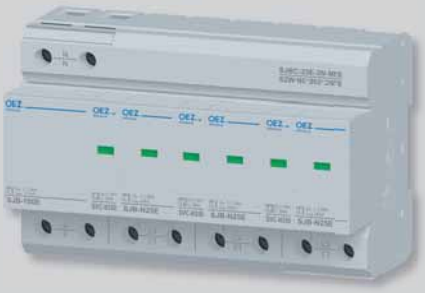
COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

T1+T2



- For protection of electric networks and equipment against overvoltage from direct or indirect lightning strokes in the arresting equipment of buildings, LV lines etc.
- For protection against overvoltage caused by atmospheric disturbances and from switching processes in networks.
- For protection of common wiring in apartments, houses, commercial buildings etc.
- It reduces voltage and „cut up" the overvoltage wave power caused by direct or indirect lightning stroke and/or switching processes in the networks.
- Use: as the first stage (coarse protection) and the second stage (medium protection) in three degree scale of protection against overvoltage – **type 1** and **type 2** according to EN 61643-11.
- For detail information on OEZ overvoltage protection see the document "Overvoltage protections - Application manual".

Lightning current and surge voltage arresters SJBC-25E-…

- Lightning current and surge voltage arresters designed for building, residential, commercial and other similar installations classed in group „big installation thread".
- For four-wire TN-C network use SJBC-25E-3-MZS and for five-wire TN-S, TT network use SJBC-25E-3N-MZS.
- Main component is a powerful arrester gap with electronic ignition release (T1) able to arrest lightning current up to 25 kA (10/350 µs) a parallel varistor (T2) with quicker reaction time (25 ns).
- Ability of quenching of follow short-circuit current up to 25 A without the ionized gas.
- Possibility of mounting in casual empty enclosures and switchboard cabinets Distri.
- Design: multipart, consisting of a base and replaceable modules. The modules can be removed in case of measurement or failure without necessity of device disconnection.
- Remote and visual signalling of the shut-down device state (after disconnection the lightning current arrester is non-functional and the replaceable module must be replaced).
- The modules can be turned in their base by 180°, so that it is also possible to turn the whole device while keeping legibility of description (e.g. at connection from the top).

Network	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
TN-C (3L + PEN)	**SJBC-25E-3-MZS**	OEZ:38361	6	1.04	1
TN-S (3L + N + PE)	**SJBC-25E-3N-MZS**	OEZ:38362	8	1.43	1

Replaceable modules

For device	Spare module	Order code	Number of modules in the device	Weight [kg]	Package [pcs]
SJBC-25E-3-MZS	**SJB-N25E-1-M**	OEZ:38363	3	0.129	10
	SVC-N350-1-M	OEZ:38364	3	0.052	10
SJBC-25E-3N-MZS	**SJB-N25E-1-M**	OEZ:38363	3	0.129	10
	SVC-N350-1-M	OEZ:38364	3	0.052	10
	SJB-100E-N-M	OEZ:38359	1	0.240	10

COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

T1+T2

Lightning current and surge voltage arresters SVBC-12,5-..

- Lightning current arresters designed for building, residential, commercial and other similar installations classed in group „medium installation threat".
- Main component is varistor, able to arrest lightning current up to 12.5 kA (10/350 µs).
- Possibility of mounting in casual empty enclosures and switchboard cabinets Distri.
- Design: multipart, consisting of a base and replaceable modules. The modules can be disconnected from equipment if need be.
- Remote and visual signalling of the shut-down device state (after disconnection the lightning current arrester is non-functional and it must be replaced).

Network	Design	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
TN-C (3L+PEN)	without remote signalling	**SVBC-12,5-3-MZ**	OEZ:40619	3	0.553	1
	with remote signalling	**SVBC-12,5-3-MZS**	OEZ:40620	3	0.560	1
TN-S, TT (3L+N+PE)	without remote signalling	**SVBC-12,5-3N-MZ**	OEZ:40621	4	0.672	1
	with remote signalling	**SVBC-12,5-3N-MZS**	OEZ:40622	4	0.681	1
TN-S (3L+N+PE)	without remote signalling	**SVBC-12,5-4-MZ**	OEZ:40623	4	0.749	1
	with remote signalling	**SVBC-12,5-4-MZS**	OEZ:40624	4	0.753	1
TN-C (1L+PEN)	without remote signalling	**SVBC-12,5-1-MZ**	OEZ:40615	1	0.158	1
TN-S, TT (1L+N+PE)	with remote signalling	**SVBC-12,5-1N-MZS**	OEZ:40618	2	0.360	1

