DEHN + SÖHNE

LSA with Lightning Current Carrying Capacity

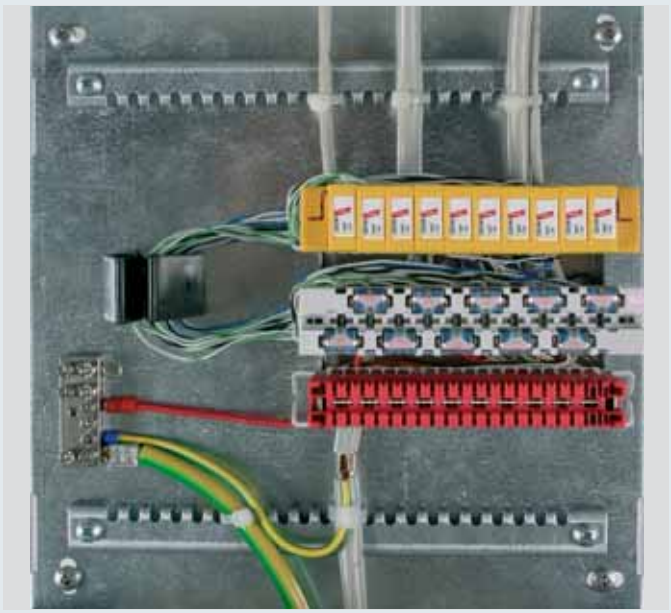
Surge Arrester and Enclosure System.

DS145/E/06.08

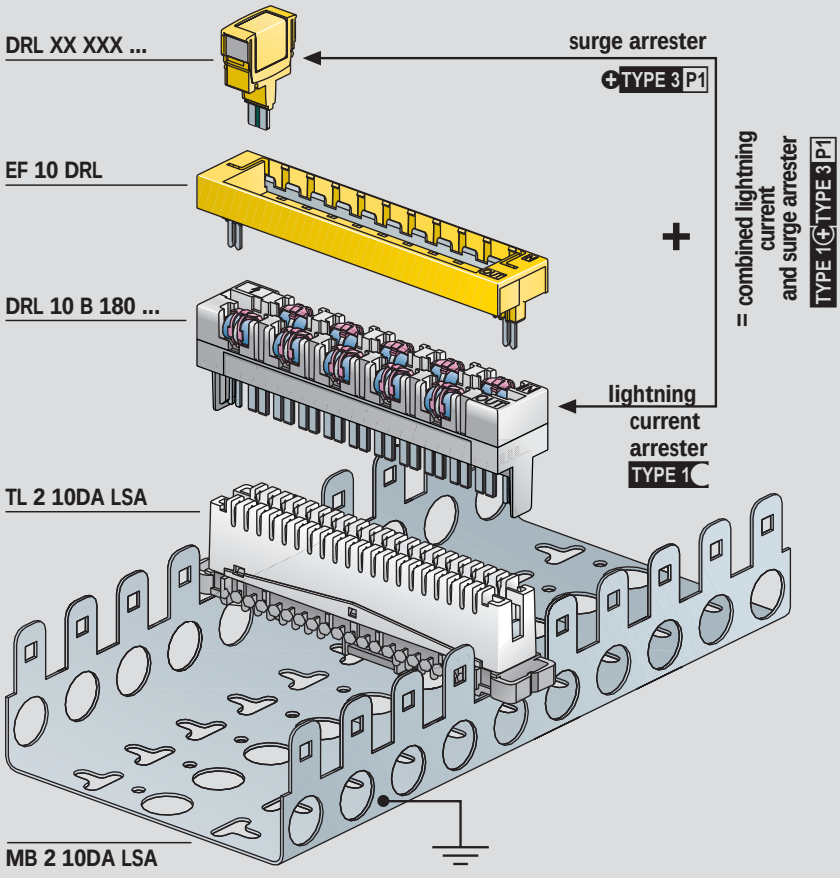
- **Variable protection for 1 – 10 pairs for LSA systems, type series 2/10**
- **LSA disconnection block function integrated into the lightning current arrester provides protection for testing, disconnecting and patching**
- **Modular system out of lightning current and surge arresters, allows also for combination to one combined SPD**

DRL Plug-in SPD block (10 pairs):
Lightning current arrester for 10 pairs.

DRL Plug (1 pair):
Surge protective plug for 1 pair, energy-coordinated to the DRL plug-in SPD blocks



Lightning current arrester, surge arrester or combined lightning current and surge arrester, pluggable into LSA disconnection blocks, type 2. The 10-pair plug-in SPD block with lightning current carrying capacity is supplied with gas discharge tubes (optionally with visual fault indicator) and disconnecti block contacts. This allows for testing, disconnecting or patching of lines at plugged-in protection or additional attaching of single-pair surge arresters for optimum protection of terminal equipment. The surge arresters snap into the earthing frame and can be removed as a block, whenever required.



