

# SIEMENS

## SIMOREG 6RA70 DC-MASTER

Top performance and intelligence



# SIMOREG 6RA70 DC-MASTER

## A new lease on life for proven DC technology

### *Now with:*

Unified operation with Siemens AC MASTERDRIVES™

More application flexibility

More communication options

Extended output range to 1000hp  
(High hp designs up to 8000hp)

Even more compact sizing

Higher processing performance

More favorably priced solutions

Innovative features



- **There are applications where DC drives** are simply the better solution reason enough for us to innovate DC drives. In many applications DC drives have clear cut advantages in operator friendliness and reliability, cost effectiveness and performance, efficiency and start-up. When these applications are matched with the SIMOREG 6RA70 which are built on over 25 years of proven SIMOREG success the results are unparalleled.

- **Use the SIMOREG 6RA70 DC-Master** on your next application and learn why the Siemens SIMOREG drives continue to be the benchmark in the DC drive industry.



# UNIVERSAL COVERAGE

## The SIMOREG 6RA70 DC-Master is known the

world over for its outstanding quality, reliability, and most of all performance. With features such as feed forward control on all of the inner control loops and a 83ns instruction time made possible by its powerful co-processor system the SIMOREG 6RA70 DC-Master stands unchallenged on its performance from every end of the globe.

*With offices in 193 countries global coverage is available in even the most remote locations.*

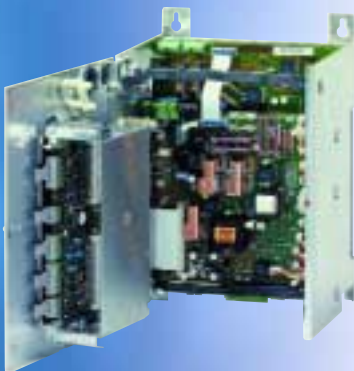
# MODULAR PHILOSOPHY:

## The SIMOREG modular design has now been extended from 15 Amps to 1660 Amps.

### Modular and compatible through and through



- Identical software platform
- Identical operator Interfaces
- Identical control card
- Identical option cards
- Identical card rack
- Identical manual



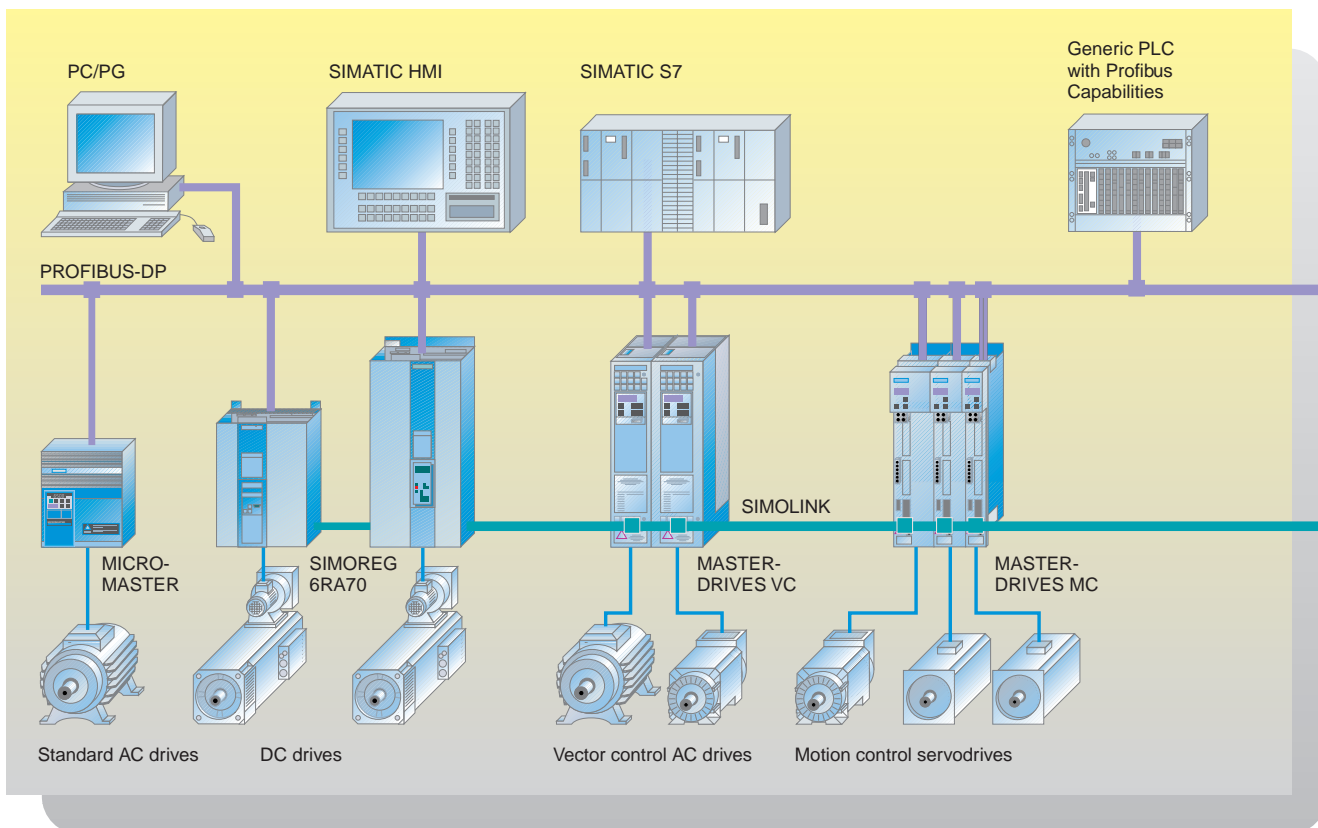
**The SIMOREG 6RA70 is extremely** flexible and cost-effective in any application. In addition to the ability to expand the standard functionality by adding option boards, the standard version can be expanded to handle

