



# Biosirus

## ULTRA

### Energy Saving - ULTRA

#### High-tech Device / Easy to Install



#### Application:

- Industrial, Commercial, Residential
- High Inductive (motor) or Composite Loads
- 0.5 KVA to 1500KVA Loads
- 100-600 Vac; 1ph/2ph/3ph; 50/60 Hz.
- Panel Incomer / Branch / Individual Loads

#### Suitability:

- Industrial Drives, Refrigeration, Air-conditioners, Heat Pumps
- Load Factor >60%; Total Motor Load >70%
- Works with existing electrical panels and MCB/MCCBs
- Single installation (Incomer) or Dispersed Installation (Loads)

#### ULTRA Unit:

- Wall mount (next to electrical panel or near load)
- Wired onto Panel/Load terminals directly (load side)
- No power supply required; Installs in 30 minutes
- Operating Temp: -40 deg. C to +70 deg.
- UL508/CSA22.2-14/13 (Ind. control); EN50178(LVD)/EN61000-6-2
- Selection based on maximum load (KVA) or MCB rating (in KVA)
- Size:
  - 0.5 KVA 6x10x3cm, 0.5 Kg. – 1500 KVA 40x60x25cm, 50 Kg.
  - 0.5 5KVA 2.4x3.9x1.2in, 1.1 lb. – 1500 KVA 16x24x10in, 110 lb.

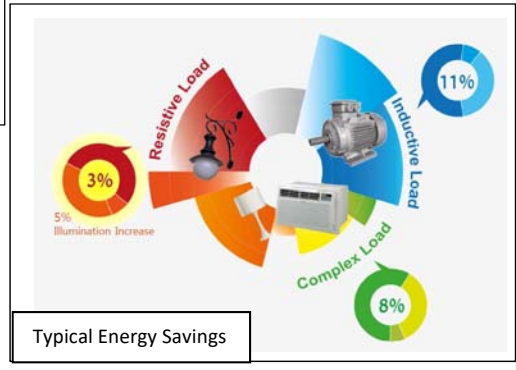
#### How Does it Work:

- Not a pf or a KVAR unit
- Magnetic interaction with ceramic coating in AC field
- Utilizes ceramic coating; 10-Year life

#### Energy Savings:

- Typical Payback: 1-2 years (Motor Loads)
- Inductive Loads: 11-18%; Composite Load: 8-11%; Resistive Load: 3-5%
- 3-year Warranty / Extended Warranty Options
- Adaption Period: <10KVA (2 days); 10-50 KVA (5 days); 100-300KVA (15 days); 500-1500 KVA (24 days)

#### Comparison:



### ULTRA SPECIFICATION

INDUSTRIAL						
MODEL NO.	INPUT	VOLTAGE	Hz	SIZE (W x L x H cm)	WEIGHT (kg)	CAPACITY (KVA-AC)
U-1500	3ø	100-600V	50-60Hz	40 x 60 x 25	50	1500
U-1000				40 x 60 x 20	40	1000
U-700				35 x 52 x 15	27	700
U-500				35 x 45 x 15	25	500
U-300				30 x 40 x 10	15	300

COMMERCIAL						
MODEL NO.	INPUT	VOLTAGE	Hz	SIZE (W x L x H cm)	WEIGHT (kg)	CAPACITY (KVA-AC)
UC-200	3ø	100-600V	50-60Hz	25 x 35 x 08	11	200
UC-100				22 x 30 x 08	8	100
UC-50				18 x 25 x 06	5	50

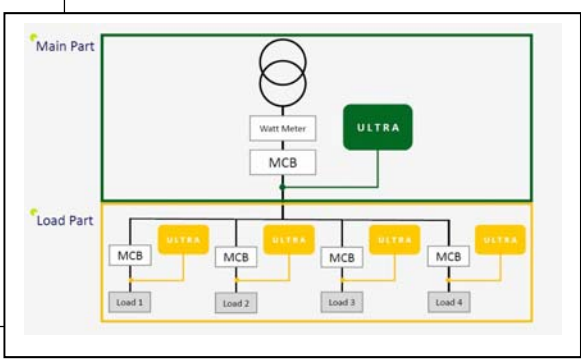
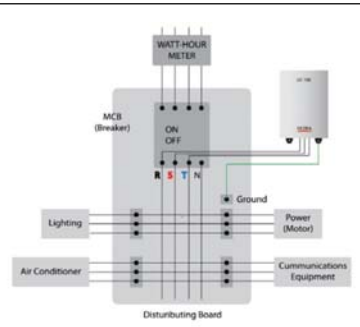
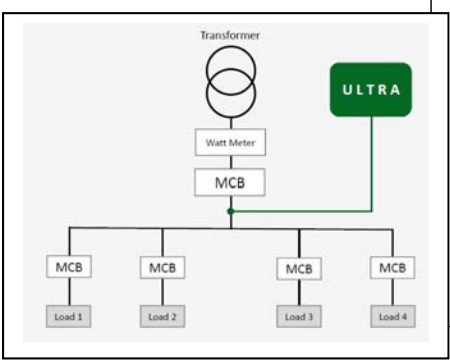
  

