protection



Earth bar

Ordering information

Description	Order No.
<p>Earth bar for LSA-PLUS® HD180 modules Earth contact for 1-pair HDP series ComProtect protection plugs; used to establish earth contact between the protection plugs and the distribution frame For 10-pair LSA-PLUS® HD180 modules Weight/pack: 0.010 kg</p> <p>WARNING: The function of the protection plug is only guaranteed in conjunction with the earth bar. The installation instructions must be followed. Quantity: 1 per pack</p>	<p>300001734415</p>

Test Device

The portable ComProtect test device allows measurement of tolerance limits, interruptions and short circuits in protection circuits, as well as automatic measurement of all positions of the corresponding adapter.

Features and benefits

- Supports lifetime testing of 1-pair protection plugs and magazines
- Battery-operated for mobile use
- Features exchangeable adaptors
- Optional software module allows measurement data collection
- Enables individual programming of measurement limit values
- Provides automatic measurement
- Offers optical and acoustical fault recognition



The ComProtect test device is delivered in a carrying case. Adapters and software to be ordered separately.

Ordering information

Description	Order No.
ComProtect® test device	59091302-00
LSA-PLUS® 2/10 adapter insert, with receptacle for LSA-PLUS® magazine 2/10 and 1-pair ComProtect protection plug	59091303-00
10-pair LSA-PLUS® HD180 adapter insert, with receptacle for 10-pair LSA-PLUS®HD180 magazines and 1-pair ComProtect HD180 protection plug	59091311-00
Software for ComProtect test device Software and adapter cable for data collection and statistical evaluation	59091304-00

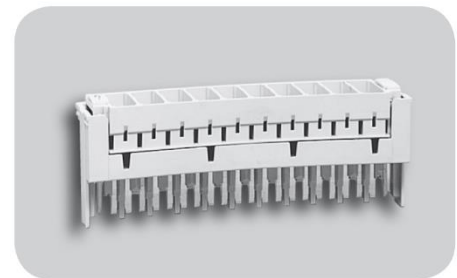
Multi Pair Overvoltage Protection - Magazines

Basic Protection Magazine for LSA-PLUS® Series 2 Blocks

This basic protection magazine is recommended for use as a basic overvoltage protection in analog and digital telecommunication systems. The magazines are designed for the complete equipping of LSA-PLUS® modules. For installation in distributors using profile rod system, earth contact clips are required to establish earth contact with the profile rods. Optimal function for magazines is guaranteed only when used in conjunction with the corresponding overvoltage arrestors.

Features and benefits

- Designed for use with 3-pole overvoltage arrestors
- Overvoltage arrestors and fail-safe elements are replaceable
- Installation height is approximately 25 mm above the module
- Economical solution offering multi-pair basic protection



Magazine 2/10 for 3-pole gas discharge tubes (GDT)

Ordering information

Description	Order No.
Basic protection magazine for <u>8-pairs</u> with 3-pole overvoltage arrestors (8x13 mm) Magazine 2/8 for 8-pair modules, <u>unequipped</u>	60362003-01
Basic protection magazine for <u>10-pairs</u> with 3-pole overvoltage arrestors (8 x 13 mm) Magazine 2/10 for 10-pair modules, <u>unequipped</u>	60892023-01
Magazine 2/10 for 10-pair modules, <u>equipped</u> with overvoltage arrestors (8x13 mm), 230V, 10kA/10A with fail-safe (67173513-00)	60892023-08

Magazine cover for LSA-PLUS® Series 2 Overvoltage Protection magazines

The magazine cover is transparent and is used with overvoltage protection magazine 2/10 with gas discharge tube (GDT) 8x13.

Features and benefits

- Provides dust protection
- Prevents accidental contact with the overvoltage protection magazine



Ordering information

Description	Order No.
Magazine cover with KRONE® logo	64173022-01

Basic Protection Magazine for LSA-PLUS® HD180 Blocks

This magazine is recommended for basic overvoltage protection in analog or digital telecommunication systems. The magazine is equipped with 3-pole overvoltage arrestors (gas discharge tubes). Magazines with maximum operating voltages of 180V are equipped with a fail-safe contact. The magazine is designed for the complete equipping of LSA-PLUS HD180 connection, disconnection or switching modules.

Features and benefits

- Equipped with 3-pole overvoltage arrestors
- Installation height is approximately 29.5 mm above the module
- Economical solution offering multi-pair basic protection

Ordering information

Description	Order No.
Magazine for 10-pair LSA-PLUS® HD180 modules, maximum operating voltage: 180V Overvoltage arrestors: 230V, 10kA/5A and fail-safe	PRO-70192220-00
Magazine for 10-pair LSA-PLUS® HD180 modules, maximum operating voltage: 330V Overvoltage arrestors: 420V, 10kA/10A <u>without</u> fail-safe	PRO-70192220-20

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