higher-level software applications with the built in extended technology software. In many applications the use of the extended technology software can replace a technology board or even the PLC functions.

# Unified integration with the SIMOVERT MASTERDRIVES™ family

**The SIMOREG 6RA70 DC-MASTER was designed** as a truly integrated member of the Siemens MASTERDRIVES family. The 6RA70 having an identical card rack and BICO software technology as the 6SE70 AC drive series lends itself to using the same option cards including Profibus CBP2 card, Simolink SLB card, T400 Technology card, etc..

In addition to using the same option cards as the 6SE70 AC MASTERDRIVE series, additional devices such as the OP1S Operator Control Panel are also interchangeable. This concept can greatly reduce your inventory in addition to adding versatility and operator friendliness to your drive systems.



# Unified communications throughout the Siemens applied drive family

In recent years the majority of drive controls have migrated from traditional hard wiring to serial communications. The Siemens 6RA70 DC MASTER series was

designed with this migration in mind and is capable of being fully integrated into any automation environment.

## PROFIBUS DP

The most successful fieldbus standard worldwide.  
12M baud max (copperwire) RS485  
Up to 127 nodes

## CAN

Controller Area Network  
16 word telegram available  
Up to 124 nodes  
1M baud

## DEVICENET™

Industrial Fieldbus  
500K baud  
Up to 64 nodes

## THE PATH TO THE FUTURE: Optimum Integration with Communications

## SIMOLINK

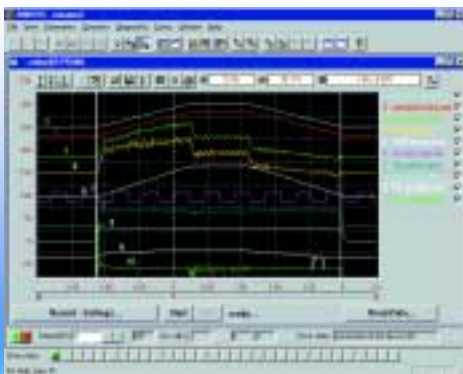
Fiber Optic ringbus.  
Up to 201 nodes  
11M baud max.

## PEER TO PEER

5 word telegram  
2 wire or 4 wire operation  
187.5K baud max.

## USS

Communication protocol for OPIS,  
SIMOVIS and QuickStart  
RS232 or RS485 (up to 31 nodes)  
187.5K baud max.