Replaceable modules

For device	Spare module	Order code	Number of modules in the device	Weight [kg]	Package [pcs]
SVBC-12,5-1-MZ	**SVBC-12,5-1-M**	OEZ:40625	1	0,114	1
SVBC-12,5-1N-MZS	**SVBC-12,5-1-M**	OEZ:40625	1	0,114	1
	SVBC-50-N-M	OEZ:40626	1	0,078	1
SVBC-12,5-3-MZ(S)	**SVBC-12,5-1-M**	OEZ:40625	3	0,114	1
SVBC-12,5-3N-MZ(S)	**SVBC-12,5-1-M**	OEZ:40625	3	0,114	1
	SVBC-50-N-M	OEZ:40626	1	0,078	1
SVBC-12,5-4-MZ(S)	**SVBC-12,5-1-M**	OEZ:40625	4	0,114	1

COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

T1+T2

Specifications

Type				SJBC-25E-3-MZS	SJBC-25E-3N-MZS
Standards				EN 61643-11 IEC 61643-11	EN 61643-11 IEC 61643-11
Approval marks					
Rated voltage	U_N			AC 230/400 V	AC 230/400 V
Maximum constant operating voltage	U_C	L-N		-	AC 350 V
		L-PEN		AC 350 V	-
		N-PE		-	AC 350 V
Impulse current (10/350 µs)	I_{imp}	peak value I_{peak}	L-N	-	75 kA (25 kA / pole)
			L-PEN	75 kA (25 kA / pole)	-
			N-PE	-	100 kA
		charge Q		37.5 As	50 As
		specific energy W/R		1.4 MJ/Ω	2.5 MJ/Ω
Rated discharge current (8/20 µs)	I_n	L-N		-	25 kA / pole
		L-PEN		25 kA / pole	-
		N-PE		-	100 kA
Maximum discharge current (8/20 µs)	I_{max}	L-N		-	40 kA / pole
		L-PEN		40 kA / pole	-
		N-PE		-	-
Rated frequency	f_n			50/60 Hz	50/60 Hz
Voltage protection level	U_p	L-N		-	≤ 1.5 kV
		L-PEN/L-PE		≤ 1.5 kV / -	- / 2.2 kV
		N-PE		-	≤ 1.5 kV
Arrester classification		according to EN 61643-11		type 1 and type 2 T1 T2	type 1 a type 2 T1 T2
		according to IEC 61643-11		class I and class II	class I and class II
Response time		L-N		-	≤ 25 ns
		L-PEN		≤ 25 ns	-
		N-PE		-	≤ 100 ns
Quenching follow-current	I_{fi}	L-N		-	25 kA / AC 264 V
		L-PEN		25 kA / AC 264 V	-
		N-PE		-	0.1 kA
Maximum backup fuse gG/gL		parallel connection (T)		315 A	315 A
		serial connection (V)		125 A	125 A
Degree of protection - with connected conductors				IP20	IP20
Mounting on "U" rail according to EN 60715 – type				TH 35	TH 35
Connection					
Conductor - rigid (solid, stranded)				2.5 ÷ 35 mm²	2.5 ÷ 35 mm²
Conductor – flexible				2.5 ÷ 25 mm²	2.5 ÷ 25 mm²
Torque				4.5 Nm	4.5 Nm
Top or bottom connection				yes	yes
Optical signalling					
Functional state				green	green
Non-functional state				red	red
Remote signalling					
Arrangement of contacts [1]				001	001
Max. voltage/current	U_{max}/I_{max}			AC 250 V / 1 A	AC 250 V / 1 A
				DC 30 V / 1 A	DC 30 V / 1 A
Min. voltage/current	U_{min}/I_{min}			AC 12 V / 10 mA	AC 12 V / 10 mA
Connection – conductor (rigid, flexible)				0.14 ÷ 1.5 mm²	0.14 ÷ 1.5 mm²
Torque				0.25 Nm	0.25 Nm
Operating conditions					
Ambient temperature				-40 ÷ 80 °C	-40 ÷ 80 °C
Working position				arbitrary	arbitrary

[1] Each digit indicates successively the number of make, break and break-make contacts.

COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

T1+T2

Specifications

Type				SVBC-12,5-3-MZ SVBC-12,5-3-MZS	SVBC-12,5-3N-MZ SVBC-12,5-3N-MZS	SVBC-12,5-4-MZ SVBC-12,5-4-MZS	SVBC-12,5-1-MZ	SVBC-12,5-1N-MZS
Standards				EN 61643-11 IEC 61643-11	EN 61643-11 IEC 61643-11	EN 61643-11 IEC 61643-1	EN 61643-11 IEC 61643-1	EN 61643-11 IEC 61643-1
Approval marks				CE EAC	CE EAC	CE EAC	CE EAC	CE EAC
Rated voltage	U_N			AC 230 /400 V	AC 230 /400 V	AC 230 /400 V	AC 230 V	AC 230 V
Maximum constant operating voltage	U_c	L-N		- / -	AC 335 V	-	-	AC 335 V
		L-PE/L-PEN		- / AC 335 V	- / -	AC 335 V / -	- / AC 335 V	- / -
		N-PE		-	AC 264 V	AC 335 V	-	AC 264 V
Impulse current	I_{imp}	peak value I_{peak}	L-N	-	37.5 kA (12.5 kA / pole)	-	-	12.5 kA
			L-PE/L-PEN	- / 37.5 kA (12.5 kA / pole)	- / -	37.5 kA (12.5 kA / pole) / -	- / 12.5 kA	- / -
			N-PE	-	50 kA	12.5 kA	-	50 kA
		charge Q		18.75 As	25 As	25 As	6.25 As	12.5 As
		specific energy W/R		352 kJ/Ω	625 kJ/Ω	625 kJ/Ω	39 kJ/Ω	160 kJ/Ω
Rated discharge current (8/20 µs	I_n	L-N		-	12.5 kA / pole	-	-	12.5 kA
		L-PE/L-PEN		- / 12.5 kA / pole	- / -	12.5 kA / pole/ -	- /12.5 kA	- / -
		N-PE		-	50 kA	12.5 kA	-	50 kA
Maximum discharge current (8/20 µs)	I_{max}	L-N		-	50 kA / pole	-	-	50 kA
		L-PE/L-PEN		- / 50 kA / pole	- / -	50 kA /pole/ -	- / 50 kA	-
		N-PE		-	50 kA	50 kA	-	50 kA
Rated frequency	f_n			50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Voltage protection level	U_p	L-N		-	≤ 1.2 kV	-	-	≤ 1.2 kV
		L-PE/L-PEN		- / ≤ 1.2 kV	≤ 2 kV / -	≤ 1.2 kV	- / ≤ 1.2 kV	≤ 2 kV / -
		N-PE		-	≤ 1.7 kV	≤ 1.2 kV	-	≤ 1.7 kV
Arrester classification		according to EN 61643-11		type 1 and type 2 T1 T2	type 1 and type 2 T1 T2	type 1 and type 2 T1 T2	type 1 and type 2 T1 T2	type 1 and type 2 T1 T2
		according to IEC 61643-11		class I and class II	class I and class II	class I and class II	class I and class II	class I and class II
Response time		L-N		-	≤ 25 ns	-	-	≤ 25 ns
		L-PE/L-PEN		- / ≤ 25 ns	- / -	≤ 25 ns / -	- / ≤ 25 ns	- / -
		N-PE		-	≤ 100 ns	≤ 25 ns	-	≤ 100 ns
Maximum backup fuse gG/gL		parallel connection (T)		160 A	160 A	160 A	160 A	160 A
		serial connection (V)		80 A	80 A	80 A	80 A	80 A
Degree of protection - with connected conductors				IP20	IP20	IP20	IP20	IP20
Mounting on "U" rail according to EN 60715 – type				TH 35	TH 35	TH 35	TH 35	TH 35
Connection								
Conductor - rigid (solid, stranded)				1.5 ÷ 35 mm²	1.5 ÷ 35 mm²	1.5 ÷ 35 mm²	1.5 ÷ 35 mm²	1.5 ÷ 35 mm²
Conductor – flexible				1.5 ÷ 25 mm²	1.5 ÷ 25 mm²	1.5 ÷ 25 mm²	1.5 ÷ 25 mm²	1.5 ÷ 25 mm²
Torque				4.5 Nm	4.5 Nm	4.5 Nm	4.5 Nm	4.5 Nm
Top or bottom connection				only bottom	only bottom	only bottom	top/bottom	only bottom
Optical signalling								
Functional state				green	green	green	green	green
Non-functional state				red	red	red	red	red
Remote signalling								
Arrangement of contacts [1]				001	001	001	001	001
Max. voltage/current	U_{max}/I_{max}			AC 250 V / 1.5 A	AC 250 V / 1.5 A	AC 250 V / 1.5 A	AC 250 V / 1.5 A	AC 250 V / 1.5 A
				DC 30 V / 1.5 A	DC 30 V / 1.5 A	DC 30 V / 1.5 A	DC 30 V / 1.5 A	DC 30 V / 1.5 A
Min. voltage/current	U_{min}/I_{min}			AC 12 V / 10 mA	AC 12 V / 10 mA	AC 12 V / 10 mA	AC 12 V / 10 mA	AC 12 V / 10 mA
Connection – conductor (rigid, flexible)				0.14 ÷ 1.5 mm²	0.14 ÷ 1.5 mm²	0.14 ÷ 1.5 mm²	0.14 ÷ 1.5 mm²	0.14 ÷ 1.5 mm²
Torque				0.25 Nm	0.25 Nm	0.25 Nm	0.25 Nm	0.25 Nm
Operating conditions								
Ambient temperature				-40 ÷ 80 °C	-40 ÷ 80 °C	-40 ÷ 80 °C	-40 ÷ 80 °C	-40 ÷ 80 °C
Working position				arbitrary	arbitrary	arbitrary	arbitrary	arbitrary