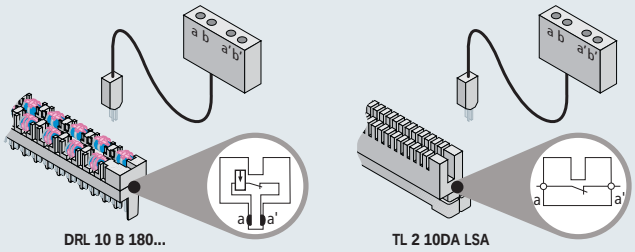
DRL system design

The DEHNrapid LSA lightning current arrester for LSA disconnection blocks protects sensitive hardware effectively from surges and allows for simultaneous testing, disconnecting and patching of connected lines. The modular SPD system for LSA disconnection blocks can be extended to a combined lightning current and surge arrester and has a fail-safe overload protection with visual fault indicator of the discharge elements.

With the compatible earthing frame, the fine limiting DEHNrapid LSA single-pair surge arresters can be plugged directly into the DRL plug-in terminal block or optionally into LSA disconnection blocks. The decoupling impedances integrated into the protective plugs allow for energy coordination to the DRL plug-in terminal block without having to consider the cable length. The single-pair plug also allows for partial supplying of disconnection blocks. One block can even support protective plugs with different circuits or nominal voltages.

DRL protective plugs with earthing frame

DRL combined lightning current and surge arrester

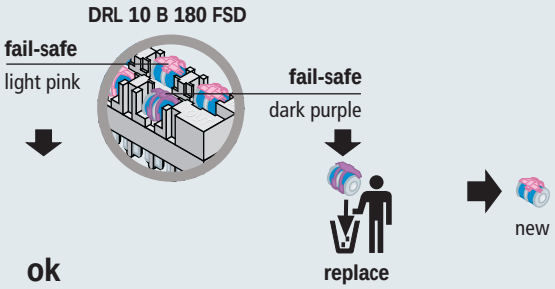


Disconnection block function

The joined unit of plug-in SPD block, earthing frame and protective plug (combined lightning current and surge arrester) can be plugged in and removed completely. The combined lightning current and surge arrester corresponds to SPD Class TYPE 1 TYPE 3 P1.

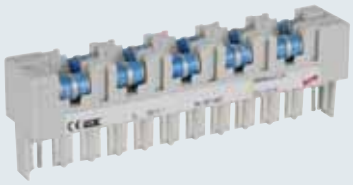
The plug-in terminal block has compatible disconnection contacts to the disconnection block. A measuring or disconnection adapter can be plugged into the DRL in the same way like into a disconnection block. This ensures protection even during maintenance work.

The fail-safe function short-circuits the lines to earth in order to protect the gas discharge tube from a possible burn-off due to overcurrents. The disconnecting solder between the spring and SPD melts, the leads are short-circuited and the temperature-sensitive colour on the spring changes from light pink to dark purple and requests the user to replace the SPD.

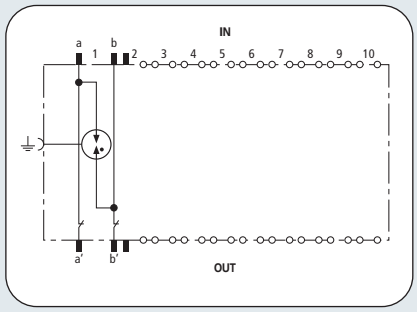


Replace the faulty gas discharge tube

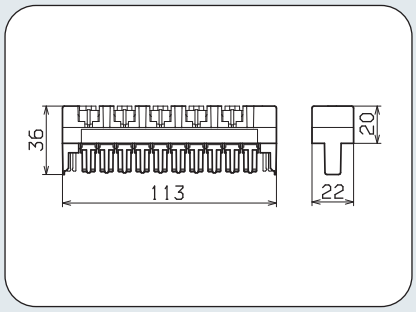
DRL 10 B



- **Lightning current arrester for use as plug-in SPD block with integrated LSA disconnection block function**
- **Extendible with modules to a combined lightning current and surge arrester**
- **For use according to the lightning protection zones concept at boundaries 0_A – 1 and higher**



SPD block with 3-pole gas discharge tubes. Integrated isolating contacts for plugging additional elements.



Dimension drawing DRL 10 B

DRL plug-in SPD block (10 pairs) with lightning current carrying capacity, for nearly all kinds of applications. Extendible with DRL protective plug to a combined lightning current and surge arrester. The integrated disconnection block contacts allow for testing, measuring and patching at plugged-in protection.

DRL 10 B 180	
SPD class	TYPE 1
Nominal voltage U_N	180 V
Max. continuous operating d.c. voltage U_C	180 V
Max. continuous operating a.c. voltage U_C	127 V
Nominal current I_L	0.4 A
D1 Total lightning impulse current (10/350 µs) I_{imp}	5 kA
D1 Lightning impulse current (10/350 µs) per line I_{imp}	2.5 kA
C2 Total nominal discharge current (8/20 µs) I_n	10 kA
C2 Nominal discharge current (8/20 µs) per line I_n	5 kA
Voltage protection level line-line for I_{imp} D1 U_p	≤ 500 V
Voltage protection level line-PG for I_{imp} D1 U_p	≤ 500 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 500 V
Voltage protection level line-PG for 1 kV/µs C3 U_p	≤ 450 V
Series impedance per line	≤ 0.005 ohms
Capacitance line-line C	≤ 5 pF
Capacitance line-PG C	≤ 5 pF
Operating temperature range	-40°C...+80°C
Degree of protection	IP 10
Pluggable into	LSA disconnection block 2/10
Earthing by	mounting frame
Enclosure material	polyamide PA 6.6
Colour	grey
Test standards	IEC 61643-21
Approvals, Certifications	VdS

Ordering information	
Type	DRL 10 B 180
Part No.	**907 400**
Packing unit	10 pc(s).

