

OVR Type 1+2 surge protective devices - Single pole

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2CTC431042V0014

OVR T1-T2 12.5-275s P QS



2CTC431050V0014

OVR T1-T2 12.5-440s P QS



2CTC431021F1701

OVR T1+2 15-255-7

Description

Type 1 and 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 μ 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 (U_p).

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

Ordering details

Pro- tect- ed lines	Impulse current I_{imp} 10/350 kA	Max. dis- charge current I_{max} 8/20 kA	Follow current inter- rupting rating I_{fi} kA	Voltage protec- tion level U_p kV	Nominal voltage U_n V	Max. cont. operating voltage U_c V	Bbn 3660308 EAN	Type	Order code	Weight Pkg (1 pce) kg
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Pluggable

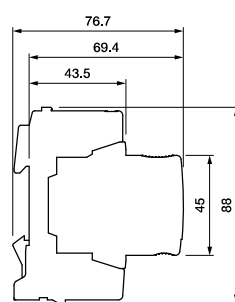
1	12,5	80	-	1,1	230	275	524959	OVR T1-T2 12.5-275s P QS*	2CTB815710R1200	0,15
1	12,5	80	-	1,1	230	275	524881	OVR T1-T2 12.5-275s P TS QS*	2CTB815710R0000	0,15
1	12,5	80	-	1,6	400	440	525123	OVR T1-T2 12.5-440s P QS*	2CTB815710R4100	0,3
1	12,5	80	-	1,6	400	440	525055	OVR T1-T2 12.5-440s P TS QS*	2CTB815710R2900	0,3
1	50	80	-	1	230	275	525024	OVR T1-T2 N 50-275s P QS*	2CTB815710R2400	0,15
1	50	80	-	1	400	440	525192	OVR T1-T2 N 50-440s P QS*	2CTB815710R5300	0,14

Unpluggable

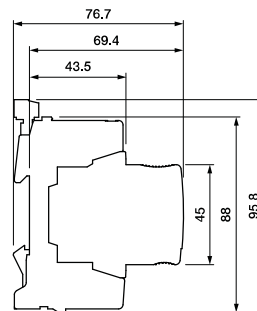
1	15	60	7	1,7	230	255	514134	OVR T1+2 15-255-7	2CTB815101R8900	0,14
1	25	60	15	1,5	230	255	510884	OVR T1+2 25-255 TS	2CTB815101R0300	0,27

* Products available end 2015.

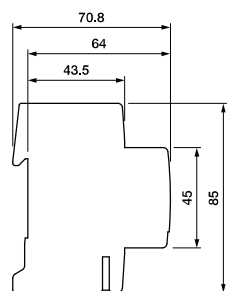
Main dimensions mm



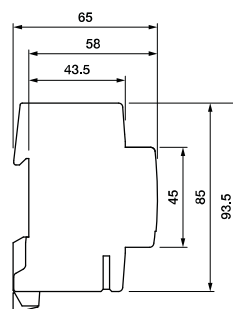
OVR T1-T2 12.5-275s P QS
OVR T1-T2 12.5-440s P QS
OVR T1-T2 N 50-275s P QS
OVR T1-T2 N 50-440s P QS



OVR T1-T2 12.5-275s P TS QS
OVR T1-T2 12.5-440s P TS QS



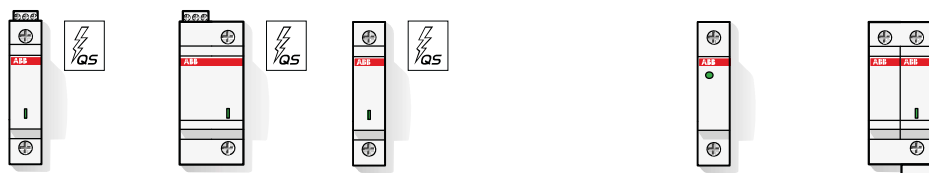
OVR T1+2 15-255-7



OVR T1+2 25-255 TS

Type	Width mm
OVR T1-T2 12.5-275s P TS QS	17,8
OVR T1-T2 12.5-275s P QS	17,8
OVR T1-T2 12.5-440s P TS QS	35,6
OVR T1-T2 12.5-440s P QS	35,6
OVR T1-T2 N 50-275s P QS	17,8
OVR T1-T2 N 50-440 P QS	17,8
OVR T+2 25-255 TS	35,6
OVR T+2 15-255-7	17,8