# Unmatched: Versatility & Performance

- ❖ Ability to auto-tune to various motors and applications
- ❖ Easily expandable with extended I/O, software functions, technology functions, etc.
- ❖ Can be fully integrated into any automation environment
- ❖ Extremely quick and simple start-up
- ❖ Absolutely no jumpers or potentiometers
- ❖ Modular through and through
- ❖ Extremely simple operator control using a unified control philosophy
- ❖ Up to four sets of parameters can be stored in the drive and activated at any time



**SIMOREG 6RA70**

# DC-MASTER

Powerful drives for every industrial sector



# Let our operator interfaces show you everything you need to know



PMU Built-in Operator Panel

## PMU SIMPLE OPERATOR PANEL

All units feature a PMU panel mounted in the converter door. The PMU consists of a five-digit, seven-segment display, three LEDs as status indicators and three parameterization keys. The PMU provides all the facilities required during start-up for making adjustments or settings and displaying measured values.

The PMU also features a 9 pin Sub-D connector with a USS interface in compliance with the RS232 or RS485 standard.

## Everything at a glance, always under control: OP1S operator control panel.

It can not be faster or simpler: The optional user-friendly OP1S operator panel with 4-line plain text display with 16 characters provides even more advantages when it comes to user-friendliness and functionality. It allows physical quantities to be displayed, and can be used as a handheld terminal or for data saving; as the current values can be quickly and electronically parameterized. Five different languages are available for universal text display. The OP1S operator panel can be used with all SIMOREG 6RA70 DC-MASTER and SIMOVERT® MASTERDRIVES. Parameter sets can be easily upread and downloaded, both offline and online using the OP1S.



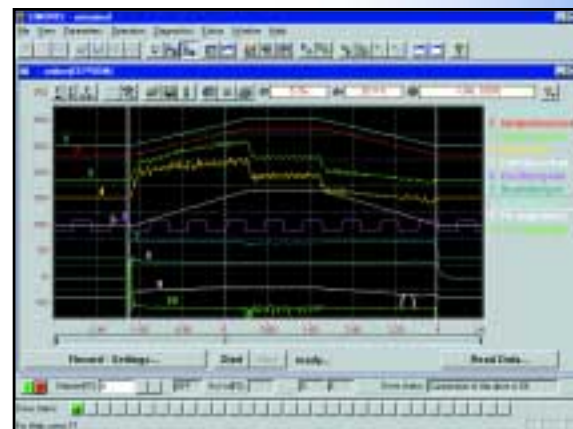
## QUICK START

For menu prompted start-up of any SIMOREG 6RA70 via the PC, try our free Quick Start software. Quick Start will guide you with step by step instructions and parameterize the SIMOREG 6RA70 to your specific needs.



## SIMOVIS

For a comprehensive PC tool with start up, drive control, parameter editing, monitoring, storage, printing and diagnostic capabilities Siemens offers free of charge SIMOVIS. SIMOVIS software is a multi-level tool for communication between your PC and Siemens drive.



## DRIVES ES

The Drive Engineering System (Drive ES), is the engineering tool used to configure, start up, and execute servicing and diagnostic operations of Siemens drives from the SIMATIC platform. Integrating drive technology into the SIMATIC environment is made simple by three components that make up Drive ES.

- Drive ES Basic
- Drive ES SIMATIC
- Drive ES Graphic



# The right drive for every requirement

## Base drive and power module designs

For customer convenience and added versatility the SIMOREG 6RA70 DC-MASTER is available in the base drive and power module designs. Base drive designs include the power module mounted on a backplane with all the necessary components and wiring for convenient installation.



