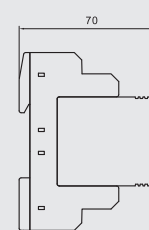
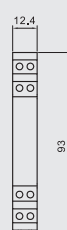
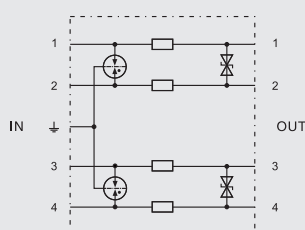


## SPDs for general information (plug-in) BR BD 4L



	BR BD 4L-6	BR BD 4L-12	BR BD 4L-24	BR BD 4L-48	BR BD 4L-60	BR BD 4L-180	
Test standards	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	IEC 61643-21	
SPD class	TYPE2 P1	TYPE2 P1	TYPE2 P1	TYPE2 P1	TYPE2 P1	TYPE2 P1	
Nominal voltage	Un	5V	12V	24V	48V	60V	180V
Max. continuous operating d.c. voltage	Uc	6.0V	15V	33V	54V	70V	180V
Max. continuous operating a.c. voltage	Uc	4.2V	10.6V	23.3V	38.1V	49.5V	127V
Nominal current at 45°C	IL	1A	1A	1A	1A	1A	0.75A
C2 Total nominal discharge current (8/20µs)	In	20kA	20kA	20kA	20kA	20kA	20kA
C2 Nominal discharge current (8/20µs) per line	In	10kA	10kA	10kA	10kA	10kA	10kA
Voltage protection level line–line for In C2	Up	≤15V	≤27V	≤55V	≤85V	≤110V	≤270V
Voltage protection level line–PG for In C2	Up	≤600V	≤600V	≤600V	≤600V	≤600V	≤600V
Voltage protection level line–line at 1 kV/µs C3	Up	≤9V	≤19V	≤45V	≤70V	≤90V	≤250V
Voltage protection level line–PG at 1 kV/µs C3	Up	≤550V	≤550V	≤550V	≤550V	≤550V	≤550V
Series impedance per line		1 Ohm	1 Ohm	1 Ohm	1 Ohm	1 Ohm	1.8 Ohm
Cut-off frequency line–PG	fG	1.0 MHz	2.8 MHz	7.8 MHz	8.7 MHz	11.0 MHz	25.0 MHz
Capacitance line–line	C	≤5.4 nF	≤2.0 nF	≤1.0 nF	≤0.7nF	≤500pF	≤240pF
capacitance line–PG	C	≤16 pF	≤16 pF	≤16 pF	≤16 pF	≤16 pF	≤16 pF
Operating temperature range	Tu	–40°C...+80°C	–40°C...+80°C	–40°C...+80°C	–40°C...+80°C	–40°C...+80°C	–40°C...+80°C
Enclosure material	polyamide PA 6.6						
Degree of protection (plugged-in)	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	
Order Code	D9110	D9111	D9112	D9113	D9114	D9115	