REGULAR						
MODEL NO.	INPUT	VOLTAGE	Hz	SIZE (W x L x H cm)	WEIGHT (kg)	CAPACITY (KVA-AC)
UR-30	3ø, 1ø	100-600V	50-60Hz	14 x 20 x 06	3.5	30
UR-10				13 x 18 x 05	2.3	10
UR-5				09 x 10 x 04	1	5

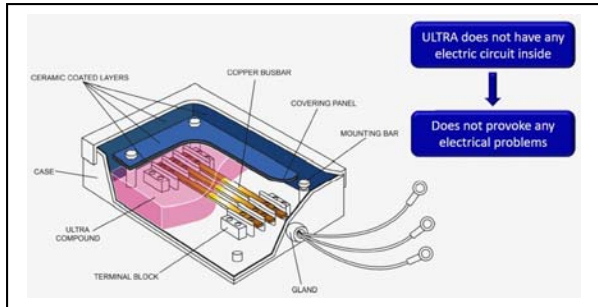
MODULE						
MODEL NO.	INPUT	VOLTAGE	Hz	SIZE (W x L x H cm)	WEIGHT (kg)	CAPACITY (KVA-AC)
UM-1	1ø	100-600V	50-60Hz	08 x 11 x 03	0.8	1
UM-0.5				06 x 10.3 x 03	0.6	0.5

\* The product specification is able to be changed in the reason of improvement without notice.



# Tech Talk: *Not a traditional power factor correction unit*

ULTRA is a high-tech product that utilizes energy released from ceramic coating in a magnetic field. Ceramic coated layer emits far-Infrared rays activating electrons in the ULTRA composite through resonance absorption. The activated electrons magnetically interact with the AC circuit magnetic field. The resultant magnetic energy compensates for energy loss in the AC circuit, thereby improving electrical energy consumption and energy efficiency.



*The optimization lies in recognising the dynamic loads (KVA) and optimizing it either as (1) a Single installation (total KVA) at the incomer or (2) as Dispersed installations (individual motor load KVA) or (3) as a Hybrid installation (be applied at incomer and load points, but in such cases the KVA sizing needs to be halved).*

## And Savings Too:

Motor loads consume 75%-90% of system power in Industrial and Commercial applications. Hence, optimizing this is key. The energy savings lie in:

- Inductive Loads – 11-18%
- Composite Loads – 8-15%

Typical payback is about 12-24 months

## Best Value Applications:

The most important parameters are:

- (1) Size of the unit(s), (2) Load factor >60%, (3) total motor load > 70%
- (4) Hours of operation per day, (5) electricity tariff rate, and
- (6) Demand charges (if levied).

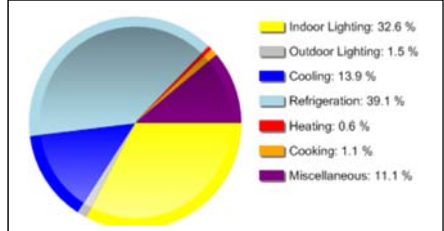
Parameters	Platinum Savings	Gold Savings	Silver Savings	Bronze Savings
Total Motor Loads	90%	80%	70%	60%
Total Load factor	90%	80%	70%	60%
Unit Sizes of Motors	50+ KW	20-50 KW	10-20 KW	0.5-10 KW
Hours of operation per day	15+	10-15	6-8	6-8
Electricity Tariff (US\$/kWh)	0.15+	0.17+	0.17+	0.20+
Demand Charges (US\$/kW)	varies	varies	varies	varies
Typical Pay back (simple ROI)	1 year	1.5 Years	2 Years	3 Years
Typical Applications	All	All	All	Big Box Retail, Supermarkets, Commercial, Small Office

*Do the math for number of motor loads in each facility – the savings are huge.*

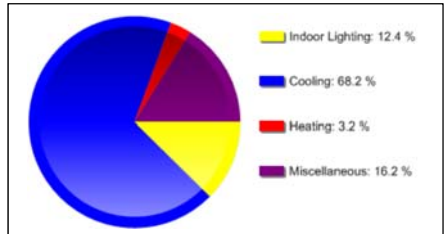
### Typical Electricity Consumption

(Source: US DOE)

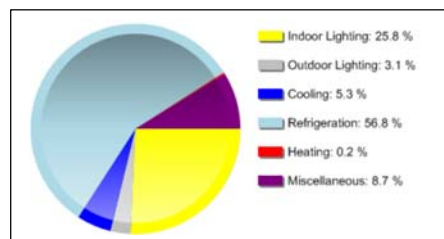
Grocery Store (60,000 sq. ft.):



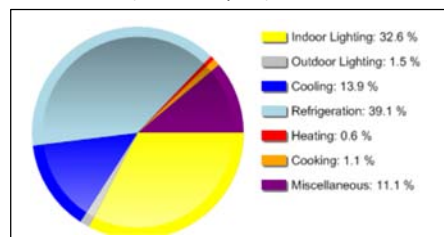
Data Centers (10,000 sq. ft.):



Convenience/Pharma Store (5,000 sq. ft.):



Restaurant (10,000 sq. ft.):



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**Call us for any details  
or a trial project**

Biosirus Brochure ULTRA: Apr 2017