OVR Type 1+2 surge protective devices - Single pole



General technical data

Types	OVR T1-T2 12.5-275s P QS	OVR T1-T2 12.5-440s P QS	OVR T1-T2 N 50-275s P QS	OVR T1-T2 N 50-440s P QS	OVR T1+2 15-255-7	-
with auxiliary contact (TS)	OVR T1-T2 12.5-275s P TS QS	OVR T1-T2 12.5-440s P TS QS	-	-	-	OVR T1+2 25-255 TS
Electrical features						
Standard	IEC 61643-11 / EN 61643-11					
Type / test class	T1-T2/I - II	T1-T2/I - II	T1-T2/I - II	T1-T2/I - II	T1+2/I - II	T1+2/I - II
Protected lines	1	1	N	N	1	1
System network	TNC - TNS - TT (L-N)	TNC - TNS - TT (L-N)	TNS (N) - TT (N)	TNS (N) - TT (N)	TNC - TNS - TT (L-N)	TNC - TNS - TT (L-N)
Type of current	AC 45-65 Hz	AC 45-65 Hz	AC 45-65 Hz	AC 45-65 Hz	AC 45-65 Hz	AC 45-65 Hz
Nominal system voltage Un	230 V	400 V	230 V	400 V	230 V	230 V
Max. cont. operating voltage Uc	275 V	440 V	275 V	440 V	255 V	255 V
Nominal DC voltage Udc L-PE	320 V DC	495 V DC	-	-	-	-
Max. DC cont. operating voltage Ucdc L-PE	355 V DC	545 V DC	-	-	-	-
Maximum impulse current Iimp (10/350)	12.5 kA	12.5 kA	50 kA	50 kA	15 kA	25 kA
Nominal discharge current In (8/20)	30 kA	30 kA	30 kA	30 kA	15 kA	25 kA
Maximal discharge current Imax (8/20)	80 kA	80 kA	80 kA	80 kA	60 kA	60 kA
Follow current interrupting rating Ifi	-	-	-	-	7 kA	15 kA
Voltage protection level Up at In	1,1 kV	1,6 kV	1 kV	1 kV	1,7 kV	1,5 kV
Voltage protection level Up at 3 kA	-	-	-	-	0,9 kV	1,0 kV
TOV (Temporary overvoltage) withstand Ut (L-N: 5 s./N-PE: 200 ms)	337 V / -	581 V / -	- / 1200 V	- / 1200 V	650 V / -	334 V / -
Response time	< 25 ns	< 25 ns	≤10 ns	≤10 ns	< 100 ns	< 100 ns
Short-circuit withstand capability Iscrc	100 kA	100 kA	≤100 kA	≤100 kA	≤50 kA	≤50 kA
Backup protection fuse (gG - gL) maximum rating	≤ 160 A	≤ 160 A	-	-	≤125 A	≤125 A
circuit breaker (B or C curve)	≤ 125 A	≤ 125 A	-	-	≤125 A	≤125 A
Pluggable cartridge	Yes	Yes	Yes	Yes	No	No
Integrated thermal disconnect	Yes	Yes	No	No	No	Yes
State indicator	Yes	Yes	No	No	No	Yes
Safety reserve	Yes	Yes	No	No	No	No
Auxiliary contact (TS)	Yes (TS option)	Yes (TS option)	No	No	No	Yes
Installation						
Wire range (L, N, PE) solid wire	2,5...35 mm ²	2,5...35 mm ²	2,5...50 mm ²	2,5...50 mm ²	2,5...50 mm ²	2,5...50 mm ²
stranded wire	2,5...25 mm ²	2,5...25 mm ²	2,5...35 mm ²	2,5...35 mm ²	2,5...35 mm ²	2,5...35 mm ²
Stripping length (L, N, PE)	12,5 mm	12,5 mm	12,5 mm	12,5 mm	15 mm	15 mm
Tightening torque (L, N, PE)	2,8 Nm	2,8 Nm	3,5 Nm	3,5 Nm	3,5 Nm	3,5 Nm
Auxiliary contact (TS)						
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	6,5 mm ²	6,5 mm ²	-	-	-	1,5 mm ²
Miscellaneous characteristics						
Stocking and operating temperature	-40...+80 °C	-40...+80 °C	-40...+80 °C	-40...+80 °C	-40...+80 °C	-40...+80 °C
Degree of protection	IP20	IP20	IP20	IP20	IP20	IP20
Fire resistance according to UL 94	V0	V0	V0	V0	V0	V0
Dimensions	mm h x w x d	88 x 17,8 x 76,7 mm	88 x 35,6 x 76,7 mm	88 x 17,8 x 76,7 mm	88 x 17,8 x 76,7 mm	85 x 17,8 x 70,8 mm
	inches h x w x d	3,46 x 0,7 x 3,02 in	3,46 x 1,4 x 3,02 in	3,46 x 0,7 x 3,02 in	3,46 x 0,7 x 3,02 in	3,35 x 0,7 x 2,79 in
Dimensions with auxiliary contact (TS)	mm h x w x d	95,8 x 17,8 x 76,7 mm	95,8 x 35,6 x 76,7 mm	-	-	-
	inches h x w x d	3,77 x 0,7 x 3,02 in	3,77 x 1,4 x 3,02 in	-	-	93,5 x 35,6 x 65 mm
						3,68 x 1,4 x 2,56 in
Replacement cartridges						
Phase product ID	Type	OVR T1-T2 12.5-275s C QS	OVR T1-T2 12.5-440s C QS	OVR T1-T2 N 50-275s C QS	OVR T1-T2 N 50-440s C QS	-
	Order code	2CTB815710R2600	2CTB815710R5500	2CTB815710R2700	2CTB815710R5600	-
Neutral product ID	Type	-	-	-	-	OVR T1 25 N
	Order code	-	-	-	-	2CTB815101R9700
		-	-	-	-	2CTB815101R0400

