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# Protection and safety

## OVR T1-T2-T3 25 kA High energy

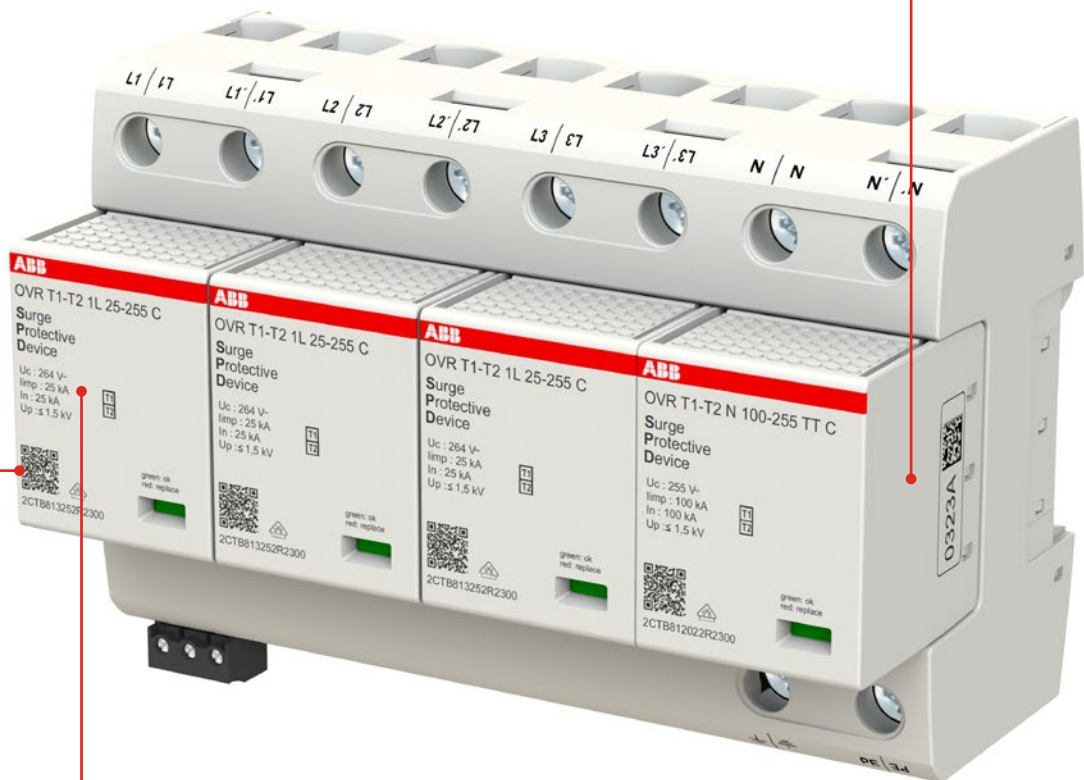


## OVR T1-T2-T3, T1-T2, T2 and T2-T3 ranges. The details make the difference

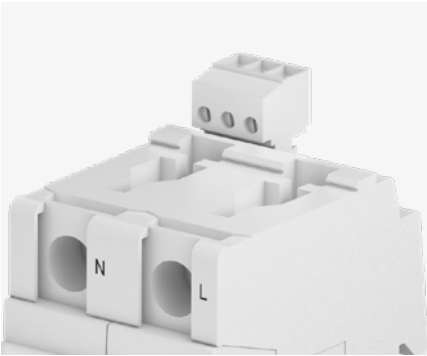
A complete range for your surge protection

Pluggable cartridge for  
easy replacement during  
maintenance operations.

Smart identification  
QR code



Clear information on the front of  
the product indicating the technical  
characteristics of the OVR.



OVR T1-T2 12.5, T2 and T2-T3 ranges are using same terminal as Pro M compact devices to guarantee a complete coordination and time saving in wiring operation.



The pluggable feature of ABB OVR pluggable surge protective devices (SPDs) facilitates maintenance. Should one or more worn cartridges need to be replaced, the wires do not have to be removed.



The end-of-life indicator of the SPD signals the status of the device. A mechanical indicator turns from green to red when the SPD reaches the end of its life, when the end-of-life indicator is fitted.

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### OVR surge protective devices selection tables

Pro- tected lines	Impulse current  Iimp 10/350 kA	Max. dis- charge current  Imax 8/20 kA	Nominal current  In kA	Follow current interrupt- ing rating  Ifi kA	Voltage protec- tion level  Up kV	Nominal voltage  Un V	Max. cont. op- erating voltage  Uc V	Order details	
								Type code	Order code
<b>Type T1-T2 OVR pluggable</b>									
<b>Uc 255 V</b>									
1	25	-	25	50	1.5	230	264	OVR T1-T2 1L 25-255 P	2CTB813250R2300
1	25	-	25	50	1.5	230	264	OVR T1-T2 1L 25-255 P TS	2CTB813251R2300
1+1	25	-	25	50/0,1	1.5	230	255	OVR T1-T2 1N 50-255 P TS	2CTB812511R2300
3	25	-	25	50	1.5	230/400	264	OVR T1-T2 3L 75-255 P TS	2CTB812751R2300
4	25	-	25	50	1.5	230/400	264	OVR T1-T2 4L 100-255 P TS	2CTB812101R2300
3+1	25	-	25	50/0,1	1.5	230/400	255	OVR T1-T2 3N 100-255 P TS	2CTB812111R2300
<b>Uc 275 V</b>									
1	12.5	80	20	-	1.4	230	275	OVR T1-T2 12.5-275s P TS QS	2CTB815710R0000
1+1	12.5	80	20	-	1.4	230	275	OVR T1-T2 1N 12.5-275s P TS QS	2CTB815710R0100
3	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 3L 12.5-275s P TS QS	2CTB815710R0600
3+1	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 3N 12.5-275s P TS QS	2CTB815710R0700
4	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 4L 12.5-275s P TS QS	2CTB815710R1100
1	12.5	80	20	-	1.4	230	275	OVR T1-T2 12.5-275s P QS	2CTB815710R1200
1+1	12.5	80	20	-	1.4	230	275	OVR T1-T2 1N 12.5-275s P QS	2CTB815710R1300
3	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 3L 12.5-275s P QS	2CTB815710R1800
3+1	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 3N 12.5-275s P QS	2CTB815710R1900
4	12.5	80	20	-	1.4	230/400	275	OVR T1-T2 4L 12.5-275s P QS	2CTB815710R2300
<b>Uc 440 V</b>									
1	12.5	80	20	-	1.9	400	440	OVR T1-T2 12.5-440s P TS QS	2CTB815710R2900
1+1	12.5	80	20	-	1.9	400	440	OVR T1-T2 1N 12.5-440s P TS QS	2CTB815710R3000
3	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 3L 12.5-440s P TS QS	2CTB815710R3500
3+1	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 3N 12.5-440s P TS QS	2CTB815710R3600
4	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 4L 12.5-440s P TS QS	2CTB815710R4000
1	12.5	80	20	-	1.9	400	440	OVR T1-T2 12.5-440s P QS	2CTB815710R4100
1+1	12.5	80	20	-	1.9	400	440	OVR T1-T2 1N 12.5-440s P QS	2CTB815710R4200
3	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 3L 12.5-440s P QS	2CTB815710R4700
3+1	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 3N 12.5-440s P QS	2CTB815710R4800
4	12.5	80	20	-	1.9	400/690	440	OVR T1-T2 4L 12.5-440s P QS	2CTB815710R5200
<b>Neutral</b>									
1	100	-	100	0.1	1.5	230	255	OVR T1-T2 N 100-255 P	2CTB813010R2300
1	100	-	100	0.1	1.5	230	255	OVR T1-T2 N 100-255 P TS	2CTB813011R2300
1	50	100	50	0.1	1.4	230	275	OVR T1-T2 N 50-275s P QS	2CTB815710R5300
1	50	100	50	0.1	1.9	400	440	OVR T1-T2 N 50-440s P QS	2CTB815710R5300
<b>Cartridges</b>									
1	25	-	25	50	1.5	230	264	OVR T1-T2 1L 25-255 C	2CTB813252R2300
1	50	-	50	0.1	1.5	230	255	OVR T1-T2 N 50-255 C	2CTB812522R2300
1	100	-	100	0.1	1.5	230	255	OVR T1-T2 N 100-255 TT C	2CTB812022R2300
1	100	-	100	0.1	1.5	230	255	OVR T1-T2 N 100-255 C	2CTB813012R2300
1	12.5	80	20	-	1.4	230	275	OVR T1-T2 12.5-275s C QS	2CTB815710R2600
1	12.5	80	20	-	1.9	400	440	OVR T1-T2 12.5-440s C QS	2CTB815710R5500
1	50	100	50	-	1.4	230	275	OVR T1-T2 N 50-275s C QS	2CTB815710R2700
1	50	100	50	-	1.9	400	440	OVR T1-T2 N 50-440s C QS	2CTB815710R5600
<b>Type 2 OVR non-pluggable</b>									
<b>Uc 275 V</b>									
1	-	20	5	-	1.0	230	275	OVR T2 20-275	2CTB804200R0100
1	-	40	20	-	1.4	230	275	OVR T2 40-275	2CTB804201R0100
1	-	20	5	-	1.0	230	275	OVR T2 20-275 (x20)	2CTB804200R1100
1	-	40	20	-	1.4	230	275	OVR T2 40-275 (x20)	2CTB804201R1100

