

RSP-EH...

1,2,3-pole lightning and surge arresters, $I_{imp} = 25 \text{ kA/pole}$

RSP-EH25/100-275/10



RSP-EH25/100-275/11



- Category IEC / EN / VDE: class I+II / type 1+2 / B+C
- Location of use: main-distribution boards (MB)
- Network systems: TT, TN-S, TN-C
- Modes of protection: L-N, N-PE
- Protection elements: MOV+GDT+TOV
- Cover: modular (replaceable module)
- Mechanical status indicator: green/red flag
- Compliance with standards: IEC/EN 61643-11:2011, IEC 60364-4-53, IEC 62305, CE, RoHS

Type of arrester		RSP-EH25/100-275/10	RSP-EH25/100-275/11	RSP-EH25/100-275/31
Electrical data				
Number of poles		1	2	4
Nominal voltage (50/60 Hz)	U _n	230 V AC		
Max. continuous operating voltage	U _c	275 V AC	275 V AC / 255 V AC (L-N / N-PE)	275 V AC / 255 V AC (L-N / N-PE)
Nom. discharge current (8/20 μs)	I _n	25 kA	25 kA / 50 kA (L-N / N-PE)	25 kA / 100 kA (L-N / N-PE)
Max. discharge current (8/20 μs)	I _{max}	100 kA	100 kA / 100 kA (L-N / N-PE)	100 kA / 150 kA (L-N / N-PE)
Impulse discharge current (10/350 μs)	I _{imp}	25 kA	25 kA / 50 kA (L-N / N-PE)	25 kA / 100 kA (L-N / N-PE)
Voltage protection level	U _p	1,0 kV	1,0 kV / 1,5 kV (L-N / N-PE)	1,0 kV / 1,5 kV (L-N / N-PE)
Response time	t _A	≤ 25 ns		
Backup fuse		≤ 315 A gL/gG		
Short-circuit current rating	I _{sc cr}	50 kA _{RMS}		
Leakage current	I _{pe}	0 mA		
TOV withstand (120 min.)	U _T	442 V		
General data				
Ambient temperature (operating)	T _a	-40...+85 °C		
Cross section of cables connected to terminals		35 mm ² (single core) / 25 mm ² (multi-core)		
Terminal tightening moment		max. 4,5 Nm		
Mounting		direct mounting on 35 mm rail mount (EN 60715)		
Cover protection category		IP 20 (built-in, EN 60529)		
Cover material		thermoplastic; extinguishing degree V-0 (UL 94)		
Dimensions (L x W x H) [mm]		90 x 36 x 86	94 x 72 x 86	94 x 144 x 86
Weight		324 g	535 g	1 260 g
Remote fault signalisation				
Type of contact		potential-free (isolated contact 1 CO)		
Switching capability of contact		0,5 A / 250 V AC 0,1 A / 250 V DC, 0,2 A / 125 V DC, 0,5 A / 75 V DC		
Cross section of cables connected to terminals		1,5 mm ² (wire single core)		