15 amp power module



15 amp base drive

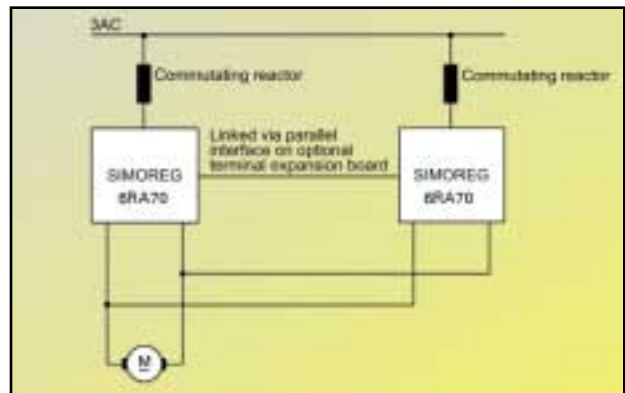
## High Hp SIMOREG

The SIMOREG 6RA70 is available in high Hp designs up to 8,000Hp. These designs retain all the functionality and commonality of the standard SIMOREG 6RA70.



## Parallel Capabilities

One of the many features of the SIMOREG 6RA70 DC-MASTER is the ability to parallel up to five identical power modules for increased power capabilities and redundancy. Through the use of the CUD2 terminal expansion card a paralleling interface is readily available to send the summated firing pulses to all connected units.



# Ratings and Dimensions

## SIMOREG 6RA70 DC Master POWER MODULES

Regenerative and Non-Regenerative Models

Rated Armature Amps *	Typical Horse Power		Height	Width	Depth
	at 240VDC	at 500VDC			
15ADC	3Hp	7.5Hp	15.2"	10.4"	9.4"
30ADC	7.5Hp	15Hp	15.2"	10.4"	12.3"
60ADC	15Hp	30Hp	15.2"	10.4"	12.3"
100ADC	25Hp	60Hp	15.2"	10.4"	12.3"
140ADC	40Hp	75Hp	15.2"	10.4"	12.3"
210ADC	60Hp	125Hp	15.2"	10.4"	12.3"
255ADC	75Hp	150Hp	24.6"	10.6"	12.5"
430ADC	125Hp	250Hp	24.6"	10.6"	12.5"
510ADC	150Hp	300Hp	27.6"	10.6"	14.2"
850ADC	250Hp	500Hp	30.7"	16.1"	14.3"
1180ADC		700Hp	34.6"	17.7"	19.7"
1660ADC		1000Hp	34.6"	17.7"	19.7"

\* Amp ratings are based on the US rating allowing an overload of 150% for 60 seconds.

## SIMOREG 6RA70 DC Master BASE DRIVES

Regenerative and Non-Regenerative Models

Rated Armature Amps *	Typical Horse Power		Height	Width	Depth
	at 240VDC	at 500VDC			
15ADC	3Hp	7.5Hp	25.1"	10.6"	10.4"
30ADC	7.5Hp	15Hp	25.1"	10.6"	13.4"
60ADC	15Hp	30Hp	28.9"	10.6"	13.4"
100ADC	25Hp	60Hp	32.7"	10.6"	13.4"
140ADC	40Hp	75Hp	38.6"	11.4"	12.8"
210ADC	60Hp	125Hp	44.1"	11.4"	12.8"
255ADC	75Hp	150Hp	46.5"	11.4"	13.3"
430ADC	125Hp	250Hp	47.2"	21.6"	15.1"
510ADC	150Hp	300Hp	47.2"	21.6"	15.1"
850ADC	250Hp	500Hp	60"	32"	16.7"
1180ADC		700Hp	78"	32"	25"
1660ADC		1000Hp	78"	32"	25"

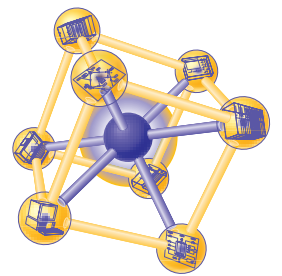
\* Amp ratings are based on the US rating allowing an overload of 150% for 60 seconds.

### Specifications

Input Voltage	460VAC, 3 Phase (other voltages available)
Frequency	45 to 65Hz, Automatic Adaptation
Armature Voltage	240VDC max./230VAC Input 500VDC max./460VAC Input
Field Voltage	150VDC max./230VAC Input 300VDC max./460VAC Input
Control and Fan Voltage	Self contained in base drives
Operational Ambient	45 C
Installation Altitude	Up to 3300 feet or 1000 meters
Speed Regulation	./- 0.1% of rated speed with pulse encoder and digital reference

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Integrated  
Automation*