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

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2CTC431045V0014

OVR T1-T2 3L 12.5-275s P QS



2CTC431060V0014

OVR T1-T2 3L 12.5-440s P QS

Description

Type 1 and 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 μ 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 (U_p).

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

Ordering details

Pro- tect- ed lines	Impulse current Iimp 10/350 kA	Max. dis- charge current Imax 8/20 kA	Voltage protec- tion level U_p kV	Nominal voltage U_n V	Max. cont. operating voltage U_c V	Bbn 3660308 EAN	Type	Order code	Weight Pkg (1 pce) kg
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Follow current interrupting rating 50 kA - Pluggable

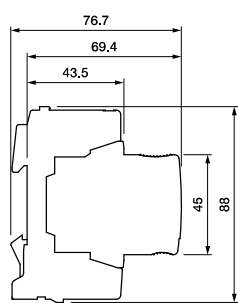
3	12,5	80	1,1	230/400	275	524980	OVR T1-T2 3L 12.5-275s P QS*	2CTB815710R1800	0,45
3	12,5	80	1,1	230/400	275	524911	OVR T1-T2 3L 12.5-275s P TS QS*	2CTB815710R0600	0,45
3	12,5	80	1,8	400/690	440	525154	OVR T1-T2 3L 12.5-440s P QS*	2CTB815710R4700	0,9
3	12,5	80	1,8	400/690	440	525086	OVR T1-T2 3L 12.5-440s P TS QS*	2CTB815710R3500	0,9

Follow current interrupting rating 50 kA - Unpluggable

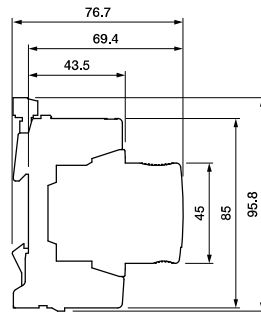
3	25	60	1,5	230/400	255	513397	OVR T1+2 3L 25-255 TS	2CTB815101R4300	0,85
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* Products available end 2015.

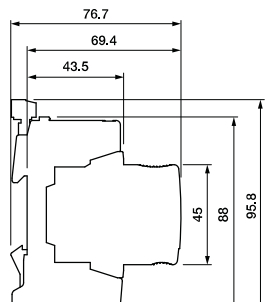
Main dimensions mm



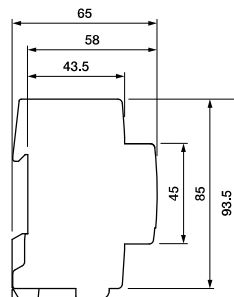
OVR T1-T2 3L 12.5-275s P QS
OVR T1-T2 3L 12.5-440s P QS



OVR T1-T2 3L 12.5-275s P TS QS



OVR T1-T2 3L 12.5-440s P TS QS



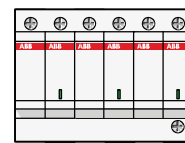
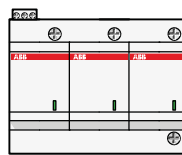
OVR T1+2 3L 25-255 TS