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### OVR surge protective devices selection tables

Pro- tected lines	Impulse current  Iimp 10/350 kA	Max. dis- charge current  Imax 8/20 kA	Nominal current  In kA	Follow current interrupt- ing rating  Ifi kA	Voltage protec- tion level  Up kV	Nominal voltage  Un V	Max. cont. op- erating voltage  Uc V	Order details	
								Type code	Order code
<b>Type 2 OVR pluggable</b>									
<b>Uc 275 V</b>									
1	2	40	20	-	1.25	230	275	OVR T2 40-275 P TS QS	2CTB803871R1700
1+1	2	40	20	-	1.25	230	275	OVR T2 1N 40-275 P TS QS	2CTB803972R0500
3	2	40	20	-	1.25	230/400	275	OVR T2 3L 40-275 P TS QS	2CTB803873R2500
4	2	40	20	-	1.25	230/400	275	OVR T2 4L 40-275 P TS QS	2CTB803873R5200
1	2	40	20	-	1.25	230	275	OVR T2 40-275 P QS	2CTB803871R2300
1+1	2	40	20	-	1.25	230	275	OVR T2 1N 40-275 P QS	2CTB803972R1100
3	2	40	20	-	1.25	230/400	275	OVR T2 3L 40-275 P QS	2CTB803873R2400
4	2	40	20	-	1.25	230/400	275	OVR T2 4L 40-275 P QS	2CTB803873R5600
1	2	40	20	-	1.4	230	275	OVR T2 40-275s P TS QS	2CTB815704R0000
1+1	2	40	20	-	1.4	230	275	OVR T2 1N 40-275s P TS QS	2CTB815704R0200
3	2	40	20	-	1.4	230/400	275	OVR T2 3L 40-275s P TS QS	2CTB815704R0600
4	2	40	20	-	1.4	230/400	275	OVR T2 4L 40-275s P TS QS	2CTB815704R1100
1	2	40	20	-	1.4	230	275	OVR T2 40-275s P QS	2CTB815704R1200
1+1	2	40	20	-	1.4	230	275	OVR T2 1N 40-275s P QS	2CTB815704R1400
3	2	40	20	-	1.4	230/400	275	OVR T2 3L 40-275s P QS	2CTB815704R1800
4	2	40	20	-	1.4	230/400	275	OVR T2 4L 40-275s P QS	2CTB815704R2300
1	6.25	80	20	-	1.4	230	275	OVR T2 80-275s P TS QS	2CTB815708R0000
1+1	6.25	80	20	-	1.4	230	275	OVR T2 1N 80-275s P TS QS	2CTB815708R0200
3	6.25	80	20	-	1.4	230/400	275	OVR T2 3L 80-275s P TS QS	2CTB815708R0600
4	6.25	80	20	-	1.4	230/400	275	OVR T2 4L 80-275s P TS QS	2CTB815708R1100
1	6.25	80	20	-	1.4	230	275	OVR T2 80-275s P QS	2CTB815708R1200
1+1	6.25	80	20	-	1.4	230	275	OVR T2 1N 80-275s P QS	2CTB815708R1400
3	6.25	80	20	-	1.4	230/400	275	OVR T2 3L 80-275s P QS	2CTB815708R1800
4	6.25	80	20	-	1.4	230/400	275	OVR T2 4L 80-275s P QS	2CTB815708R2300

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### OVR surge protective devices selection tables

Protected lines	Impulse current	Max. discharge current	Nominal current	Follow current interrupting rating	Voltage protection level	Nominal voltage	Max. cont. operating voltage	Order details	
	I <sub>imp</sub> 10/350 kA	I <sub>max</sub> 8/20 kA	I <sub>n</sub> kA	I <sub>fi</sub> kA	U <sub>p</sub> kV	U <sub>n</sub> V	U <sub>c</sub> V	Type code	Order code
<b>Neutral</b>									
1	2	80	30	0.1	1.4	230	275	OVR T2-T3 N 80-275 P QS	2CTB803973R1900
1	6.25	80	30	0.1	1.4	230	275	OVR T2 N 80-275s P QS	2CTB815708R2500
<b>Cartridges</b>									
1	2	80	30	-	1.4	230	275	OVR T2-T3 N 80-275 C QS	2CTB803876R0000
1	2	40	20	-	1.25	230	275	OVR T2 40-275 C QS	2CTB803876R1000
1	6.25	40	20	-	1.4	230	275	OVR T2 40-275s C QS	2CTB815704R2600
1	6.25	80	20	-	1.4	230	275	OVR T2 80-275s C QS	2CTB815708R2600
1	6.25	80	30	-	1.4	230	275	OVR T2 N 80-275s C QS	2CTB815708R2800
<b>Uc 350V</b>									
1	2	40	20	-	1.5	230	350	OVR T2 40-350 P QS	2CTB803881R2300
1	2	40	20	-	1.5	230	350	OVR T2 40-350 P TS QS	2CTB803881R1700
1+1	2	40	20	-	1.7	230	350	OVR T2 1N 40-350 P QS	2CTB803982R1100
1+1	2	40	20	-	1.7	230	350	OVR T2 1N 40-350 P TS QS	2CTB803982R0500
3	2	40	20	-	1.5	230/400	350	OVR T2 3L 40-350 P QS	2CTB803883R2400
3	2	40	20	-	1.5	230/400	350	OVR T2 3L 40-350 P TS QS	2CTB803883R2500
3+1	2	40	20	-	1.7	230/400	350	OVR T2 3N 40-350 P QS	2CTB803983R1100
3+1	2	40	20	-	1.7	230/400	350	OVR T2 3N 40-350 P TS QS	2CTB803983R0500
<b>Neutral</b>									
1	2	80	30	0.1	1.4	230	350	OVR T2 N 80-350 P QS	2CTB803983R1900
<b>Cartridges</b>									
1	2	80	30	0.1	1.4	230	350	OVR T2 N 80-350 C QS	2CTB803886R0000
1	2	40	20	-	1.5	230	350	OVR T2 40-350 C QS	2CTB803886R1000
<b>Uc 440V</b>									
1	2	40	20	-	1.8	400	440	OVR T2 40-440 P QS	2CTB803871R1200
1	2	40	20	-	1.8	400	440	OVR T2 40-440 P TS QS	2CTB803871R0500
3	2	40	20	-	1.8	400/690	440	OVR T2 3L 40-440 P TS QS	2CTB803873R2700
4	2	40	20	-	1.8	400/690	440	OVR T2 4L 40-440 P QS	2CTB803873R5100
4	2	40	20	-	1.8	400/690	440	OVR T2 4L 40-440 P TS QS	2CTB803873R5300
3+1	2	40	20	-	2.1	400/690	440	OVR T2 3N 40-440 P QS	2CTB803973R1400
3+1	2	40	20	-	2.1	400/690	440	OVR T2 3N 40-440 P TS QS	2CTB803973R1500
3	2	40	20	-	1.8	400/690	440	OVR T2 3L 40-440 P QS	2CTB803873R2800
1	2	40	20	-	1.8	400	440	OVR T2 40-440s P TS QS	2CTB815704R2900
3+1	2	40	20	-	1.8	400/690	440	OVR T2 3N 40-440s P TS QS	2CTB815704R3700
1	2	40	20	-	1.8	400	440	OVR T2 40-440s P QS	2CTB815704R4100
1	6.25	80	20	-	1.8	400	440	OVR T2 80-440s P TS QS	2CTB815708R2900
3	6.25	80	20	-	1.8	400/690	440	OVR T2 3L 80-440s P TS QS	2CTB815708R3500
3+1	6.25	80	20	-	1.8	400/690	440	OVR T2 3N 80-440s P TS QS	2CTB815708R3700
4	6.25	80	20	-	1.8	400/690	440	OVR T2 4L 80-440s P TS QS	2CTB815708R4000
1	6.25	80	20	-	1.8	400	440	OVR T2 80-440s P QS	2CTB815708R4100
3	6.25	80	20	-	1.8	400/690	440	OVR T2 3L 80-440s P QS	2CTB815708R4700
3+1	6.25	80	20	-	1.8	400/690	440	OVR T2 3N 80-440s P QS	2CTB815708R4900
4	6.25	80	20	-	1.8	400/690	440	OVR T2 4L 80-440s P QS	2CTB815708R5200
1+1	2	40	20	-	1.9	400	440	OVR T2 1N 40-440 P TS QS	2CTB803972R1400

