

Harmonics: an increasingly widespread phenomenon

- In the field of service industries, electrical pollution problems related to harmonics are increasing significantly. It is caused by equipment such as: computers, printers, photocopiers, electronic cash registers, fluorescent lighting, discharge lamps, etc.
- These applications draw non sinusoidal current.
- These harmonics, of which the most significant is harmonic 3 (150 Hz for a 50 Hz network) are present in the all supply networks right up to the source.
- These homopolar harmonics add themselves on in the neutral conductor. Therefore it is very common to find installations where the current in the neutral feed is greater than the phase current by 50 to 70%.

Eliminating malfunctions

- **ATRYs** improves the quality of the voltage wave by reducing the rate of distortion. This enables the equipment to operate in better conditions and consequently increases its life expectancy.

A range of harmonic equalizers

- Eliminates the principal harmonics generated by PCs, servers, printers and discharge bulbs, etc.
- Neutralises harmonics as close as possible to the polluting equipment.
- Eliminates the problems associated with the presence of harmonics in the neutral feed: overload, premature ageing, de-rating of the installations, spurious tripping of protection devices.

- Increases the lifetime of installations.
- Improves the power factor of the installation.
- Reduces the current consumed.
- Reduces the electricity bill.
- Deals with the requirements of all types of electrical network, including those supplied by generating sets.
- Compatible with all neutral systems.
- Easy to install and operate.



ATRYs_012.C-1_GAT

Your protection for

- > Service industries
- > Telecommunications
- > Businesses



Installation and operation



DIRIS 718 B

- The electrical connection (three-phase + neutral) is achieved by a simple connection, between the upstream line of the distribution panel to be cleaned and the compensator.
- **ATRYs** does not require calibration or adjustment.

The addition of a **SOCOMEc DIRIS** measuring device will provide information on:

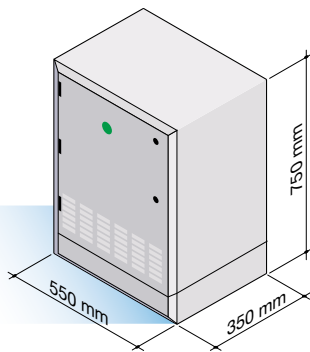
- current and voltage harmonics,
- the rate of distortion,
- the current values (phase and neutral),
- the voltages,
- the frequency.

Combining with static transfer switch

Applications located downstream from Load Transfer Modules often generate harmonic distortion.

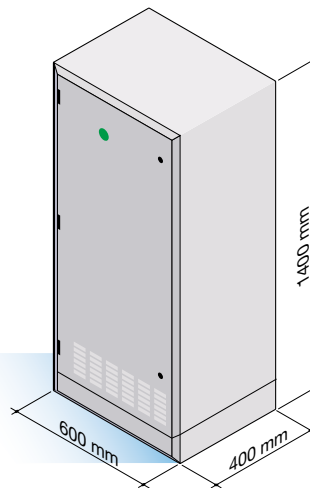
The integration of **ATRYs** compensators into the Load Transfer Modules allows the uninterruptible power supply (supply from two sources) and harmonic distortion suppression functions to be combined.

Dimensions



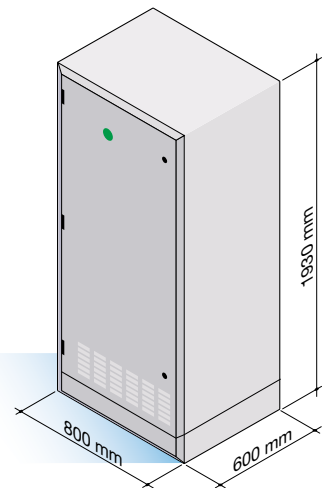
ATRYs 006 D

Application power kVA	ATRYs rating A	Weight kg
15	15	100
30	27	110
60	54	210



ATRYs 007 D

Application power kVA	ATRYs rating A	Weight kg
90	82	320



ATRYs 009 B

Application power kVA	ATRYs rating A	Weight kg
200	180	690
280	240	740

(1) Cabinet with CADRYs included 810 mm x 640 mm, 750 kg.

Technical data



ATRYs 014 A.CAT

ATRYs RATING	15 A	27 A	54 A	82 A	180 A	240 A
Application power	15 kVA	30 kVA	60 kVA	90 kVA	200 kVA	280 kVA
Phase current	23 A	45 A	87 A	130 A	300 A	400 A
Maxi neutral current	45 A	81 A	162 A	245 A	540 A	720 A
Elimination of harmonics (phases H3, H9, H15)	up to 80 %					
Elimination of neutral harmonics	up to 85 %					
Rated voltage	400 V, 3 phases + N (± 15 %)					
Rated frequency	50 Hz (± 6 %)					
Working temperature	up to 40 °C					
IP rating	IP 21 (IP 32 optional)					
Standards	compliant with 60439-1					