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RSP-EH25/100-440/11



RSP-EH25/100-440-30



Type of arrester		RSP-EH25 /100-440/10	RSP-EH25 /100-440/11	RSP-EH25 /100-440-30	RSP-EH25 /100-440-31
Electrical data					
Number of poles		1	2	3	4
Nominal voltage (50/60 Hz)	U _n	400 V AC			
Max. continuous operating voltage	U _c	440 V AC	440 V AC / 255 V AC (L-N / N-PE)	440 V AC	440 V AC / 255 V AC (L-N / N-PE)
Nom. discharge current (8/20 μs)	I _n	25 kA	25 kA / 50 kA (L-N / N-PE)	25 kA	25 kA / 100 kA (L-N / N-PE)
Max. discharge current (8/20 μs)	I _{max}	100 kA	100 kA / 100 kA (L-N / N-PE)	100 kA	100 kA / 150 kA (L-N / N-PE)
Impulse discharge current (10/350 μs)	I _{imp}	22 kA	22 kA / 50 kA (L-N / N-PE)	22 kA	22 kA / 100 kA (L-N / N-PE)
Voltage protection level	U _p	1,8 kV	1,8 kV / 1,5 kV (L-N / N-PE)	1,8 kV	1,8 kV / 1,5 kV (L-N / N-PE)
Response time	t _A	≤ 25 ns			
Backup fuse		≤ 315 A gL/gG			
Short-circuit current rating	I _{sccr}	50 kA _{RMS}			
Leakage current	I _{pe}	0 mA			
TOV withstand (120 min.)	U _T	763 V			
General data					
Ambient temperature (operating)	T _a	-40...+85 °C			
Cross section of cables connected to terminals		35 mm ² (single core) / 25 mm ² (multi-core)			
Terminal tightening moment		max. 4,5 Nm			
Mounting		direct mounting on 35 mm rail mount (EN 60715)			
Cover protection category		IP 20 (built-in, EN 60529)			
Cover material		thermoplastic; extinguishing degree V-0 (UL 94)			
Dimensions (L x W x H) [mm]		90 x 36 x 86	94 x 72 x 86	94 x 108 x 86	94 x 144 x 86
Weight		364 g	575 g	1 130 g	1 410 g
Remote fault signalisation					
Type of contact		potential-free (isolated contact 1 CO)			
Switching capability of contact		0,5 A / 250 V AC 0,1 A / 250 V DC, 0,2 A / 125 V DC, 0,5 A / 75 V DC			
Cross section of cables connected to terminals		1,5 mm ² (wire single core)			