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### OVR surge protective devices selection tables

Pro- tected lines	Impulse current	Max. dis- charge current	Nominal current	Follow current interrupt- ing rating	Voltage protec- tion level	Nominal voltage	Max. cont. op- erating voltage	Order details	
								Type code	Order code
	Iimp 10/350 kA	I <sub>max</sub> 8/20 kA	I <sub>n</sub> kA	I <sub>fi</sub> kA	U <sub>p</sub> kV	U <sub>n</sub> V	U <sub>c</sub> V		
<b>Neutral</b>									
1	6.25	80	30	0.1	2	400	440	OVR T2 N 80-440s P QS	2CTB815708R5400
1	2	80	30	0.1	1.4	400	440	OVR T2-T3 N 80-440 P QS	2CTB803973R2000
<b>Cartridges</b>									
1	2	80	20	-	1.8	400	440	OVR T2 40-440 C QS	2CTB803876R0400
1	2	40	20	-	1.8	400	440	OVR T2-T3 40-440s C QS	2CTB815704R5500
1	6.25	80	20	-	1.8	400	440	OVR T2 80-440s C QS	2CTB815708R5500
1	6.25	80	30	-	1.4	400	440	OVR T2-T3 N 80-440 C QS	2CTB803886R0100
1	6.25	80	30	-	2	400	440	OVR T2 N 80-440s C QS	2CTB815708R5700
<b>Type T2-T3 OVR Pluggable</b>									
<b>Uc 275V</b>									
1	2	20	5	-	0.9	230	275	OVR T2-T3 20-275 P QS	2CTB803871R2400
1	2	20	5	-	0.9	230	275	OVR T2-T3 20-275 P TS QS	2CTB803871R2500
1+1	2	20	5	-	1.4	230	275	OVR T2-T3 1N 20-275 P QS	2CTB803972R1200
1+1	2	20	5	-	1.4	230	275	OVR T2-T3 1N 20-275 P TS QS	2CTB803972R1300
3	2	20	5	-	0.85	230/400	275	OVR T2-T3 3L 20-275 P QS	2CTB803873R3400
3	2	20	5	-	0.85	230/400	275	OVR T2-T3 3L 20-275 P TS QS	2CTB803873R3500
3+1	2	20	5	-	1.4	230/400	275	OVR T2-T3 3N 20-275 P QS	2CTB803973R1200
3+1	2	20	5	-	1.4	230/400	275	OVR T2-T3 3N 20-275 P TS QS	2CTB803973R1600
<b>Neutral</b>									
1	-	80	30	0.1	1.4	230	275	OVR T2-T3 N 80-275 P QS	2CTB803973R1900
<b>Cartridges</b>									
1	-	20	5	-	1.4	230	275	OVR T2 20-275 C QS	2CTB803876R1200
1	-	80	30	-	1.4	230	275	OVR T2-T3 N 80-275 C QS	2CTB803876R0000
<b>Uc 440V</b>									
1	2	20	5	-	1.4	400	440	OVR T2-T3 20-440 P QS	2CTB803871R1100
1	2	20	5	-	1.4	400	440	OVR T2-T3 20-440 P TS QS	2CTB803871R1300
3+1	2	20	5	-	1.4	400/690	440	OVR T2-T3 3N 20-440 P QS	2CTB803973R1300
<b>Neutral</b>									
1	-	80	30	0.1	1.4	400	440	OVR T2-T3 N 80-440 P QS	2CTB803973R2000
<b>Cartridges</b>									
1	-	80	5	-	1.4	400	440	OVR T2 20-440 C QS	2CTB803876R0600
1	-	80	30	-	1.4	400	440	OVR T2-T3 N 80-440 C QS	2CTB803886R0100

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### OVR surge protective devices selection tables

Protected lines	Total Discharge Current	Impulse current	Max. discharge current	Nominal current	Short-circuit current rating	Voltage protection level	Nominal voltage	Max. cont. operating voltage	Order details	
									Type code	Order code
	I <sub>total</sub> 10/350	I <sub>imp</sub> 10/350	I <sub>max</sub> 8/20	I <sub>n</sub>	I <sub>scpv</sub>	U <sub>p</sub>	U <sub>n</sub>	U <sub>c</sub>		
	kA	kA	kA	kA	A	kV	V	V		
<b>Type T1-T2 OVR pluggable PV application</b>										
<b>U<sub>c</sub> 1100 V DC</b>										
1+1 DC	5	5	40	20	11.000	3.8	1000	1100	OVR PV T1-T2 5-1000 P QS	2CTB812050R1000
1+1 DC	5	5	40	20	11.000	3.8	1000	1100	OVR PV T1-T2 5-1000 P TS QS	2CTB812051R1000
1+1 DC	6,25	12.5	40	20	11.000	3.8	1000	1100	OVR PV T1-T2 12.5-1000 P QS	2CTB812120R1000
1+1 DC	6,25	12.5	40	20	11.000	3.8	1000	1100	OVR PV T1-T2 12.5-1000 P TS QS	2CTB812121R1000
<b>Cartridges</b>										
1+1 DC	5	5	40	20	11.000	-	1000	1100	OVR PV T1-T2 5-1000 C QS	2CTB812052R1000
1+1 DC	6,25	6,25	40	20	11.000	-	1000	1100	OVR PV T1-T2 12.5-1000 C QS	2CTB812122R1000
1+1 DC	6,25	6,25	40	20	11.000	-	1000	1100	OVR PV T1-T2 12.5-1000 M C QS	2CTB812122R1001
<b>U<sub>c</sub> 1500 V DC</b>										
1+1 DC	5	5	30	20	11.000	5	1500	1500	OVR PV T1-T2 5-1500 P QS	2CTB812050R1500
1+1 DC	5	5	30	20	11.000	5	1500	1500	OVR PV T1-T2 5-1500 P TS QS	2CTB812051R1500
1+1 DC	5	10	30	20	11.000	5	1500	1500	OVR PV T1-T2 10-1500 P QS	2CTB812100R1500
1+1 DC	5	10	30	20	11.000	5	1500	1500	OVR PV T1-T2 10-1500 P TS QS	2CTB812101R1500
<b>Cartridges</b>										
1+1 DC	5	5	30	20	11.000	-	1500	1500	OVR PV T1-T2 5-1500 C QS	2CTB812052R1500
1+1 DC	5	5	30	20	11.000	-	1500	1500	OVR PV T1-T2 10-1500 C QS	2CTB812102R1500
1+1 DC	5	5	30	20	11.000	-	1500	1500	OVR PV T1-T2 10-1500 M C QS	2CTB812102R1501