Accessory Part for DEHNrapid® LSA

Label holder

Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

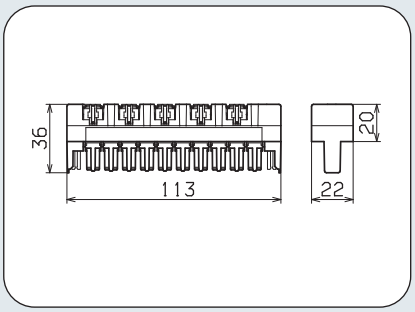
Gas discharge tube

High-capacity spare gas discharge tubes for DRL 10 or BM 10 DRL. 3-pole unit with common thrust chamber for a steady voltage protection level for line-line and line-ground.

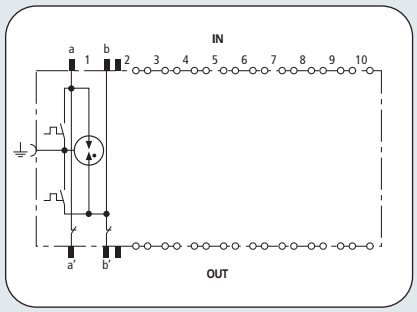
Type	GDT 230 B3	GDT 230 B3 FSD
Integrated into (Part No.)	907 400	907 401
Visual fault indicator	—	✔
Fail-safe spring	—	✔

Type	PU pc(s)	Part No.
GDT 230 B3	1	**907 218**
GDT 230 B3 FSD	1	**907 219**

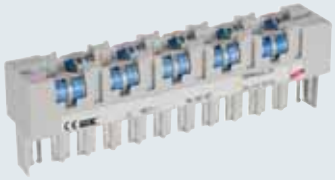
DEHNrapid® LSA
DRL 10 B FSD



Dimension drawing DRL 10 B FSD



SPD block with 3-pole gas discharge tubes with fail-safe function. Integrated isolating contacts for plugging additional elements.



- **Lightning current arrester for use as plug-in SPD block with integrated LSA disconnection block function**
- **Visual fault indicator of the gas discharge tubes**
- **Extendible with DRL protective plugs to a combined lightning current and surge arrester**
- **For use according to the lightning protection zones concept at boundaries 0_A – 1 and higher**

DRL plug-in SPD block (10 pairs) with lightning current carrying capacity, for nearly all types of applications. Extendible with DRL protective plug to a combined lightning current and surge arrester. The integrated disconnection block contacts allow for testing, measuring and patching at plugged-in protection. The gas discharge tubes have a fail-safe function with visual indicator for prospective faults.

DRL 10 B 180 FSD	
SPD class	TYPE 1 C
Fault indication	visual by colour change
Nominal voltage U_N	180 V
Max. continuous operating d.c. voltage U_C	180 V
Max. continuous operating a.c. voltage U_C	127 V
Nominal current I_L	0.4 A
D1 Total lightning impulse current (10/350 µs) I_{imp}	5 kA
D1 Lightning impulse current (10/350 µs) per line I_{imp}	2.5 kA
C2 Total nominal discharge current (8/20 µs) I_n	10 kA
C2 Nominal discharge current (8/20 µs) per line I_n	5 kA
Voltage protection level line-line for I_{imp} D1 U_p	≤ 500 V
Voltage protection level line-PG for I_{imp} D1 U_p	≤ 500 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 500 V
Voltage protection level line-PG for 1 kV/µs C3 U_p	≤ 450 V
Series impedance per line	≤ 0.005 ohms
Capacitance line-line C	≤ 5 pF
Capacitance line-PG C	≤ 5 pF
Fail-safe performance	gas discharge tube with spring contacts
Operating temperature range	-40°C...+80°C
Degree of protection	IP 10
Pluggable into	LSA disconnection block 2/10
Earthing by	mounting frame
Enclosure material	polyamide PA 6.6
Colour	grey
Test standards	IEC 61643-21
Approvals, Certifications	VdS

Ordering information	
Type	DRL 10 B 180 FSD
Part No.	**907 401**
Packing unit	10 pc(s).

Gas discharge tube

High-capacity spare gas discharge tubes for DRL 10 or BM 10 DRL. 3-pole unit with common thrust chamber for a steady voltage protection level for line-line and line-ground.

