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**MASTER**  
**GUARD**

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**MASTER  
GUARD**

**Series C**

from 10 to 60 kVA



**UNINTERRUPTIBLE POWER SUPPLY**

# Series C from 10 to 60 kVA

## The Range

Masterguard's Series C family is available from 10 to 60 kVA in three-phase output versions. Batteries, available in a wide range of autonomies, are included in the UPS cabinet as standard (10-40kVA only).

## Flexibility for Customized Solutions

Series C uses intelligent double conversion technology meaning users can select from the following operating modes:

- **Double conversion:** reducing network disturbances to a minimum
- **Digital interactive:** allowing significant energy savings through high power efficiency

Separate bypass input terminals and top cable entry (on 50-60 kVA) provide maximum flexibility during installation. Special versions including full galvanic isolation transformer (400V/400V/50Hz, T version and 208V/208V/60Hz, LAM version) are available and are fully integrated into the UPS cabinet.

## Leading Technology

Patented Vector Control technology increases power component performance and enables active conditioning of the load. Vector control provides:

- Improved performance for specific unbalanced load conditions
- Perfect load distribution between parallel connected UPS
- Improved fault clearing capacity for downstream short circuits
- Customisation easily achieved via simple software modifications
- Improved efficiency through reduced installation times and ease of servicing

Active input Power Factor Correction (PFC) is another key feature of Series C. This means units only absorb active power, having an input power factor >0.95. Reduced installation and operating costs result. Series C also features Total Harmonic Distortion (THDi) correction. Series C will correct input THDi to less than 8%, without requiring additional options, allowing perfect compatibility with upstream distributions and preserving UPS power conversion efficiency (10-40 kVA versions only).

## Reliability and Scalability

Up to 8 three-phase Series C units can be connected in parallel. We are able to customise and adapt our solution as load requirements change.

Through fully integrated digital control, Series C allows:

- Modular parallel redundant configurations N+1.
- Modular parallel scalable configuration, allowing the increase of on-site power

## Communication

Series C is installed with a voltage-free contact port, two serial ports and two internal slots for ManageUPSNET (with SNMP capability and IP network interface), MopUPS shutdown and monitoring software and LIFE.net modem. A liquid crystal display further facilitates interaction with your UPS. Advanced Battery Care helps maintain optimum battery condition via regular battery status checks. Series C is also compatible with Masterguard's battery management system (BMS) providing continuous monitoring of individual battery cells.

## Monitoring

The Series C family is fully compatible with LIFE.net, Masterguard's remote monitoring tool. This service provides:

- Automatic transmission of a daily status report
- Continuous real time UPS monitoring and diagnosis
- A remote fix capability
- Regular UPS Operational status report supplied via post or email
- Detailed operation history of the full service LIFE of the UPS system
- ETS function for trouble-shooting of the most common operating anomalies
- Power Quality Monitoring to effectively monitor power disturbance trends

## Applications

Series C provides secure power infrastructure for a wide range of applications including:

- Storage Networks
- Commercial Processing Systems
- IT networks
- Enterprise servers

## Secure Power Always

Supplying you with a UPS alone will never deliver the level of business continuity you require. Masterguard offers a range of maintenance plans which will:

- Help deliver reliability to your load.
- Extend the life of your power protection equipment
- Optimise your capital expenditure
- Provide risk management at a fixed cost
- Provide a pro-active approach to disaster recovery

**Delegate your power management to the experts.**

<b>Series C</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>
<b>TECHNICAL CHARACTERISTICS</b>							
Nominal power rating @ 40°C (kVA)	10	15	20	30	40	50	60
Nominal power rating @ 25°C (kVA)	11	16.5	22	33	44	55	66
<b>INPUT</b>							
Nominal input voltage (V)	400 (380 V, 415 V selectable) three-phase + neutral						
Input voltage tolerance:							
• Full output load (%)	-30/+15	-30/+15	-25/+15	-25/+15	-25/+15	-25/+15	-25/+15
• 75% output load (%)	-30/+15	-30/+15	-30/+15	-30/+15	-30/+15	-30/+15	-30/+15
Nominal frequency (Hz)	50/60 [selectable]						
Frequency tolerance (%)	±10%						
Input Power Factor @ nominal input voltage	>0.95						
Input current distortion (%)	<8	<8	<8	<8	<8	<10 (1)	<10 (1)
Nominal reserve voltage (V)	400 (380 V, 415 V selectable) three-phase + neutral						
Reserve frequency tolerance (%)	±2 [0.2 to 6 selectable]						
<b>OUTPUT</b>							
Nominal output voltage (V)	400 (380 V, 415 V selectable) three-phase + neutral						
Nominal output frequency (Hz)	50 (60 selectable)						
Output Power Factor	0.8						
Output voltage stability for load variation 0 - 100%:							
• Static (%)	±1						
• Dynamic	Complies with IEC/EN 62040-3, Class 1						
Output frequency stability:							
• With mains synchronism (%)	±2 [1, 3, 4 selectable]						
• With internal quartz oscillator (%)	0.1						
Inverter overload capacity:							
• For 5 minutes (%)	125						
• For 30 seconds (%)	150						
Automatic nominal output power adjusting with temperature	110% at 25°C, 100% at 40°C						
<b>BATTERY CHARGER</b>							
Battery ripple current (%)	<0.01C <sub>10</sub>						
Charging current (A) / (Expandability)	5(+5)	5(+5)	5(+5)	5(+5)	10(+10)	10(+10)	10(+10)
<b>GENERAL</b>							
AC/AC efficiency - Digital Interactive mode (%)	>97						
AC/AC efficiency - Double Conversion mode (%)	>91	>91	>91	>91	>91	>92	>92
Operating temperature (°C)	0 - 40						
Maximum relative humidity @ 20°C (not condensing) (%)	<90						
Maximum noise level @ 1 metre (dBA)	<50	<50	<50	<52	<52	<55	<55
EMC class (EN 50091-2)	(10-40) Class A					(50-60) Class RS	
Degree of protection	IP 21					IP 20	
Frame colour (RAL scale)	7035						
Cable entry	Bottom/Side					Top/Bottom/Side	
Equipment mobility	On casters					Fixed	
<b>DIMENSIONS AND WEIGHT</b>							
Height (mm)	1400	1400	1400	1600	1600	1780	1780
Width (mm)	500	500	500	550	550	620	620
Depth (mm)	800	800	800	800	800	835	835
Weight (Kg) w/o batteries	145	145	145	190	210	260	260

Notes: (1) With low input THD option