## Protection and safety

### OVR surge protective devices selection tables

Protected lines	Impulse current limp 10/350 kA	Max. discharge current Imax 8/20 kA	Nominal current In kA	Short-circuit current rating Iscpv A	Voltage protection level Up kV	Nominal voltage Un V	Max. cont. operating voltage Uc V	Order details	
								Type code	Order code
<b>Type 2 OVR pluggable PV applications</b>									
<b>Uc 1000 V DC</b>									
1+1 DC	-	40	20	10.000	4	1000	1000	OVR PV T2 40-1000 P	2CTB802400R1000
1+1 DC	-	40	20	10.000	4	1000	1000	OVR PV T2 40-1000 P BULK (x20)	2CTB802400Z1000
1+1 DC	-	40	20	10.000	4	1000	1000	OVR PV T2 40-1000 P TS BULK (x20)	2CTB802401Z1000
<b>Cartridges</b>									
1+1 DC	-	40	20	10.000	-	1000	1000	OVR PV T2 40-1000 C	2CTB802402R1000
<b>Uc 1500 V DC</b>									
1+1 DC	-	40	15	10.000	5	1500	1500	OVR PV T2 40-1500 P	2CTB802400R1500
1+1 DC	-	40	15	10.000	5	1500	1500	OVR PV T2 40-1500 P BULK (x20)	2CTB802400Z1500
1+1 DC	-	40	10	10.000	5	1500	1500	OVR PV T2 40-1500 P TS BULK (x20)	2CTB802401Z1500
<b>Cartridges</b>									
1+1 DC	2	40	10	10.000	-	1500	1500	OVR PV T2 40-1500 C	2CTB802402R1500



OVR PV T2 40-1000 P TS

## Protection and safety

### OVR Type 1+2 surge protective devices Single pole



OVR T1-T2 1L  
25-255 P TS

#### Technical features

<b>Types</b>		<b>OVR T1-T2 1L 25-255 P</b>	
<b>with auxiliary contact (TS)</b>		<b>OVR T1-T2 1L 25-255 P TS</b>	
Technology		Spark Gap	
<b>Electrical features</b>			
Standard		IEC 61643-11 / EN 61643-11 UL 1449, 5th Edition	
Type/test class		T1-T2 / I - II	
Protected lines		1	
System network		TNC - TNS - TT	
Type of current		47-63Hz	
Voltage regulation of the system network		± 10 %	
Nominal system voltage Un		[V]	230
Max. cont. operating voltage Uc		[V]	264
Maximum impulse current Iimp (10/350)		[kA]	25
Nominal discharge current In (8/20)		[kA]	25
Maximum discharge current Imax (8/20)		[kA]	-
Follow current interrupting rating Ifi		[kA]	50
Voltage protection level Up at In (L-N/N-PE/L-PE)		[kV]	1.5 / - / -
Voltage protection level Ures at 3 kA		[kV]	-
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200ms)		[V]	440 V: 120 min / -
Response time		[ns]	≤ 100
Short-circuit withstand capability Isccr		[kA]	50
Max Limitation/Extinction of mains follow currents (L-N)/(N-PE)		[kA]	100 / -
Maximum Prospective Short-Circuit current on the point of installation		[kA]	100
Backup protection fuse (gG)		[A]	≤ 315
maximum rating circuit breaker (B or C curve)		[A]	-
Pluggable cartridge		Yes	
Integrated thermal disconnecter		Yes	
State indicator		Yes	
Safety reserve		No	
Auxiliary contact		Yes (TS option)	
<b>Installation</b>			
Wire range (L, N, PE)		solid wire (single wiring / V wiring)	[mm <sup>2</sup> ] 10...35 / 10...25
		stranded wire (single wiring / V wiring)	[mm <sup>2</sup> ] 10...50 / 10...35
Stripping length (L, N, PE)		[mm]	16.5
Tightening torque (L, N, PE)		[Nm]	7
<b>Auxiliary contact (TS)</b>			
Contacts information		1 NO - 1 NC	
Min. load		5V DC - 10 mA	
Max. load		250 V AC - 0,5A	
Connection cross-section		[mm <sup>2</sup> ]	0.5 ...1.5
<b>Miscellaneous characteristics</b>			
Stocking and operating temperature		[°C]	-40 to +80
Maximal Altitude		[m]	2000
Degree of protection		IP20 - Indoor	
Fire resistance according to UL 94		V0	
<b>Dimensions</b>			
height x width x depth		[mm]	90 x 36 x 73
		[inches]	3.51 x 1.40 x 2.85
<b>Dimensions with auxiliary contact (TS)</b>			
height x width x depth		[mm]	99 x 36 x 73
		[inches]	3.86 x 1.40 x 2.85
<b>Replacement Cartridges</b>			
Phase Product ID		OVR T1-T2 1L 25-255 C 2CTB813252R2300	
Neutral Product ID		-	

## Protection and safety

### OVR Type 1+2 surge protective devices Single pole

<b>OVR T1-T2 12.5-275s P QS</b>	<b>OVR T1-T2 12.5-440s P QS</b>
<b>OVR T1-T2 12.5-275s P TS QS</b>	<b>OVR T1-T2 12.5-440s P TS QS</b>
Varistor	Varistor
IEC 61643-11 / EN 61643-11: 2012 / A11: 2018	IEC 61643-11 / EN 61643-11: 2012 / A11: 2018
T1-T2 / I - II	T1-T2 / I - II
1	1
TT (L-N) - TNS - TNC	TT (L-N) - TNS - TNC
AC 47-63 Hz	AC 47-63 Hz
± 20%	± 10%
230	400
275	440
12.5	12.5
20	20
80	80
-	-
1.4 / - / 1.4	1.9 / - / 1.9
0.5	0.5
337 /	581 /
< 25	< 25
100	100
-	-
100	100
≤ 160	≤ 160
≤ 125	≤ 125
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes (TS option)	Yes (TS option)
2.5 ... 35 / -	2.5 ... 35 / -
2.5 ... 25 / -	2.5 ... 25 / -
12.5	12.5
2.8	2.8
1 NO - 1 NC	1 NO - 1 NC
12 V DC - 10 mA	12 V DC - 10 mA
250 V AC - 1A	250 V AC - 1A
0.5 ...1.5	0.5 ...1.5
-40 to +80	-40 to +80
5000	5000
IP 20 - Indoor	IP 20 - Indoor
V-0	V-0
88 x 17.8 x 76.7	88 x 35.6 x 76.7
3.46 x 0.70 x 3.02	3.46 x 1.4 x 3.02
95.8 x 17.8 x 76.7	95.8 x 35.6 x 76.7
3.77 x 0.70 x 3.02	3.77 x 1.4 x 3.02
<b>OVR T1-T2 12.5-275s C QS</b> 2CTB815710R2600	<b>OVR T1-T2 12.5-440s C QS</b> 2CTB815710R5500
-	-