Type	GDT 230 B3	GDT 230 B3 FSD
Integrated into (Part No.)	907 400	907 401
Visual fault indicator	—	✔
Fail-safe spring	—	✔

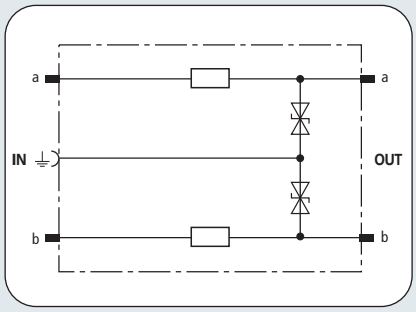
Type	PU pc(s)	Part No.
GDT 230 B3	1	**907 218**
GDT 230 B3 FSD	1	**907 219**

Label holder

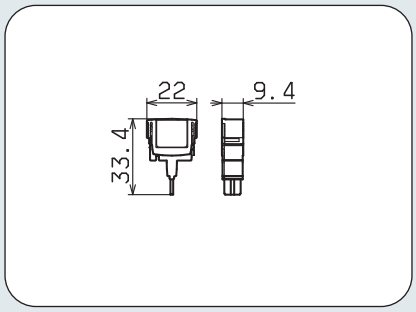
Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

DRL RE



Protective circuit, energy-coordinated to DRL 10 B for protecting terminal equipment, fine limitation between line and PG



Dimension drawing DRL RE

- **Low voltage protection levels for protecting terminal equipment**
- **Energy-coordinated to DRL plug-in SPD block**
- **For use according to the lightning protection zones concept at boundaries 1 – 2 and higher**

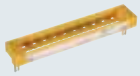
Protective plug (1 pair), energy-coordinated to DRL plug-in SPD block, for use as single-stage protection for terminal equipment with decoupling impedances. Especially suitable for signal circuits with common potential. Earthing by EF 10 DRL. For disconnection blocks or DRL plug-in SPD blocks only.

	DRL RE 5	DRL RE 12	DRL RE 24	DRL RE 48	DRL RE 60	DRL RE 180
SPD class	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1
Nominal voltage U_N	5 V	12 V	24 V	48 V	60 V	180 V
Max. continuous operating d.c. voltage U_C	6 V	14 V	28 V	54 V	70 V	180 V
Max. continuous operating a.c. voltage U_C	4.2 V	9.5 V	19.5 V	38 V	49.5 V	127 V
Nominal current I_L	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.1 A
D1 Total lightning impulse current (10/350 µs) in combination with DRL 10 B... I_{imp}	5 kA	5 kA	5 kA	5 kA	5 kA	5 kA
D1 Lightning impulse current (10/350 µs) per line in combination with DRL 10 B... I_{imp}	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA
C2 Total nominal discharge current (8/20 µs) in combination with DRL 10 B... I_n	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA
C2 Nominal discharge current (8/20 µs) per line in combination with DRL 10 B... I_n	5 kA	5 kA	5 kA	5 kA	5 kA	5 kA
Voltage protection level line-PG for I_{imp} D1 in combination with DRL 10 B... U_p	≤ 40 V	≤ 45 V	≤ 65 V	≤ 95 V	≤ 115 V	≤ 280 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 17.0 V	≤ 36 V	≤ 72 V	≤ 135 V	≤ 185 V	≤ 500 V
Voltage protection level line-PG for 1 kV/µs C3 U_p	≤ 9.5 V	≤ 19 V	≤ 38 V	≤ 70 V	≤ 95 V	≤ 270 V
Series impedance per line	4.7 ohms	4.7 ohms	4.7 ohms	6.8 ohms	6.8 ohms	4.7 ohms
Bandwidth line-PG f_G	0.95 MHz	2.7 MHz	4.5 MHz	7.35 MHz	10.5 MHz	42 MHz
Capacitance line-line C	≤ 3 nF	≤ 1 nF	≤ 0.55 pF	≤ 350 pF	≤ 250 pF	≤ 50 pF
Operating temperature range	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
Degree of protection	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in
Pluggable into	LSA disconnection block 2/10 or DRL 10 B ... plug-in SPD block					
Earthing by	earthing frame	earthing frame	earthing frame	earthing frame	earthing frame	earthing frame
Enclosure material	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6
Colour	yellow	yellow	yellow	yellow	yellow	yellow
Test standards	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21
Approvals, Certifications	VdS	VdS	VdS	VdS	VdS	VdS
Ordering information						
Type	DRL RE 5	DRL RE 12	DRL RE 24	DRL RE 48	DRL RE 60	DRL RE 180
Part No.	**907 420**	**907 421**	**907 422**	**907 423**	**907 424**	**907 425**
Packing unit	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).

Label holder

Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

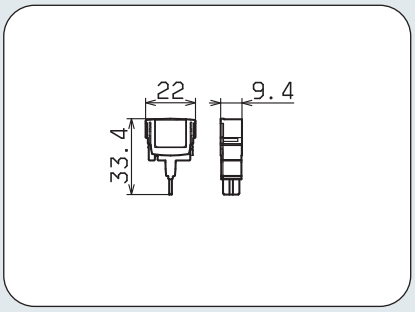


Earthing frame

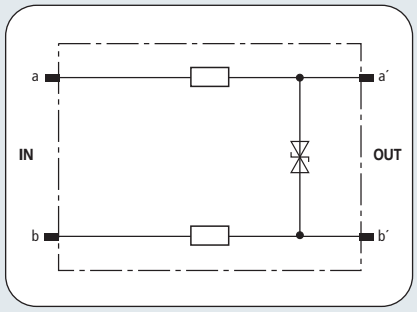
Earthing frame with snap-in device, required for earthing and mounting max. 10 DRL protective plugs. Pluggable onto a 10-pair disconnection block or DRL plug-in SPD block.

