

6651C-Series

Type 2/3 Class II/III

Surge Arrester

The 6651C unit is a Type 2 surge protector (BS EN 61643-11), suitable for use at the boundary of Lightning Protection Zones 1-2 (BS EN 62305). The protector provides an economical means of preventing damage to electrical installations from induced voltage transients caused by switching or nearby lightning strikes.

The 6651C unit provides three mode system protection from mainsborne voltage spikes and surges that can occur between phase and neutral, phase and earth, neutral and earth and additionally phase to phase for the three phase model.

This protection is achieved by using high energy elements which absorb or redirect incoming mainsborne transients. Every unit has two stages of protection, the status of which are clearly indicated by lights incorporated in the front panel, thus ensuring continuity of protection by allowing time for replacement once the first stage has ceased to protect.

Installation

Designed to be quickly and easily installed either alongside the incoming electrical supply or sub-distribution panels, the unit is connected in parallel with the mains supply, thus eliminating complicated by-pass wiring associated with series suppressors. Connected in this manner the 6651C thereby carries only the current associated with the transient being discharged.

By connecting the 6651C ahead of a RCD the incidence of nuisance tripping may be reduced. The unit is suitable for direct connection to a line rated up to 60 Amps but can be connected via 60 Amp series fuses (BS HD 60269-2:2010, BS 88-2:2010) for lines up to 100 Amps (*If MCBs are used in place of fuses they should be of type C*).

Since the 6651C should be installed as close as possible to the distribution panel the half metre cable supplied should be reduced in length if possible and as appropriate. The 6651C unit may be installed at any angle to achieve minimum cable length, so the cable entry may be at the top, bottom, right or left of the housing.

Operation

The 6651C will automatically reset after clamping surges up to the required 10kA level and the Green light(s) indicates that full protection is present. However, after clamping a number of 10kA surges the energy handling capability of the unit's first stage may be exceeded causing the 6651C's internal fuses to operate thus safely disconnecting this stage.

The Red light(s) will then also be illuminated and, whilst the system will still be adequately protected, the unit should be replaced before a further large surge can remove the second protection stage. There is no protection present when only the Red light(s) is illuminated, but unprotected mains power will still be supplied to the system.



6651C-1 Single Phase



6651C-3 Three Phase

Revision: vPD2, 07/04/17
Information subject to change without notice.

All of the above information, including drawings, illustrations and graphic designs, reflects our present understanding and is to the best of our knowledge and belief correct and reliable. Users, however, should independently evaluate the suitability of each product for the desired application.



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Let Through Voltage

The let-through voltage of the 6651C, including 0.5 metre of cable, is less than 900 volts in all modes when tested at 6kV 1.2/50µs o/c 3kA 8/20µs s/c

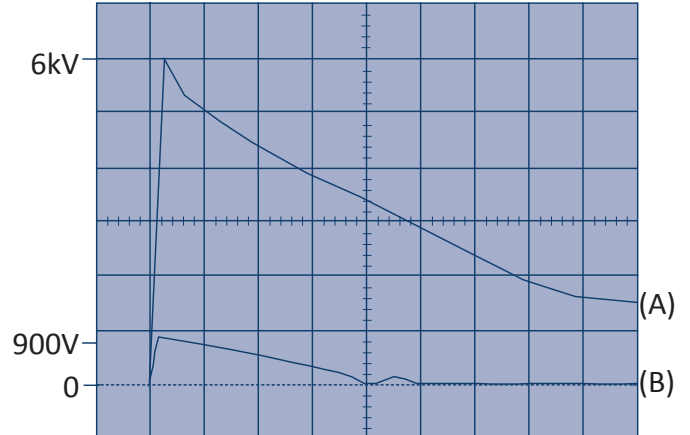
Maintenance

The unit requires no maintenance other than a routine examination of the status of the lights and replacement if required.

Safety

The 6651C unit includes internal fuses to ensure that suppression components are adequately protected in the event of violent electrical discharge.

Example of 6651C Voltage Clamping



Specifications	Single Phase 	Three Phase 
Voltage rating (Nominal)	230V rms	400V rms
Maximum Operating voltage	300V rms	L-N 300 V rms L-L 500 V rms
Maximum current rating	Unlimited (Parallel Connection)	Unlimited (Parallel Connection)
Maximum surge current handling (8/20 µs)	10 kA	10 kA
Response time	<10 ns	<10 ns
Power consumption	Negligible	Negligible
Leakage current	0.15 mA	0.40 mA
Cable Supplied (0.5 m)	3 Core 2.5mm ²	5 Core 2.5mm ²
Operating temperature	-40° to +70° Celcius	-40° to +70° Celcius
Indicator Lights	Green - Full Protection Red & Green - Reduced Protection Red - No Protection	Green - Full Protection Red & Green - Reduced Protection Red - No Protection
Case	Powder Coated Mild Steel	Powder Coated Mild Steel
IP Rating	54	54
Type according to BS EN 61643-11	2	2
Dimensions (in mm)		
L:	182	182
W:	81	81
D:	61	61
Weight (in grams)	900	1100
Part Code	6651C/1	6651C/3

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