## Protection and safety

### OVR Type 1+2 surge protective devices Single pole



OVR T1-T2 N  
100-255 P TS

#### Technical features

<b>Types</b>			<b>OVR T1-T2 N 100-255 P</b>
<b>with auxiliary contact (TS)</b>			<b>OVR T1-T2 N 100-255 P TS</b>
Technology			Spark Gap
<b>Electrical features</b>			
Standard			IEC 61643-11 / EN 61643-11 UL 1449. 5th Edition
Type/test class			T1-T2 / I - II
Protected lines			N
System network			TNS / TT
Type of current			47-63Hz
Voltage regulation of the system network			± 10 %
Nominal system voltage Un	[V]		230
Max. cont. operating voltage Uc	[V]		255
Maximum impulse current Iimp (10/350)	[kA]		100
Nominal discharge current In 8/20	[kA]		100
Maximum discharge current Imax (8/20)	[kA]		-
Follow current interrupting rating Ifi	[kA]		0,1
Voltage protection level Up at In (L-N/N-PE/L-PE)	[kV]		- / 1.5 / -
Voltage protection level Ures at 3 kA	[kV]		-
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200ms)	[V]		- / 1200
Response time	[ns]		≤100
Short-circuit withstand capability Isccr	[kA]		-
Backup protection fuse (gG)	[A]		-
maximum rating circuit breaker (B or C curve)	[A]		-
Pluggable cartridge			Yes
Integrated thermal disconnecter			Yes
State indicator			Yes
Safety reserve			No
Auxiliary contact			Yes (TS option)
<b>Installation</b>			
Wire range (L, N, PE)	solid wire (single wiring / V wiring)	[mm <sup>2</sup> ]	10...35 / 10...25
	stranded wire (single wiring / V wiring)	[mm <sup>2</sup> ]	10...50 / 10...35
Stripping length (L, N, PE)		[mm]	16.5
Tightening torque (L, N, PE)		[Nm]	7
<b>Auxiliary contact (TS)</b>			
Contacts information			1 NO - 1 NC
Min. load			5V DC - 10 mA
Max. load			250 V AC - 0,5A
Connection cross-section		[mm <sup>2</sup> ]	0.5 ...1.5
<b>Miscellaneous characteristics</b>			
Stocking and operating temperature		[°C]	-40 to +60
Maximal Altitude		[m]	2000
Degree of protection			IP20 - Indoor
Fire resistance according to UL 94			V0
<b>Dimensions</b>			
height x width x depth		[mm]	90 x 36 x 73
		[inches]	3.51 x 1.40 x 2.85
<b>Dimensions with auxiliary contact (TS)</b>			
height x width x depth		[mm]	99 x 36 x 73
		[inches]	3.86 x 1.40 x 2.85
<b>Replacement Cartridges</b>			
Phase Product ID			
Neutral Product ID			OVR T1-T2 N 100-255 C 2CTB813012R2300

## Protection and safety

### OVR Type 1+2 surge protective devices Single pole

OVR T1-T2 N 50-275s P QS	OVR T1-T2 N 50-440s P QS
GDT	GDT
IEC 61643-11 / EN 61643-11: 2012 / A11: 2018	IEC 61643-11 / EN 61643-11: 2012 / A11: 2018
T1-T2 / I - II	T1-T2 / I - II
N	N
TT (N-PE) - TNS (N-PE)	TT (N-PE) - TNS (N-PE)
AC 47-63 Hz	AC 47-63 Hz
± 20%	± 10%
230	400
275	440
50	50
50	50
100	100
-	-
- / 1.4 / -	- / 1.9 / -
-	-
- / 1200	- / 1200
≤10	≤10
≤100	≤100
-	-
-	-
Yes	Yes
No	No
No	No
No	No
No	No
2.5 ... 50 / -	2.5 ... 50 / -
2.5 ... 35 / -	2.5 ... 35 / -
12.5	12.5
3.5	3.5
-40 to +80	-40 to +80
5000	5000
IP 20 - Indoor	IP 20 - Indoor
V0	V0
88 x 17.8 x 76.7	88 x 17.8 x 76.7
3.46 x 0.7 x 3.02	3.46 x 0.7 x 3.02
OVR T1-T2 N 50-275s C QS 2CTB815710R2700	OVR T1-T2 N 50-440s C QS 2CTB815710R5600

## Protection and safety

### OVR Type 1+2 surge protective devices Single pole

Type 1+2 surge protective devices are designed to discharge high current surges without any destruction of the installation. These surge protective devices are characterized by their capacity to withstand impulse current with 10/350  $\mu$ s wave form which simulate natural lightning current. Type 1+2 ABB surge protective devices have a high impulse current withstand capacity with ensuring a low protection level (Up).

Type 1+2 SPDs can be installed at the entrance in the main switch board for a global protection of the electrical installation.

Poles	Impulse current 10/350 kA	Max. discharge current I <sub>max</sub> 8/20 kA	Follow current interrupting rating I <sub>fi</sub> kA	Voltage protection level Up kV	Nominal voltage U <sub>n</sub> V	Max. continuous operating voltage U <sub>c</sub> V	Bbn 3660308 EAN	Order details		Weight 1 piece kg
								Type code	Order code	
1	25	-	50	1.5	230	264	4053546053364	OVR T1-T2 1L 25-255 P	2CTB813250R2300	0.27
1	25	-	50	1.5	230	264	4053546053371	OVR T1-T2 1L 25-255 P TS	2CTB813251R2300	0.3
1	25	-	0.1	1.5	230	255	4053546053234	OVR T1-T2 N 100-255 P	2CTB813010R2300	0.3
1	25	-	0.1	1.5	230	255	4053546054736	OVR T1-T2 N 100-255 P TS	2CTB813011R2300	0.3
1	12.5	80	-	1.4	230	275	524881	OVR T1-T2 12.5-275s P TS QS	2CTB815710R0000	0.15
1	12.5	80	-	1.4	230	275	524959	OVR T1-T2 12.5-275s P QS	2CTB815710R1200	0.15
1	12.5	80	-	1.9	400	440	525055	OVR T1-T2 12.5-440s P TS QS	2CTB815710R2900	0.30
1	12.5	80	-	1.9	400	440	525123	OVR T1-T2 12.5-440s P QS	2CTB815710R4100	0.30
1	50	100	-	1.4	230	275	525024	OVR T1-T2 N 50-275s P QS	2CTB815710R2400	0.15
1	50	100	-	1.9	400	440	525192	OVR T1-T2 N 50-440s P QS	2CTB815710R5300	0.14