Type	PU pc(s)	Part No.
EF 10 DRL	1	**907 498**

DEHNrapid® LSA
DRL RD



Dimension drawing DRL RD



Line-line protective circuit, energy-coordinated to DRL 10 B for protecting of terminal equipment.

- **Low voltage protection level line/line for protecting terminal equipment**
- **Energy-coordinated to DRL plug-in SPD block**
- **For use according to the lightning protection zones concept at boundaries 1 – 2 and higher**

Protective plug (1 pair), energy-coordinated to DRL plug-in SPD block for use as single-stage protection for terminal equipment. Low voltage protection levels line-line for electrically isolated interfaces. To be installed with EF 10 DRL. Installation recommended only in combination with DRL plug-in SPD block.

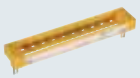
	DRL RD 5	DRL RD 12	DRL RD 24	DRL RD 48	DRL RD 60	DRL RD 110
SPD class	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1	TYPE 3 P1
Nominal voltage U_N	5 V	12 V	24 V	48 V	60 V	110 V
Max. continuous operating d.c. voltage U_C	6 V	14 V	28 V	54 V	70 V	180 V
Max. continuous operating a.c. voltage U_C	4.2 V	9.5 V	19.5 V	38 V	49.5 V	127 V
Nominal current I_L	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A
D1 Total lightning impulse current (10/350 µs) in combination with DRL 10 B... I_{imp}	5 kA	5 kA	5 kA	5 kA	5 kA	5 kA
D1 Lightning impulse current (10/350 µs) per line in combination with DRL 10 B... I_{imp}	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2,5 kA
C2 Total nominal discharge current (8/20 µs) in combination with DRL 10 B... I_n	10 kA	10 kA	10 kA	10 kA	10 kA	10 kA
C2 Nominal discharge current (8/20 µs) per line in combination with DRL 10 B... I_n	5 kA	5 kA	5 kA	5 kA	5 kA	5 kA
Voltage protection level line-PG for I_{imp} D1 in combination with DRL 10 B... U_p	≤ 500 V	≤ 500 V	≤ 500 V	≤ 500 V	≤ 500 V	≤ 500 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 8.5 V	≤ 18 V	≤ 36 V	≤ 70 V	≤ 95 V	≤ 250 V
Series impedance per line	2.2 ohms	2.2 ohms	2.2 ohms	4.7 ohms	4.7 ohms	4.7 ohms
Bandwidth line-line f_G	1 MHz	2.7 MHz	5.4 MHz	7.8 MHz	11 MHz	20 MHz
Capacitance line-line C	≤ 5.5 nF	≤ 2.0 nF	≤ 1.1 nF	≤ 700 pF	≤ 500 pF	≤ 200 pF
Operating temperature range	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
Degree of protection	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in	IP 20 plugged in
Pluggable into	LSA disconnection block 2/10 or DRL 10 B... plug-in SPD block					
Enclosure material	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6	polyamide PA 6.6
Colour	yellow	yellow	yellow	yellow	yellow	yellow
Test standards	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21
Approvals, Certifications	VdS	VdS	VdS	VdS	VdS	—

Ordering information						
Type	DRL RD 5	DRL RD 12	DRL RD 24	DRL RD 48	DRL RD 60	DRL RD 110
Part No.	**907 440**	**907 441**	**907 442**	**907 443**	**907 444**	**907 445**
Packing unit	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).	10 pc(s).

Earthing frame

Earthing frame with snap-in device, required for earthing and mounting max. 10 DRL protective plugs. Pluggable onto a 10-pair disconnection block or DRL plug-in SPD block.

Type	PU pc(s)	Part No.
EF 10 DRL	1	**907 498**

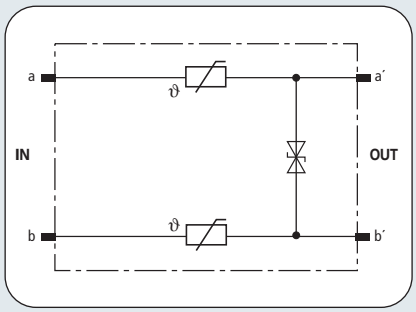


Label holder

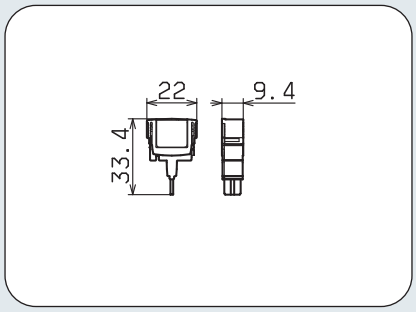
Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

DRL PD



Protective circuit, energy-coordinated to DRL 10 B for protecting terminal equipment, fine limitation between line and PG and additional overcurrent protection.



