

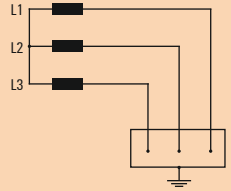
# Grid system

# Type I

# Type II

# Type III

IT-grid



Without remote contact      With remote contact

VPU AC I 3 440/25 LCF  
**2619160000 / 1622677**

VPU AC I 3 R 440/25 LCF  
**2619170000 / 1622678**



VPU AC I 3 480/10  
**2591530000 / 1622675**

VPU AC I 3 R 480/10  
**2591540000 / 1622676**



Without remote contact      With remote contact

**1P for IT-grid** VPU AC II 1 350/50  
**2591350000 / 1622673**

VPU AC II 1 R 350/50  
**2591360000 / 1622674**



**2P for IT-grid** VPU AC II 2 350/50  
**2637010000 / 1622681**

VPU AC II 2 R 350/50  
**2637020000 / 1622682**



**Ground cable with distributed PE** VPU AC II 3 350/50  
**2591100000 / 1622667**

VPU AC II 3 R 350/50  
**2591110000 / 1622668**



**Over ground cable without distributed PE** VPU AC II 3 350/50  
**2591100000 / 1622667**

VPU AC II 3 R 350/50  
**2591110000 / 1622668**



Without remote contact      With remote contact

VPU AC II+III 2 440/20 S  
**2908440000 / 1622702**

VPU AC II+III 2 R 440/20 S  
**2908450000 / 1622703**

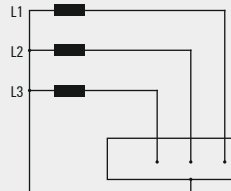


VPU AC II+III 3 440/20 S  
**2908460000 / 1622704**

VPU AC II+III 3 R 440/20 S  
**2908470000 / 1622705**



TT-grid



VPU AC I 3+1 275/25 LCF S 2PE  
**2726760000 / 6610083**

VPU AC I 3+1 R 275/25 LCF S 2PE  
**2726770000 / 1622685**



VPU AC I 3+1 300/12.5 LCF  
**2566910000 / 1622664**

VPU AC I 3+1 R 300/12.5 LCF  
**2636920000 / 1622680**



**1P for TT-grid** VPU AC II 1 300/50  
**2591020000 / 1622665**

VPU AC II 1 R 300/50  
**2591030000 / 1622666**



**Ground cable with distributed PE** VPU AC II 3 300/50  
**2591170000 / 1622671**

VPU AC II 3 R 300/50  
**2591170000 / 1622672**



**Over ground cable without distributed PE** VPU AC II 3 300/50  
**2591160000 / 1622671**

VPU AC II 3 R 300/50  
**2591170000 / 1622672**



**For TT-grid with integrated fuse** VPU AC II F 3 300/40  
**2827600000 / 1622690**

VPU AC II F 3 R 300/40  
**2807410000 / 1622688**



VPU AC II+III 1+1 275/20 S  
**2907930000 / 1622698**

VPU AC II+III 1+1 R 275/20 S  
**2907940000 / 1622699**

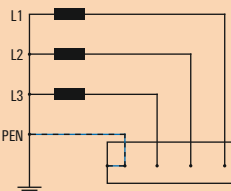


VPU AC II+III 3 275/20 S  
**2907870000 / 1622694**

VPU AC II+III 3 R 275/20 S  
**2907880000 / 1622695**



TN-C-grid



VPU AC I 3 275/25 LCF S  
**2726740000 / 1622683**

VPU AC I 3 R 275/25 LCF S  
**2726750000 / 1622684**



VPU AC I 3+1 300/12.5 LCF  
**2636910000 / 1622679**

VPU AC I 3+1 R 300/12.5 LCF  
**2636920000 / 1622680**



**1P for TN-grid** VPU AC II 1 300/50  
**2591020000 / 1622665**

VPU AC II 1 R 300/50  