## Protection and safety

### OVR Type 1+2 surge protective devices TNC 230 and 400 V networks

#### Technical features

Types				OVR T1-T2 3L 12.5-275s P QS	OVR T1-T2 3L 12.5-440s P QS
with auxiliary contact (TS)			OVR T1-T2 3L 75-255 P TS	OVR T1-T2 3L 12.5-275s P TS QS	OVR T1-T2 3L 12.5-440s P TS QS
Technology			Spark Gap	Varistor	Varistor
<b>Electrical features</b>					
Standard			IEC 61643-11/EN 61643-11 UL 1449. 5th Edition	IEC 61643-11/EN 61643-11:2012/A11:2018	IEC 61643-11/EN 61643-11:2012/A11:2018
Type/test class			T1-T2/I - II	T1-T2/I - II	T1-T2/I - II
Protected lines			3	3	3
System network			TNC	TNC	TNC
Type of current			AC 47-63 Hz	AC 47-63 Hz	AC 47-63 Hz
Voltage regulation of the system network			± 10 %	± 20 %	± 10 %
Nominal system voltage Un		[V]	230/400	230/400	400/690
Max. cont. operating voltage Uc		[V]	264	275	440
Maximum impulse current Iimp (10/350)		[kA]	25	12.5	12.5
Max. Imp current Tot Iimp (10/350)		[kA]	75	37.5	37.5
Nominal discharge current In (8/20)		[kA]	25	20	20
Maximum discharge current Imax (8/20)		[kA]	-	80	80
Follow current interrupting rating Ifi		[kA]	50	-	-
Voltage protection level Up at In (L-N/N-PE/L-PE)		[kV]	-/-/1.5	-/-/1.4	-/-/2
Voltage protection level Ures at 3 kA		[kV]	-	0.5	0.8
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200 ms)		[V]	440 V: 120 min	337/-	581/-
Response time		[ns]	≤ 100	≤ 25	≤ 25
Short-circuit withstand capability Isccr		[kA]	50	100	100
Max Limitation/Extinction of mains follow currents (L-N)/(N-PE)		[kA]	100/-	-	-
Maximum Prospective Short-Circuit current on the point of installation		[kA]	100	100	100
Backup fuse (gG)		[A]	≤ 315	≤ 160	≤ 160
protection circuit breaker (B or C)		[A]	-	≤ 125	≤ 125
maximum rating					
Pluggable cartridge			Yes	Yes	Yes
Integrated thermal disconnecter			Yes	Yes	Yes
State indicator			Yes	Yes	Yes
Safety reserve			No	Yes	Yes
Auxiliary contact			Yes	Yes (TS option)	Yes (TS option)
<b>Installation</b>					
Wire range solid wire, single wiring		[mm <sup>2</sup> ]	10...35	2.5 ... 35	2.5 ... 35
(L, N, PE) stranded wire, single wiring		[mm <sup>2</sup> ]	10...50	2.5 ... 25	2.5 ... 25
Stripping length (L, N, PE)		[mm]	15.5	12.5	12.5
Tightening torque (L, N, PE)		[Nm]	7	2.8	2.8
<b>Auxiliary contact (TS)</b>					
Contacts information			1 NO - 1 NC	1 NO - 1 NC	1 NO - 1 NC
Min. load			5V DC - 10 mA	12 DC - 10 mA	12 DC - 10 mA
Max. load			250 V AC - 0,5A	250 V AC - 1A	250 V AC - 1A
Connection cross-section		[mm <sup>2</sup> ]	0.5 ...1.5	0.5 ...1.5	0.5 ...1.5
<b>Miscellaneous characteristics</b>					
Stocking and operating temperature		[°C]	-40 to +60	-40 to +80	-40 to +80
Maximal Altitude		[m]	2000	5000	5000
Degree of protection			IP20 - Indoor	IP 20 - Indoor	IP 20 - Indoor
Fire resistance according to UL 94			V0	V-0	V-0
<b>Dimensions</b>					
height x width x depth		[mm]		88 x 53.4 x 76.7	88 x 106.8 x 76.7
		[inches]		3.46 x 2.1 x 3.02	3.46 x 4.2 x 3.02
<b>Dimensions with auxiliary contact (TS)</b>					
height x width x depth		[mm]	99 x 72 x 108	95.8 x 53.4 x 76.7	95.8 x 106.8 x 76.7
		[inches]	3.86 x 2.80 x 4.25	3.77 x 2.1 x 3.02	3.77 x 4.2 x 3.02
<b>Replacement Cartridges</b>					
Phase Product ID			OVR T1-T2 1L 25-255 C 2CTB813252R2300	OVR T1-T2 12.5-275s C QS 2CTB815710R2600	OVR T1-T2 12.5-440s C QS 2CTB815710R5500



## Protection and safety

### OVR Type 1+2 surge protective devices TNC networks



OVR T1-T2 3L  
75-255 P TS

Type 1+2 surge protective devices are designed to discharge high current surges without any destruction of the installation. These surge protective devices are characterized by their capacity to withstand impulse current with 10/350  $\mu$ s wave form which simulate natural lightning current.

Type 1+2 ABB surge protective devices have a high impulse current withstand capacity with ensuring a low protection level (Up).

Type 1+2 SPDs can be installed at the entrance in the main switch board for a global protection of the electrical installation.

Poles	Impulse current 10/350 kA	Max discharge current Imax 8/20 kA	Voltage protection level Up kV	Nominal voltage Un V	Max. cont. operating voltage Uc V	Bbn 3660308 EAN	Order details		Weight 1 piece kg
							Type code	Order code	
3	25	50	1.5	230/400	264	4053546114621	OVR T1-T2 3L 75-255 P TS	2CTB812751R2300	0.52
3	12.5	80	1.4	230/400	275	524911	OVR T1-T2 3L 12.5- 275s P TS QS	2CTB815710R0600	0.45
3	12.5	80	1.4	230/400	275	524980	OVR T1-T2 3L 12.5-275s P QS	2CTB815710R1800	0.45
3	12.5	80	1.9	400/690	440	525086	OVR T1-T2 3L 12.5- 440s P TS QS	2CTB815710R3500	0.90
3	12.5	80	2	400/690	440	525154	OVR T1-T2 3L 12.5-440s P QS	2CTB815710R4700	0.90

## Protection and safety

OVR Type 1+2 surge protective devices TNS/TT 230 1Ph+N and 3Ph+N networks

### Technical features

<b>Types</b>			
<b>with auxiliary contact (TS)</b>			<b>OVR T1-T2 1N 50-255 P TS</b>
Technology			Spark Gap
<b>Electrical features</b>			
Standard			IEC 61643-11 / EN 61643-11 UL 1449. 5th Edition
Type/test class			T1-T2 / I - II
Protected lines			1+N
System network			TN / TT
Type of current			47-63Hz
Voltage regulation of the system network			± 10 %
Nominal system voltage Un	[V]		230
Max. cont. operating voltage Uc	[V]		255
Maximum impulse current Iimp (10/350)	[kA]		25
Max.Imp current Tot Iimp (10/350)	[kA]		50
Nominal discharge current In (8/20)	[kA]		25
Maximal discharge current I <sub>max</sub> (8/20) kA	[kA]		-
Follow current interrupting rating I <sub>fi</sub>	[kA]		50
Voltage protection level Up at In (L-N/N-PE/L-PE)	[kV]		≤ 1.5 / ≤ 1.5 / ≤ 1.8
Voltage protection level U <sub>res</sub> at 3 kA	[kV]		-
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200ms)	[V]		440 V: 120 min / 1200 V
Response time	[ns]		≤ 100
Short-circuit withstand capability I <sub>sccr</sub>	[kA]		50 / -
Max Limitation / Extinction of mains follow currents (L-N)/(N-PE)	[kA]		100 / 0,1
Maximum Prospective Short-Circuit current on the point of installation	[kA]		100
Backup protection maximum rating	fuse (gG) circuit breaker (B or C curve)	[A]	≤ 315 -
Pluggable cartridge			Yes
Integrated thermal disconnecter			Yes
State indicator			Yes
Safety reserve			No
Auxiliary contact			Yes
<b>Installation</b>			
Wire range (L, N, PE)	solid wire, single wiring	[mm <sup>2</sup> ]	10...35
	stranded wire, single wiring	[mm <sup>2</sup> ]	10...50
Stripping length (L, N, PE)		[mm]	15.5
Tightening torque (L, N, PE)		[Nm]	7
<b>Auxiliary contact (TS)</b>			
Contacts information			1 NO - 1 NC
Min. load			5V DC - 10 mA
Max. load			250 V AC - 0,5A
Connection cross-section		[mm <sup>2</sup> ]	0.5 ...1.5
<b>Miscellaneous characteristics</b>			
Stocking and operating temperature		[°C]	-40 to +60
Maximal Altitude		[m]	2000
Degree of protection			IP20 - Indoor
Fire resistance according to UL 94			V0
<b>Dimensions</b>			
height x width x depth		[mm]	
		[inches]	
<b>Dimensions with auxiliary contact (TS)</b>			
height x width x depth		[mm]	99 x 72 x 72
		[inches]	3.86 x 2.80 x 2.85
<b>Replacement Cartridges</b>			
Phase Product ID			OVR T1-T2 1L 25-255 C 2CTB813252R2300
Neutral Product ID			OVR T1-T2 N 50-255 C 2CTB812522R2300