Dimension drawing DRL PD

- **For maximum transmission rates – combined with overcurrent protection**
- **Energy-coordinated to DRL plug-in SPD block**
- **For use according to the lightning protection zones concept at boundaries 1 – 2 and higher**

Protective plug (1 pair), energy-coordinated to DRL plug-in SPD block for use as single-stage protection for terminal equipment. Low voltage protection level line-line and integrated overcurrent protection for ADSL, ISDN U_{k0} or a/b lines. For mounting with EF 10 DRL. Installation recommended only in combination with DRL plug-in SPD block.

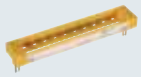
	DRL PD 180
SPD class	TYPE 3 P1
Nominal voltage U_N	180 V
Max. continuous operating d.c. voltage U_C	180 V
Max. continuous operating a.c. voltage U_C	127 V
Nominal current I_L	0.1 A
D1 Total lightning impulse current (10/350 µs) in combination with DRL 10 B... I_{imp}	5 kA
D1 Lightning impulse current (10/350 µs) per line in combination with DRL 10 B... I_{imp}	2.5 kA
C2 Total nominal discharge current (8/20 µs) in combination with DRL 10 B... I_n	10 kA
C2 Nominal discharge current (8/20 µs) per line in combination with DRL 10 B... I_n	5 kA
Voltage protection level line-PG for I_{imp} D1 in combination with DRL 10 B... U_p	≤ 500 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 270 V
Series impedance per line	12 ohms
Bandwidth line-line f_G	61 MHz
Capacitance line-line C	≤ 80 pF
Capacitance line-PG C	≤ 7 pF
Integrated overcurrent protection	✔
Operating temperature range	-40°C...+80°C
Degree of protection	IP 20 plugged in
Pluggable into	LSA disconnection block 2/10 or DRL 10 B... plug-in SPD block
Enclosure material	polyamide PA 6.6
Colour	yellow
Test standards	IEC 61643-21
Approvals, Certifications	VdS

Ordering information	
Type	DRL PD 180
Part No.	**907 430**
Packing unit	10 pc(s).

Label holder

Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

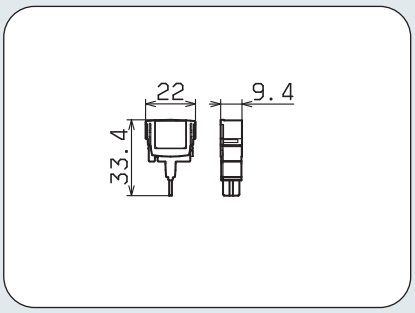
Type	PU pc(s)	Part No.
SR DRL	1	**907 497**



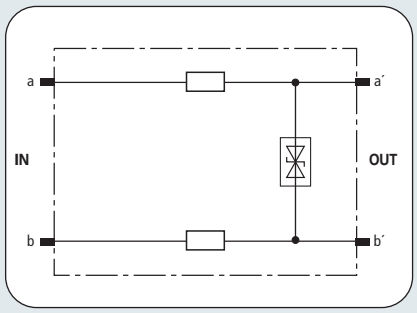
Earthing frame

Earthing frame with snap-in device, required for earthing and mounting max. 10 DRL protective plugs. Pluggable onto a 10-pair disconnection block or DRL plug-in SPD block.

Type	PU pc(s)	Part No.
EF 10 DRL	1	**907 498**



Dimension drawing DRL HD



Protective circuit, energy-coordinated to DRL 10 B, with low capacitance for protection of terminal equipment line-line.

- **For maximum transmission rates**
- **Energy-coordinated to DRL plug-in SPD block**
- **For use according to the lightning protection zones concept at boundaries 1 – 2 and higher**

Protective plug (1 pair), energy-coordinated to DRL plug-in SPD block, for use as single-stage protection for terminal equipment for high-frequency transmissions like G.703 or ISDN U_{2m} , S_{2m} and S_0 . To be installed with EF 10 DRL. Installation recommended only in combination with DRL plug-in SPD block.

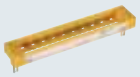
	DRL HD 5	DRL HD 24
SPD class	TYPE 3 P1	TYPE 3 P1
Nominal voltage U_N	5 V	24 V
Max. continuous operating d.c. voltage U_C	6.5 V	28 V
Max. continuous operating a.c. voltage U_C	4.6 V	19.5 V
Nominal current I_L	0.4 A	0.4 A
D1 Total lightning impulse current (10/350 µs) in combination with DRL 10 B... I_{imp}	5 kA	5 kA
D1 Lightning impulse current (10/350 µs) per line in combination with DRL 10 B... I_{imp}	2.5 kA	2.5 kA
C2 Total nominal discharge current (8/20 µs) in combination with DRL 10 B... I_n	10 kA	10 kA
C2 Nominal discharge current (8/20 µs) per line in combination with DRL 10 B... I_n	5 kA	5 kA
Voltage protection level line-PG for I_{imp} D1 in combination with DRL 10 B... U_p	≤ 500 V	≤ 500 V
Voltage protection level line-line for 1 kV/µs C3 U_p	≤ 25 V	≤ 46 V
Series impedance per line	2.2 ohms	4.7 ohms
Bandwidth line-line f_G	90 MHz	94 MHz
Capacitance line-line C	≤ 22 pF	≤ 22 pF
Operating temperature range	-40°C...+80°C	-40°C...+80°C
Degree of protection	IP 20 plugged in	IP 20 plugged in
Pluggable into	LSA disconnection block 2/10 or DRL 10 B... plug-in SPD block	
Enclosure material	polyamide PA 6.6	polyamide PA 6.6
Colour	yellow	yellow
Test standards	IEC 61643-21	IEC 61643-21
Approvals, Certifications	—	VdS