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RSP-EH12.5/100-750-10



RSP-EH22/100-960-31

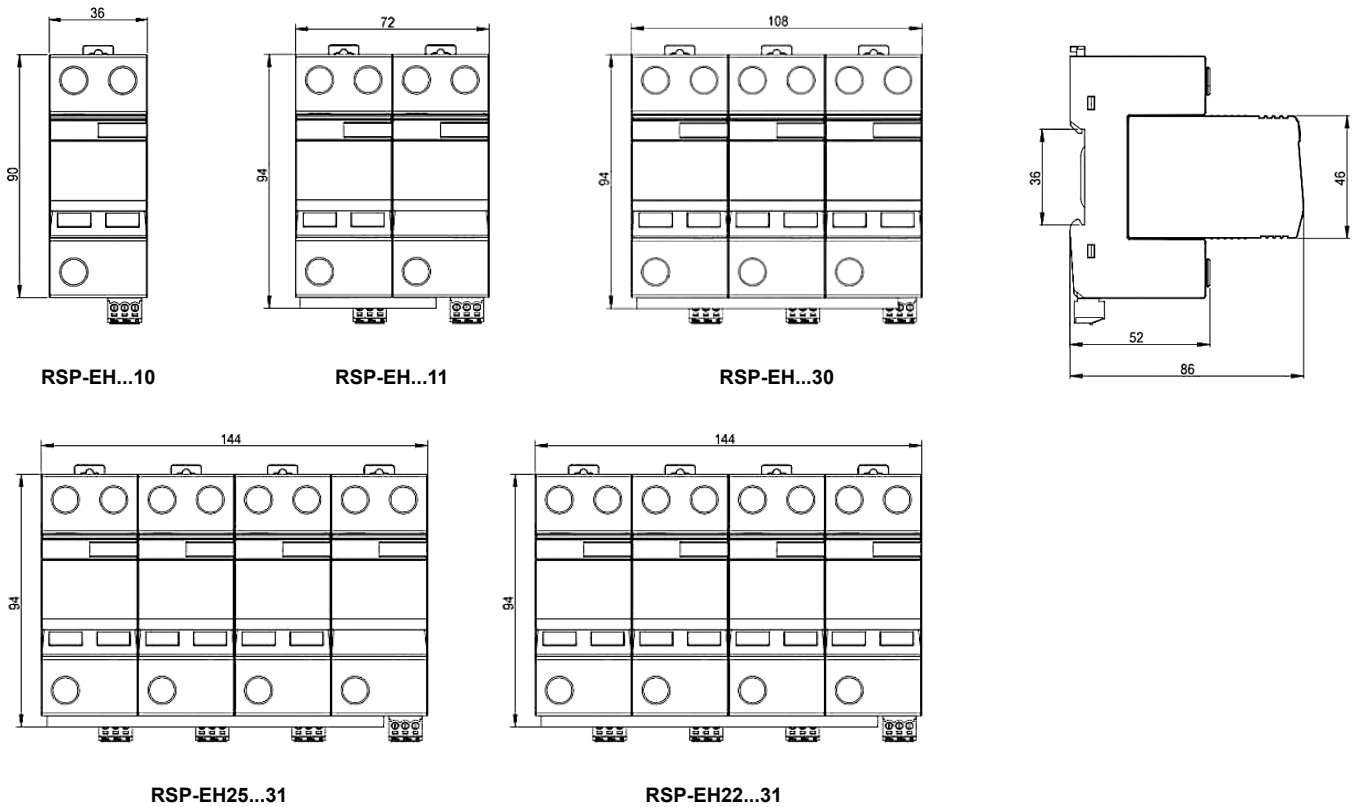


Type of arrester		RSP-EH12.5/100-750-10	RSP-EH22/100-960-31
Electrical data			
Number of poles		1	4
Nominal voltage (50/60 Hz)	U_n	690 V AC	690 V AC (3-phase TN-C/IT)
Max. continuous operating voltage	U_c	750 V AC	960 V AC
Nom. discharge current (8/20 μs)	I_n	25 kA	25 kA
Max. discharge current (8/20 μs)	I_{max}	100 kA	100 kA
Impulse discharge current (10/350 μs)	I_{imp}	4 kA	22 kA
Voltage protection level	U_p	2,5 kV	4,0 kV (L-L, L-PE)
Response time	t_A	$\leq 25 \text{ ns}$	
Backup fuse		$\leq 315 \text{ A gL/gG}$	
Short-circuit current rating	I_{sccr}	50 kA _{RMS}	
Leakage current	I_{pe}	0 mA	
TOV withstand (120 min.)	U_T	1 145 V	1 500 V
General data			
Ambient temperature (operating)	T_a	-40...+85 °C	
Cross section of cables connected to terminals		35 mm ² (single core) / 25 mm ² (multi-core)	
Terminal tightening moment		max. 4,5 Nm	
Mounting		direct mounting on 35 mm rail mount (EN 60715)	
Cover protection category		IP 20 (built-in, EN 60529)	
Cover material		thermoplastic; extinguishing degree V-0 (UL 94)	
Dimensions (L x W x H) [mm]		90 x 36 x 86	94 x 72 x 86
Weight		457 g	1 480 g
Remote fault signalisation			
Type of contact		potential-free (isolated contact 1 CO)	
Switching capability of contact		0,5 A / 250 V AC 0,1 A / 250 V DC, 0,2 A / 125 V DC, 0,5 A / 75 V DC	
Cross section of cables connected to terminals		1,5 mm ² (wire single core)	