## Protection and safety

OVR Type 1+2 surge protective devices TNS/TT 230 1Ph+N and 3Ph+N networks

OVR T1-T2 3N 100-255 P TS	OVR T1-T2 4L 100-255 P TS
Spark Gap	Spark Gap
IEC 61643-11 / EN 61643-11 UL 1449. 5th Edition	IEC 61643-11/EN 61643-11 UL 1449. 5th Edition
T1-T2 / I - II	T1-T2 / I - II
3+N	4
TNS / TT	TNS
47-63Hz	47-63Hz
± 10 %	± 10 %
230/400	230/400
255	255
25	25
100	100
25	25
-	-
50	50
≤ 1.5 / ≤ 1.5 / ≤ 1.8	≤ 3 / ≤ 1.5 / ≤ 1,5
-	-
440 V: 120 min / 1200 V	440 V: 120 min / -
≤ 100	≤ 100
50 / -	50
100 / 0,1	100/100
100	100
≤ 315	≤ 315
-	-
Yes	Yes
Yes	Yes
Yes	Yes
No	No
Yes	Yes
10...35	10...35
10...50	10...50
15.5	15.5
7	7
1 NO - 1 NC	1 NO - 1 NC
5V DC - 10 mA	5V DC - 10 mA
250 V AC - 0,5A	250 V AC - 0,5A
0.5 ...1.5	0.5 ...1.5
-40 to +60	-40 to +60
2000	2000
IP20 - Indoor	IP20 - Indoor
V0	V0
99 x 144 x 72	99 x 144 x 72
3.86 x 5.60 x 2.85	3.86 x 5.60 x 2.85
OVR T1-T2 1L 25-255 C 2CTB813252R2300	OVR T1-T2 1L 25-255 C 2CTB813252R2300
OVR T1-T2 N 100-255 TT C 2CTB812022R2300	OVR T1-T2 1L 25-255 C 2CTB813252R2300

## Protection and safety

OVR Type 1+2 surge protective devices TNS/TT 230 1Ph+N and 3Ph+N networks

### Technical features

<b>Types</b>	<b>OVR T1-T2 1N 12.5-275s P QS</b>		
<b>with auxiliary contact (TS)</b>	<b>OVR T1-T2 1N 12.5-275s P TS QS</b>		
Technology	Varistor + GDT		
<b>Electrical features</b>			
Standard	IEC 61643-11/EN 61643-11:2012/A11:2018		
Type/test class	T1-T2/I - II		
Protected lines	1+1		
System network	TT - TNS		
Type of current	AC 47-63 Hz		
Voltage regulation of the system network	± 20%		
Nominal system voltage Un	[V]	230	
Max. cont. operating voltage Uc	[V]	275	
Maximum impulse current Iimp (10/350)	[kA]	12.5	
Max. Imp current Tot Iimp (10/350)	[kA]	25	
Nominal discharge current In (8/20)	[kA]	20	
Maximal discharge current Imax (8/20) kA	[kA]	80	
Follow current interrupting rating Ifi	[kA]		
Voltage protection level Up at In (L-N/N-PE/L-PE)	[kV]	1.4/1.4/1.5	
Voltage protection level Ures at 3 kA	[kV]	0.5	
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200ms)	[V]	337/1200	
Response time	[ns]	≤ 25	
Short-circuit withstand capability Isccr	[kA]	100	
Backup protection maximum rating	fuse (gG)	[A]	≤ 160
	circuit breaker (B or C curve)	[A]	≤ 125
Pluggable cartridge	Yes		
Integrated thermal disconnecter	Yes		
State indicator	Yes		
Safety reserve	Yes		
Auxiliary contact	Yes (TS option)		
<b>Installation</b>			
Wire range (L, N, PE)	solid wire, single wiring	[mm <sup>2</sup> ]	2.5 ... 35
	stranded wire, single wiring	[mm <sup>2</sup> ]	2.5 ... 25
Stripping length (L, N, PE)		[mm]	12.5
Tightening torque (L, N, PE)		[Nm]	2.8
<b>Auxiliary contact (TS)</b>			
Contacts information	1 NO - 1 NC		
Min. load	12 V DC - 10 mA		
Max. load	250 V AC - 1A		
Connection cross-section	[mm <sup>2</sup> ]	0.5 ...1.5	
<b>Miscellaneous characteristics</b>			
Stocking and operating temperature	[°C]	-40 to +80	
Maximal Altitude	[m]	5000	
Degree of protection	IP 20 - Indoor		
Fire resistance according to UL 94	V-0		
<b>Dimensions</b>			
height x width x depth	[mm]	88 x 35.6 x 76.7	
	[inches]	3.46 x 1.4 x 3.02	
<b>Dimensions with auxiliary contact (TS)</b>			
height x width x depth	[mm]	95.8 x 35.6 x 76.7	
	[inches]	3.46 x 1.4 x 3.02	
<b>Replacement Cartridges</b>			
Phase Product ID	OVR T1-T2 12.5-275s C QS 2CTB815710R2600		
Neutral Product ID	OVR T1-T2 N 50-275s C QS 2CTB815710R2700		

## Protection and safety

OVR Type 1+2 surge protective devices TNS/TT 230 1Ph+N and 3Ph+N networks

OVR T1-T2 3N 12.5-275s P QS	OVR T1-T2 4L 12.5-275s P QS
OVR T1-T2 3N 12.5-275s P TS QS	OVR T1-T2 4L 12.5-275s P TS QS
Varistor + GDT	Varistor
IEC 61643-11/EN 61643-11:2012/A11:2018	IEC 61643-11/EN 61643-11:2012/A11:2018
T1-T2/I - II	T1-T2/I - II
3+1	3+N
TT - TNS	TNS
AC 47-63 Hz	AC 47-63 Hz
± 20%	± 20%
230/400	230/400
275	275
12.5	12.5
50	50
20	20
80	80
	-
1.4/1.4/1.5	2.8/1.4/1.4
0.5	0.5
337/1200	337/
≤ 25	≤ 25
100	100
≤ 160	≤ 160
≤ 125	≤ 125
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes (TS option)	Yes (TS option)
2.5 ... 35	2.5 ... 35
2.5 ... 25	2.5 ... 25
12.5	12.5
2.8	2.8
1 NO - 1 NC	1 NO - 1 NC
12 V DC - 10 mA	12 V DC - 10 mA
250 V AC - 1A	250 V AC - 1A
0.5 ...1.5	0.5 ...1.5
-40 to +80	-40 to +80
5000	5000
IP 20 - Indoor	IP 20 - Indoor
V-0	V-0
88 x 71.2 x 76.7	88 x 71.2 x 76.7
3.46 x 2.8 x 3.02	3.46 x 2.8 x 3.02
95.8 x 71.2 x 76.7	95.8 x 71.2 x 76.7
3.77 x 2.8 x 3.02	3.77 x 2.8 x 3.02
OVR T1-T2 12.5-275s C QS 2CTB815710R2600	OVR T1-T2 12.5-275s C QS 2CTB815710R2600
OVR T1-T2 N 50-275s C QS 2CTB815710R2700	