Ordering information		
Type	DRL HD 5	DRL HD 24
Part No.	**907 465**	**907 470**
Packing unit	10 pc(s).	10 pc(s).

Earthing frame

Earthing frame with snap-in device, required for earthing and mounting max. 10 DRL protective plugs. Pluggable onto a 10-pair disconnection block or DRL plug-in SPD block.

Type	PU pc(s)	Part No.
EF 10 DRL	1	**907 498**

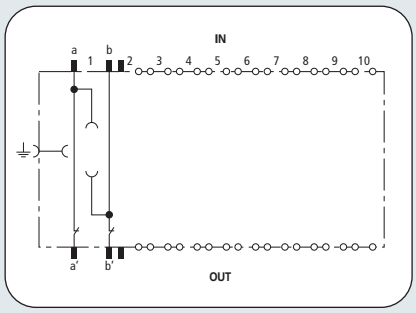


Label holder

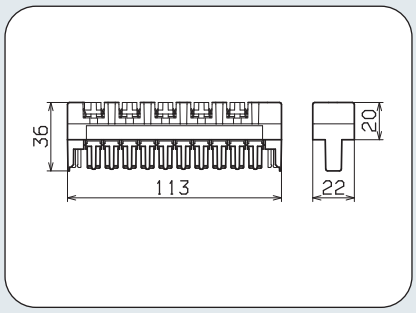
Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

Plug-in SPD Block (without SPDs)



SPD block for 3-pole gas discharge tubes. Integrated disconnecting contacts for plugging additional elements.



Dimension drawing BM 10 DRL

- **Integrated disconnection contacts**
- **For LSA disconnection blocks type 2/10**
- **Allows for individual supplying with SPDs**

Plug-in SPD block (without SPDs) for supporting 1 to max. 10 gas discharge tubes type GDT 230 B3 ... . Also suitable for supporting DRL protective plugs with earthing frame.

BM 10 DRL	
Pluggable into	LSA disconnection blocks
Earthing by	mounting frame
Enclosure material	polyamide PA 6.6
Colour	grey

Ordering information	
Type	BM 10 DRL
Part No.	**907 499**
Packing unit	10 pc(s).

Accessory Part for DEHNrapid® LSA plug-in SPD block without SPDs

Label holder

Universal label holder made of stainless steel, for clear marking of LSA connections. Can be snapped onto DEHNrapid LSA plug-in SPD blocks, earthing frames with protective plug or LSA SPD blocks, 2/10 series.

Type	PU pc(s)	Part No.
SR DRL	1	**907 497**

Accessory Part for DEHNrapid® LSA plug-in SPD block without SPDs

Gas discharge tube

High-capacity spare gas discharge tubes for DRL 10 or BM 10 DRL. 3-pole unit with common thrust chamber for a steady voltage protection level for line-line and line-ground.

Type	GDT 230 B3	GDT 230 B3 FSD
Integrated into (Part No.)	907 400	907 401
Visual fault indicator	—	✔
Fail-safe spring	—	✔

Type	PU pc(s)	Part No.
GDT 230 B3	1	**907 218**
GDT 230 B3 FSD	1	**907 219**

Routing Module with LSA Tension Spring for Disconnection Blocks

Routing module for disconnection blocks for DIN rail mounting, supplied with tension spring type series 2/10, as well as spring-pressure terminals for variable wire connection. For plugging DPL and DEHNrapid LSA surge arresters.

Type	PU pc(s)	Part No.
TL2 10DA CC	1	**907 991** new

- **Premounted enclosure system for wiring and protection components**
- **Tested lightning impulse current carrying capacity**
- **Optimised for equipotential bonding (surge arrester and shield connection)**
- **Metal enclosure, lockable against unauthorised access**

DEHN enclosures for equipotential bonding (DPG) are lockable metal enclosures and prepared for installation of wiring and protection components. With four different sizes, the enclosures with lightning current carrying capacity provide clamping devices to integrate surge arresters and shields into the equipotential bonding.

Enclosure with lightning current carrying capacity, IP 40, for different designs of distribution boards and for using surge arresters. The cover can be removed from the wall plate without tools and is supplied with a lock with a cylindrical casement fastener and a key. The C-shaped design of the wall plate makes mounting work easier by sidewise or front access. LSA mounting frames or DIN rails can be attached to the wall plate with cable entrance plates and cable rails.