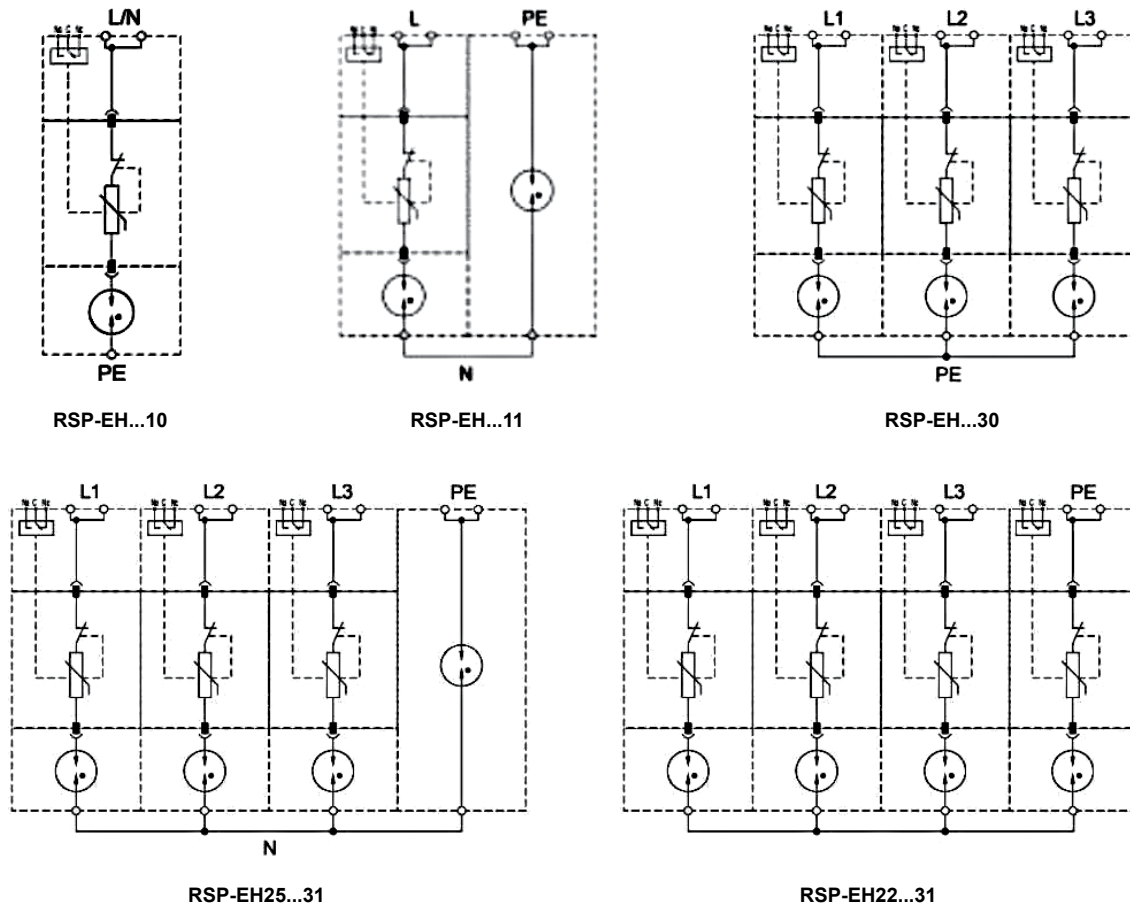
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Dimensions



Connection diagrams



Features:

- designed according to IEC/EN 61643-11:2011, IEC 60364-4-53, IEC 62305,
- unique thermal disconnecter design provides quick thermal response and secure disconnection,
- high lightning current discharge capacity up to 25 kA (10/350 μs), surge current capability up to 100 kA (8/20 μs),
- high short-circuit current rating up to 50 kA_{RMS}, suitable for application in most AC power systems, low voltage protection level,
- anti-vibration module locking system with release button,
- pluggable module for easy replacement without the need to remove system wiring,
- dual degradation failure indication window and remote signal contact.

Series description:

- **RSP-EH...** is the class I+II SPD for low-voltage power supply system lightning current & surge protection, especially for location of high risk exposure or LPZ 0-2 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes; is suit for the main-distribution board,
- high energy MOVs are employed to provide stable lightning & surge protection service with no follow current; notable feature is dual module redundancy for one pole, two individual MOV protection modules in parallel in one pole SPD with two indication windows, so that the SPD could keep on working in spite of one protection module fails or one indication windows turns to red - that will help to realize the uninterrupted surge protection, since user can replace the failure models according to the timing and the condition,
- built-in special VT technology ensures very low voltage protection level, remarkable lightning current discharge capacity up to 25 kA (10/350 μs), long service life because of no leakage current and follow current, improve the network quality (no power line disturbances); very high TOV (temporary overvoltage) withstanding performance - better reliability and robustness for areas with unstable power networks; is applied in most electrical installation (better reliability and safety protection), particularly suitable for system with permanent insulation monitoring,
- high energy gas discharge tube technology is designed especially for separation and protection between the N and PE conductors.

Types for reference:

- **RSP-EH25/100-275/10, RSP-EH25/100-440/10, RSP-EH12.5/100-750-10**: combined single-pole SPD,
- **RSP-EH25/100-275/11, RSP-EH25/100-440/11**: combined two-poles SPD - "1+1" protection circuit for single phase 230/440 TT/TN systems,
- **RSP-EH25/100-440-30**: combined three-poles SPD - for environments with frequent switching operations or lightning strikes,
- **RSP-EH25/100-275/31, RSP-EH25/100-440-31, RSP-EH22/100-960-31**: combined four-poles SPD - "1+1" protection circuit for single phase 230/440 TT/TN systems; for environments with frequent switching operations or lightning strikes.