**2591030000 / 1622666**



**Ground cable with distributed PE** VPU AC II 3 300/50  
**2591160000 / 1622671**

VPU AC II 3 R 300/50  
**2591170000 / 1622672**



**For TN-C with integrated fuse** VPU AC II F 3 300/40  
**2827600000 / 1622690**

VPU AC II F 3 R 300/40  
**2807410000 / 1622688**



VPU AC II+III 2 275/20 S  
**2907830000 / 1622692**

VPU AC II+III 2 R 275/20 S  
**2907840000 / 1622693**

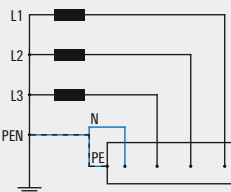


VPU AC II+III 3 275/20 S  
**2907870000 / 1622694**

VPU AC II+III 3 R 275/20 S  
**2907880000 / 1622695**



TN-(C)-S-grid



VPU AC I 3+1 275/25 LCF S 2PE  
**2726760000 / 6610083**

VPU AC I 3+1 R 275/25 LCF S 2PE  
**2726770000 / 1622685**



VPU AC I 3+1 300/12.5 LCF  
**2636910000 / 1622679**

VPU AC I 3+1 R 300/12.5 LCF  
**2636920000 / 1622680**



**1P for TN-grid** VPU AC II 1 300/50  
**2591020000 / 1622665**

VPU AC II 1 R 300/50  
**2591030000 / 1622666**



**Supply with both PE- or N-leider** VPU AC II 4 300/50  
**2591140000 / 1622669**

VPU AC II 4 R 300/50  
**2591150000 / 1622670**



**For TN-(C)-S with integrated fuse** VPU AC II F 3+1 300/40  
**2827630000 / 1622691**

VPU AC II F 3+1 R 300/40  
**2807440000 / 1622689**



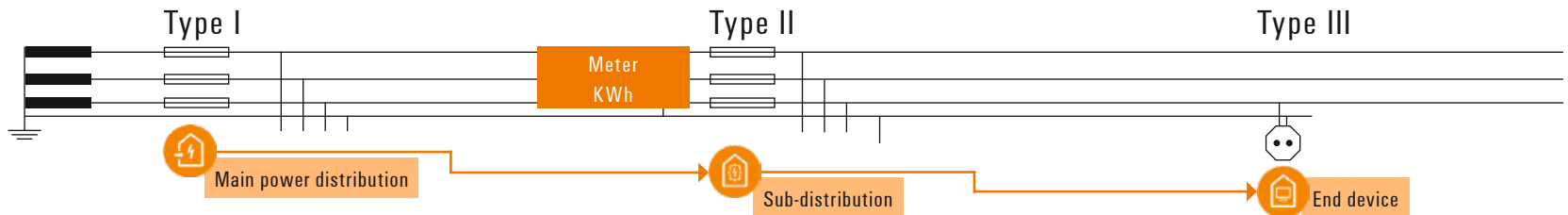
VPU AC II+III 3+1 275/20 S  
**2907950000 / 1622700**

VPU AC II+III 3+1 R 275/20 S  
**2907970000 / 1622701**

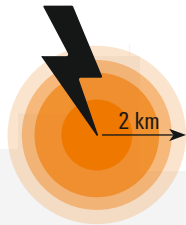


VPU AC II+III 4 275/20 S  
**2907890000 / 1622696**

VPU AC II+III 4 R 275/20 S  
**2907920000 / 1622697**

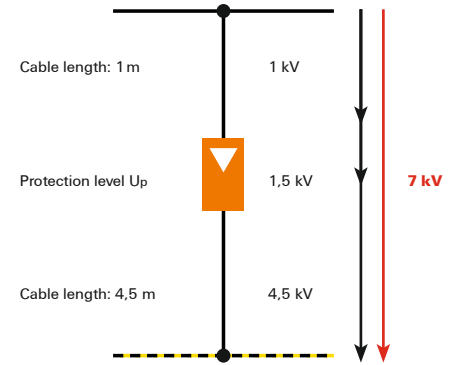


# Installation information and technical basics



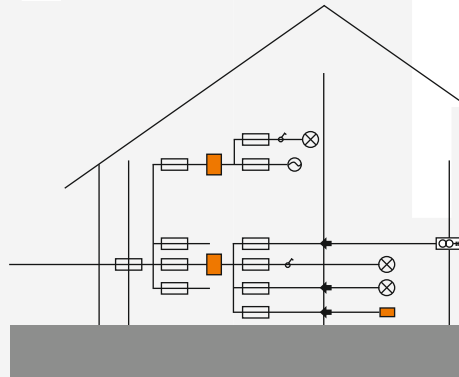
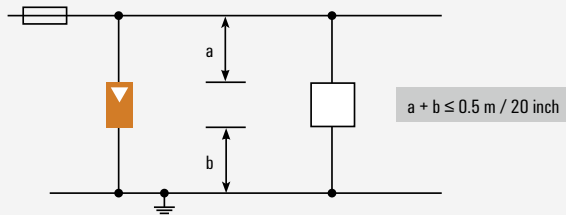
The direct lightning strike has a range of up to 2 km.

**Voltage drop on the cable**  
Long cables reduce the effectiveness of an SPD. Inductivity: 1 m cable will cause 1 kV.



**Specifications for the installation location**  
The standard requires a maximum cable length of the connecting lines of an SPD of  $\leq 0.5$  m.

Single branch wiring b must be as short as possible



**Zonebased surge protection concept**

	400 V	230/400 V	230 V	230 V
	6000 V	4000 V	2500 V	1500 V
Distribution	Main power distribution	Sub-distribution	Electrical machine	End device
SPD Type	Type I	Type II	Type II	Type III
Protection level	IV	III	II	I

Type	Connection lines between SPD and outer conductors	Connection lines between SPD and main earth bar or protective conductor (PE or PEN)
Type I	6 mm <sup>2</sup>	16 mm <sup>2</sup>
Type II	2.5 mm <sup>2</sup>	6 mm <sup>2</sup>

**Cross sections of the cables**

**Specifications for the protected area**  
The protective area of an SPD is 10 m. If this is exceeded, another SPD is required.