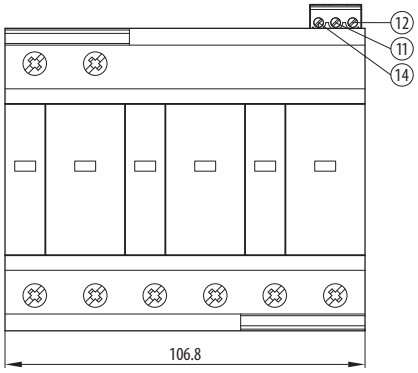
[1] Each digit indicates successively the number of make, break and break-make contacts.

COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

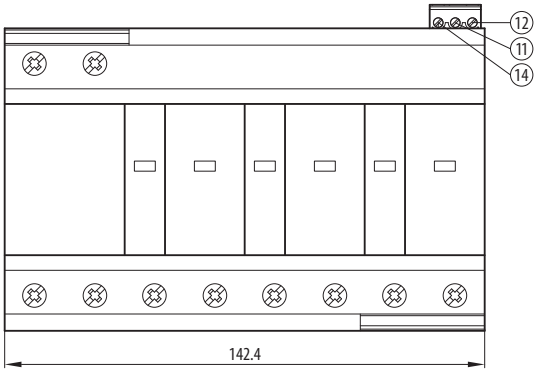
T1+T2

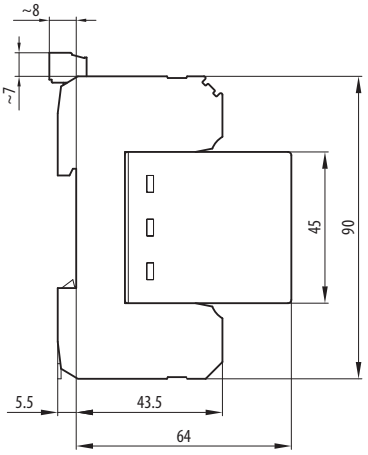
Dimensions

SJBC-25E-3-MZS

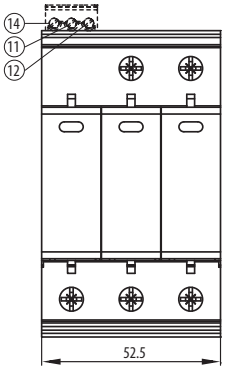


SJBC-25E-3N-MZS

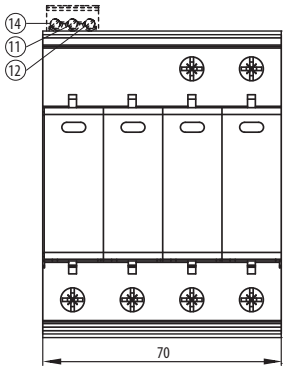




SVBC-12,5-3-MZ(S)

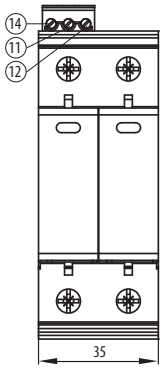


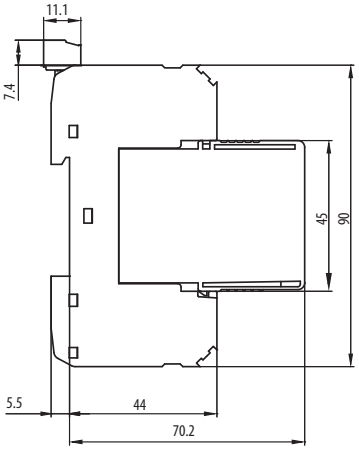
SVBC-12,5-3N-MZ(S)
SVBC-12,5-4-MZ(S)