## Protection and safety

### OVR Type 1+2 surge protective devices TNS/TT 400 V 1Ph+N and 3Ph+N networks

#### Technical features

Types			OVR T1-T2 1N 12.5-440s P QS	OVR T1-T2 3N 12.5-440s P QS	OVR T1-T2 4L 12.5-440s P QS
with auxiliary contact (TS)			OVR T1-T2 1N 12.5-440s P TS QS	OVR T1-T2 3N 12.5-440s P TS QS	OVR T1-T2 4L 12.5-440s P TS QS
Technology			Varistor + GDT	Varistor + GDT	Varistor
<b>Electrical features</b>					
Standard			IEC 61643-11/EN 61643-11:2012/A11:2018	IEC 61643-11/EN 61643-11:2012/A11:2018	IEC 61643-11/EN 61643-11:2012/A11:2018
Type/test class			T1-T2/I - II	T1-T2/I - II	T1-T2/I - II
Protected lines			1+1	3+1	4
System network			TT- TNS	TT- TNS	TNS
Type of current			AC 47-63 Hz	AC 47-63 Hz	AC 47-63 Hz
Voltage regulation of the system network			± 10%	± 10%	± 10%
Nominal system voltage Un		[V]	400	400/690	400/690
Max. cont. operating voltage Uc		[V]	440	440	440
Maximum impulse current Iimp (10/350)		[kA]	12.5	12.5	12.5
Max. Imp current Tot Iimp (10/350)		[kA]	25	50	50
Nominal discharge current In (8/20)		[kA]	20	20	20
Maximal discharge current Imax (8/20) kA		[kA]	80	80	80
Follow current interrupting rating Ifi		[kA]			
Voltage protection level Up at In (L-N/N-PE/L-PE)		[kV]	1.9/1.9/2	1.9/1.9/2	3.8/1.9/1.9
Voltage protection level Ures at 3 kA		[kV]	0.8	0.8	0.8
TOV (Temporary overvoltage) withstand Ut (L-N: 5s./N-PE: 200ms)		[V]	581/1200	581/1200	581/
Response time		[ns]	≤ 25	≤ 25	≤ 25
Short-circuit withstand capability Isccr		[kA]	100	100	100
Backup protection fuse (gG)		[A]	≤ 160	≤ 160	≤ 160
maximum rating circuit breaker (B or C curve)		[A]	≤ 125	≤ 125	≤ 125
Pluggable cartridge			Yes	Yes	Yes
Integrated thermal disconnecter			Yes	Yes	Yes
State indicator			Yes	Yes	Yes
Safety reserve			Yes	Yes	Yes
Auxiliary contact			Yes (TS option)	Yes (TS option)	Yes (TS option)
<b>Installation</b>					
Wire range (L, N, PE)		solid wire, single wiring	[mm <sup>2</sup> ] 2.5 ... 35	2.5 ... 35	2.5 ... 35
		stranded wire, single wiring	[mm <sup>2</sup> ] 2.5 ... 25	2.5 ... 25	2.5 ... 25
Stripping length (L, N, PE)		[mm]	12.5	12.5	12.5
Tightening torque (L, N, PE)		[Nm]	2.8	2.8	2.8
<b>Auxiliary contact (TS)</b>					
Contacts information			1 NO - 1 NC	1 NO - 1 NC	1 NO - 1 NC
Min. load			12 V DC - 10 mA	12 V DC - 10 mA	12 V DC - 10 mA
Max. load			250 V AC - 1 A	250 V AC - 1 A	250 V AC - 1 A
Connection cross-section		[mm <sup>2</sup> ]	0.5 ...1.5	0.5 ...1.5	0.5 ...1.5
<b>Miscellaneous characteristics</b>					
Stocking and operating temperature		[°C]	-40 to +80	-40 to +80	-40 to +80
Maximal Altitude		[m]	5000	5000	5000
Degree of protection			IP 20 - Indoor	IP 20 - Indoor	IP 20 - Indoor
Fire resistance according to UL 94			V-0	V-0	V-0
<b>Dimensions</b>					
height x width x depth		[mm]	88 x 53.4 x 76.7	88 x 124.6 x 76.7	88 x 142.4 x 76.7
		[inches]	3.46 x 2.1 x 3.02	3.46 x 4.91 x 3.02	3.46 x 5.61 x 3.02
<b>Dimensions with auxiliary contact (TS)</b>					
height x width x depth		[mm]	95.8 x 53.4 x 76.7	95.8 x 124.6 x 76.7	95.8 x 142.4 x 76.7
		[inches]	3.77 x 2.1 x 3.02	3.77 x 4.91 x 3.02	3.77 x 5.61 x 3.02
<b>Replacement Cartridges</b>					
Phase Product ID			OVR T1-T2 12.5-440s C QS 2CTB815710R5500	OVR T1-T2 12.5-440s C QS 2CTB815710R5500	OVR T1-T2 12.5-440s C QS 2CTB815710R5500
Neutral Product ID			OVR T1-T2 N 50-440s C QS 2CTB815710R5600	OVR T1-T2 N 50-440s C QS 2CTB815710R5600	

## Protection and safety

### OVR Type 1+2 surge protective devices TNS/TT 1Ph+N and 3Ph+N networks



Type 1+2 surge protective devices are designed to discharge high current surges without any destruction of the installation. These surge protective devices are characterized by their capacity to withstand impulse current with 10/350  $\mu$ s wave form which simulate natural lightning current.

Type 1+2 ABB surge protective devices have a high impulse current withstand capacity with ensuring a low protection level (Up).

Type 1+2 SPDs can be installed at the entrance in the main switch board for a global protection of the electrical installation.

#### OVR T1-T2 1N 12.5-440s P TS QS

Poles	Impulse current Iimp 10/350	Max. discharge current I <sub>max</sub> 8/20	Follow current interrupting rating I <sub>fi</sub>	Voltage protection level U <sub>p</sub>	Nominal voltage U <sub>n</sub>	Max. cont. operating voltage U <sub>c</sub>	Bbn 3660 308	Order details		Weight 1 piece
	kA	kA	kA	kV	V	V	EAN	Type code	Order code	kg
1+1	25	-	50	1.5	230	255	4053546114614	OVR T1-T2 1N 50-255 P TS	2CTB812511R2300	0.46
3+1	25	-	50	1.5	230/400	255	4053546114645	OVR T1-T2 3N 100-255 P TS	2CTB812111R2300	0.54
4	25	-	50	1.5	230/400	264	4053546114638	OVR T1-T2 4L 100-255 P TS	2CTB812101R2300	0.54
1+1	12.5	80	-	1.4	230	275	524966	OVR T1-T2 1N 12.5-275s P QS	2CTB815710R1300	0.30
1+1	12.5	80	-	1.4	230	275	524898	OVR T1-T2 1N 12.5-275s P TS QS	2CTB815710R0100	0.30
1+1	12.5	80	-	1.9	400	440	525130	OVR T1-T2 1N 12.5-440s P QS	2CTB815710R4200	0.45
1+1	12.5	80	-	1.9	400	440	525062	OVR T1-T2 1N 12.5-440s P TS QS	2CTB815710R3000	0.45
3+1	12.5	80	-	1.4	230/400	275	524997	OVR T1-T2 3N 12.5-275s P QS	2CTB815710R1900	0.60
3+1	12.5	80	-	1.4	230/400	275	524928	OVR T1-T2 3N 12.5-275s P TS QS	2CTB815710R0700	0.60
3+1	12.5	80	-	1.9	400/690	440	525161	OVR T1-T2 3N 12.5-440s P QS	2CTB815710R4800	1.05
3+1	12.5	80	-	1.9	400/690	440	525093	OVR T1-T2 3N 12.5-440s P TS QS	2CTB815710R3600	1.05
4	12.5	80	-	1.4	230/400	275	525017	OVR T1-T2 4L 12.5-275s P QS	2CTB815710R2300	0.60
4	12.5	80	-	1.4	230/400	275	524942	OVR T1-T2 4L 12.5-275s P TS QS	2CTB815710R1100	0.60
4	12.5	80	-	1.9	400/690	440	525185	OVR T1-T2 4L 12.5-440s P QS	2CTB815710R5200	1.20
4	12.5	80	-	1.9	400/690	440	525116	OVR T1-T2 4L 12.5-440s P TS QS	2CTB815710R4000	1.20



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