Type	Width mm
OVR T1-T2 3L 12.5-275s P TS QS	53,4
OVR T1-T2 3L 12.5-275s P QS	53,4
OVR T1-T2 3L 12.5-440s P TS QS	106,8
OVR T1-T2 3L 12.5-440s P QS	106,8
OVR T1+2 3L 25-255 TS	106,8

2CTC431002S0201

OVR Type 1+2 surge protective devices

TNC - 230 and 400 V networks



General technical data

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 12.5-275s P TS QS	OVR T1-T2 3L 12.5-440s P TS QS	OVR T1+2 3L 25-255 TS
Electrical features			
Standard	IEC 61643-11 / EN 61643-11		
Type / test class	T1-T2/I - II	T1-T2/I - II	T1+2/I - II
Protected lines	3	3	3
System network	TNC - TNS - TT	TNC - TNS - TT	TNC - TNS - TT
Type of current	AC 45-65 Hz	AC 45-65 Hz	AC 45-65 Hz
Nominal system voltage Un	230 / 400 V	400 / 690 V	230 / 400 V
Max. cont. operating voltage Uc	275 V	440 V	255 V
Nominal DC voltage Undc L-PE / Undc L-L	320 / 640 V DC	495 / 990 V DC	-
Max. DC cont. operating voltage Ucdc L-PE	355 / 710 V DC	545 / 1090 V DC	-
Maximum impulse current Iimp (10/350)	12.5 kA	12.5 kA	25 kA
Max. Imp current Tot Iimp (10/350)	37.5 kA	37.5 kA	75 kA
Nominal discharge current In (8/20)	30 kA	30 kA	25 kA
Maximum discharge current Imax (8/20)	80 kA	80 kA	60 kA
Follow current interrupting rating Ifi	-	-	-
Voltage protection level Up at In	1.1 kV	1.8 kV	1.5 kV
Voltage protection level Up at 3 kA	0.5 kV	0.8 kV	1.0 kV
TOV (Temporary overvoltage) withstand Ut (L-N: 5 s./N-PE: 200 ms)	337 V / -	581 V / -	334 V / -
Response time	25 ns	25 ns	< 100 ns
Short-circuit withstand capability Iscsr	100 kA	100 kA	≤ 50 kA
Backup protection fuse (gG - gL)	≤ 160 A	≤ 160 A	≤ 125 A
maximum rating circuit breaker (B or C)	≤ 125 A	≤ 125 A	≤ 125 A
Pluggable cartridge	Yes	Yes	No
Integrated thermal disconnecter	Yes	Yes	Yes
State indicator	Yes	Yes	Yes
Safety reserve	Yes	Yes	No
Auxiliary contact (TS)	Yes (TS option)	Yes (TS option)	Yes
Installation			
Wire range (L, N, PE) solid wire	2.5...35 mm ²	2.5...35 mm ²	2.5...50 mm ²
stranded wire	2.5...25 mm ²	2.5...25 mm ²	2.5...35 mm ²
Stripping length (L, N, PE)	12.5 mm	12.5 mm	15 mm
Tightening torque (L, N, PE)	2.8 Nm	2.8 Nm	3.5 Nm
Auxiliary contact (TS)			
Contacts information	1 NO - 1 NC	1 NO - 1 NC	1 NO - 1 NC
Min. load	12 DC - 10 mA	12 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	1.5 mm ²	1.5 mm ²	1.5 mm ²
Miscellaneous characteristics			
Stocking and operating temperature	-40...+80 °C	-40...+80 °C	-40...+80 °C
Degree of protection	IP20	IP20	IP20
Fire resistance according to UL 94	V0	V0	V0
Dimensions	mm h x w x d 88 x 53,4 x 76,7 mm inches h x w x d 3.46 x 2.1 x 3.02 in	mm h x w x d 88 x 106,8 x 76,7 mm inches h x w x d 3.46 x 4.2 x 3.02 in	- -
Dimensions with auxiliary contact (TS)	mm h x w x d 95,8 x 53,4 x 76,7 mm inches h x w x d 3.77 x 2.1 x 3.02 in	mm h x w x d 95,8 x 106,8 x 76,7 mm inches h x w x d 3.77 x 4.2 x 3.02 in	mm h x w x d 93,5 x 106,8 x 65 mm inches h x w x d 3.68 x 4.2 x 2.56 in
Replacement cartridges			
Phase product ID	OVR T1-T2 12.5-275s C QS	OVR T1-T2 12.5-440s C QS	OVR T1+2 25-255 C
Type			
Order code	2CTB815710R2600	2CTB815710R5500	2CTB815101R3700