Despite of a high packing density, a structured cabling management is provided – crossings between cablings and wirings are avoided and the cabling of e.g. the LSA blocks becomes concise due to the 30 mm grid. For this kind of cabling, an optional shield connection system is available (constant force spring). The sophisticated earthing system permanently connects all conductive components of the enclosure system by mechanical contacting, or earth conductors by means of an earthing block.

DEHN enclosures for equipotential bonding (DPG) are available in 4 sizes to be supplied with 3/6/12/22 LSA blocks. Even for using 20/50/100/200 pairs, this still provides enough space for the earth conductor block for supporting shielded sheath wires.

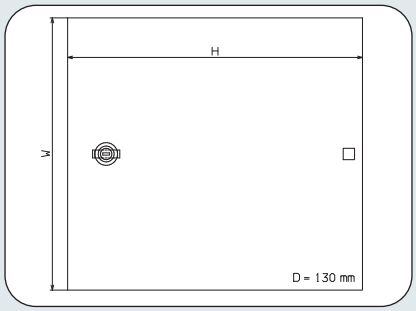
DEHN enclosures for equipotential bonding (DPG) in 4 sizes

The shields of feeded conductors can be contacted with constant force springs type SA KRF in a space-saving way and with lightning current capacity. All equipotential bonding conductors are led together in the central earthing block.

Shield connection with SA KRF

DEHN Enclosure for Equipotential Bonding
DPG LSA

- **Earthing system with lightning current carrying capacity for SPDs and shield connection**
- **Mounting frame for LSA blocks integrated with a grid dimension of 30 mm**
- **Reserved space for uninterfered wiring and use of surge arresters**



DPG LSA is a completely premounted enclosure system with LSA mounting frame and allows for optimised use of SPDs and shield connection systems (constant force spring).

	DPG LSA 30 P	DPG LSA 60 P	DPG LSA 120 P	DPG LSA 220 P
Carrying capacity of connection components				
D1 Total lightning impulse current (10/350 µs) I_{imp}	15 kA	30 kA	50 kA	50 kA
LSA mounting frame for	1 x 3 blocks 2/10	1 x 6 blocks 2/10	2 x 6 blocks 2/10	2 x 11 blocks 2/10
Grid dimension of mounting frame	30 mm	30 mm	30 mm	30 mm
Wirings	1 pc(s)	2 pc(s)	2 pc(s)	3 pc(s)
Cable entries	top / bottom	top / bottom	top / bottom	top / bottom
Cable rail	top / bottom	top / bottom	top / bottom	top / bottom
Locking device	yes	yes	yes	yes
For mounting on	wall	wall	wall	wall
Degree of protection	IP 40	IP 40	IP 40	IP 40
Earthing by	earthing block	earthing block	earthing block	earthing block
Dimension W x H x D	240 x 260 x 130 mm	240 x 350 x 130 mm	330 x 350 x 130 mm	330 x 500 x 130 mm
Enclosure material	steel plate	steel plate	steel plate	steel plate
Colour	RAL 9002	RAL 9002	RAL 9002	RAL 9002
Ordering information				
Type	DPG LSA 30 P	DPG LSA 60 P	DPG LSA 120 P	DPG LSA 220 P
Part No.	**906 100**	**906 101**	**906 102**	**906 103**
Packing unit	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).

Accessory Part for DEHN Enclosure for Equipotential Bonding

Insertion Tools

For LSA blocks.

Type	PU pc(s)	Part No.
AW2 LSA	1	**907 994**

Terminal Block

LSA series 2, for 10 pairs.

Type	PU pc(s)	Part No.
AL2 10DA LSA	1	**907 997**

Disconnection Block

LSA series 2, for 10 pairs.

Type	PU pc(s)	Part No.
TL2 10DA LSA	1	**907 996**

Earth Conductor Block

LSA series 2, for earthing of 38 wires.

Type	PU pc(s)	Part No.
EL2 38EA LSA	1	**907 993**

Constant Force Spring

Constant force springs allow for solderfree shield connections for equipotential bonding or lightning equipotential bonding. They can be installed subsequentially without interrupting the conductor shield or requiring tools for installation. Approved for nuclear installations acc. to TÜV Certificate No. T12-04-ETL003 (TÜV = German Technical Inspectorate).

Type	Clamping range	Material	PU pc(s)	Part No.
SA KRF 10 V2A	4 – 10 mm	StSt	1	**919 031**
SA KRF 15 V2A	9 – 15 mm	StSt	1	**919 032**
SA KRF 22 V2A	14 – 22 mm	StSt	1	**919 033**
SA KRF 29 V2A	18.5 – 29 mm	StSt	1	**919 034**
SA KRF 37 V2A	23.5 – 37 mm	StSt	1	**919 035**

Selfbonding Rubber Tape

Reel with 9 m of selfbonding rubber tape for wrapping around constant force springs for permanent protection against corrosion.

Type	PU pc(s)	Part No.
SKB 19 9M SW	1	**919 030**

Available from

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