SVBC-12,5-1-MZ

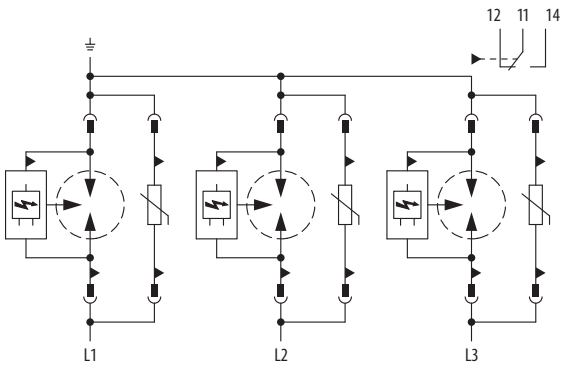
SVBC-12,5-1N-MZS



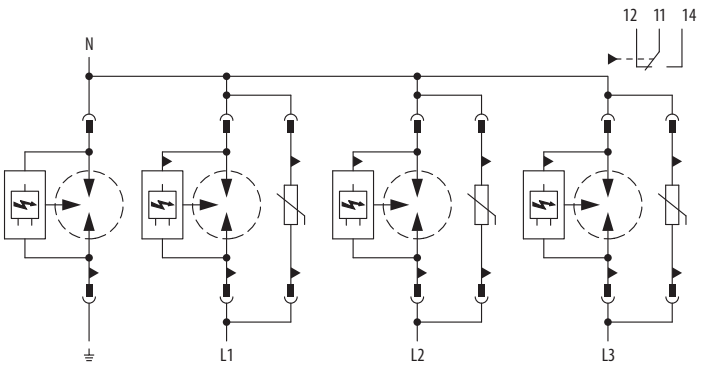


Diagram

SJBC-25E-3-MZS



SJBC-25E-3N-MZS

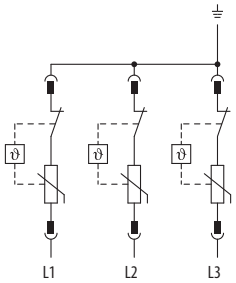


COMBINED LIGHTNING CURRENT AND SURGE VOLTAGE ARRESTERS SJBC, SVBC

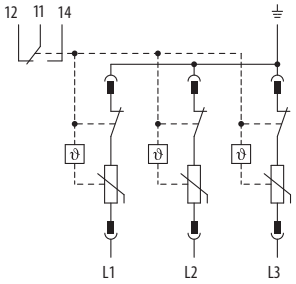
T1+T2

Diagram

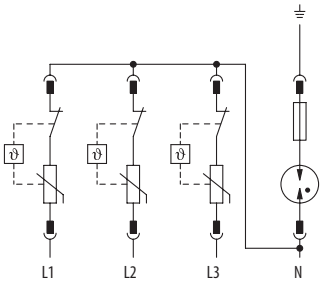
SVBC-12,5-3-MZ



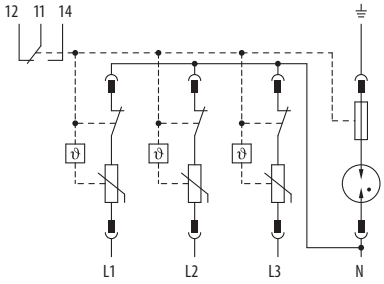
SVBC-12,5-3-MZS



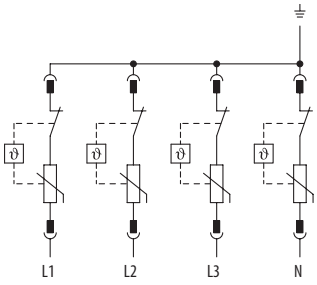
SVBC-12,5-3N-MZ



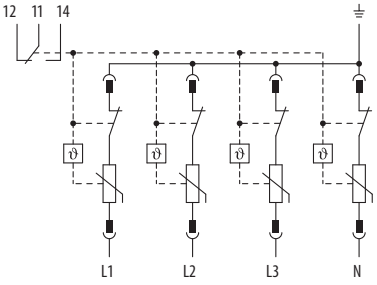
SVBC-12,5-3N-MZS



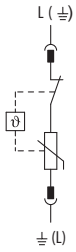
SVBC-12,5-4-MZ



SVBC-12,5-4-MZS



SVBC-12,5-1-MZ



SVBC-12,5-1N-MZS