



SIEMENS

Ingenuity for life



Siemens GCS

Control & monitoring system for
Siemens gas engines & gen-sets

[siemens.com](https://www.siemens.com)

Why Siemens engines?

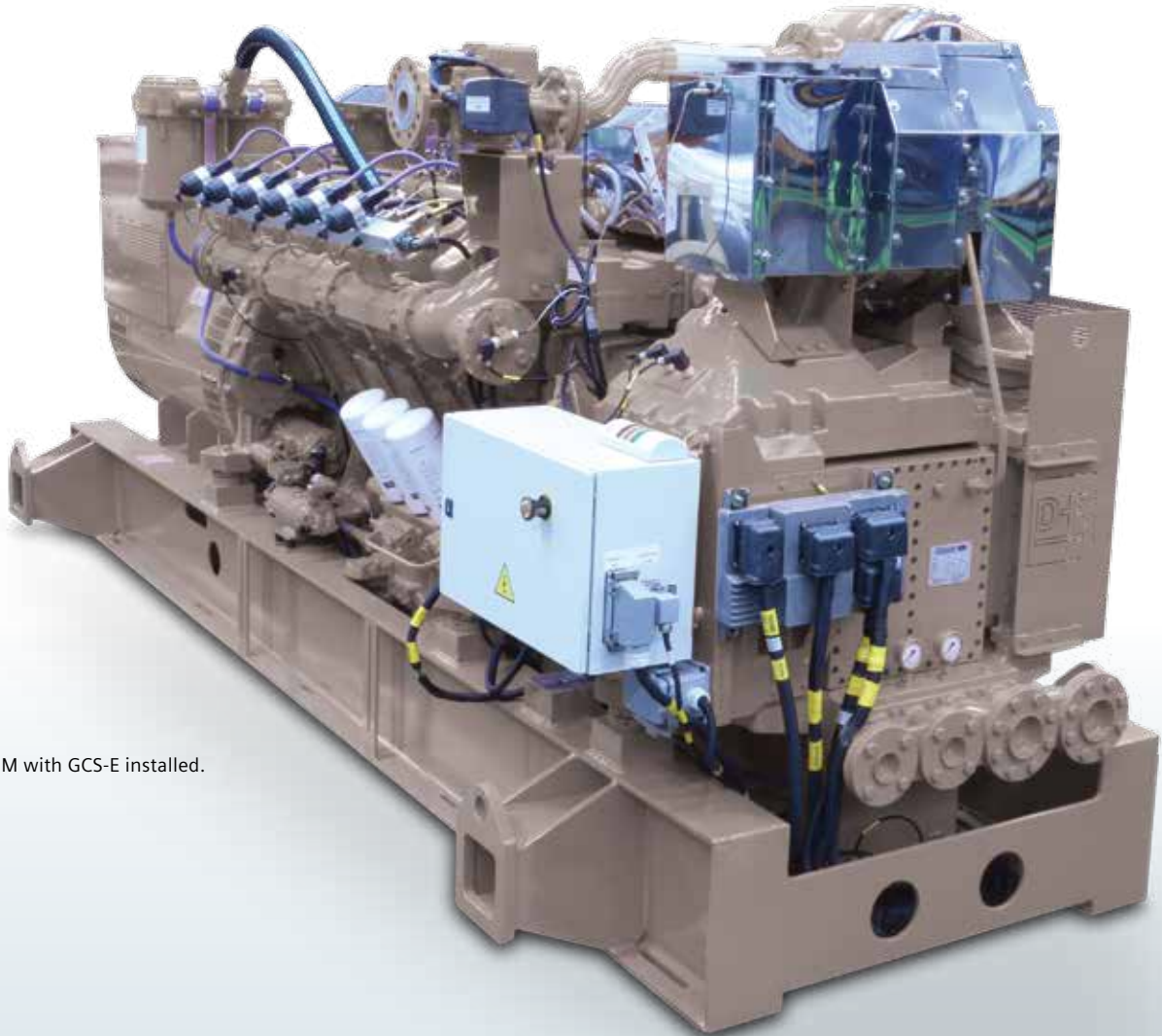
High performance eco-friendly engines

Our commitment is to design and manufacture robust and high performance engines & gen-sets, with a low life-cycle cost focus and in compliance with the strictest environmental requirements.

Siemens offers a comprehensive product portfolio between 200 Kwe up to 2 Mwe

through different product families and suitable for all sort of different fuel gases. Siemens develops unique client intimacy to assure the product fully fits with client needs and requirements.

Siemens engines operate in more than 40 countries



SGE-42HM with GCS-E installed.

GCS

Control & monitoring system for Siemens gas engines & gen-sets

At Siemens we go one step further to offer the best products and services to our clients. That is why we introduce our Control Systems to all our engines.

Control Systems GCS are the result of implementing the most technologically advanced engine, gen-set and power plant control management systems to optimize performance.

You can now control and monitor your plant, while maximizing equipment efficiency with Control Systems.

The GCS control system comprises:

- The whole Engine parameters control
- The alarms management
- It supports the following interface protocols: Modbus TCP, CAN J1939, CANopen
- Unique diagnostics and trending software

Main features / benefits

“GCS reduces complexity at competitive integration costs”

- Real-time connection to the engine, gen-set or power plant
- Ethernet connection possible for remote support
- Emails warning reports
- Detailed diagnostics troubleshooting
- One hardware platform and single service tool
- Simplifies installation and commissioning
- Quick intervention in case of any variations of the controlled parameters set
- GCS reduces complexity at competitive integration costs

GCS-E

- GCS-E governs the engine unit.
- Autonomous engine control
- Plug & Play system
- Simplifies installation and commissioning

The control onto the engine GCS-E captures the following parameter:

- Ignition
- Ignition and timing; emissions control
- Knocking detection
- Carburation
- Speed /load control
- Protections
- Pre-lubricating/starter
- Pre-heating (Water/Oil)

GCS-G

- GCS-G governs the engine-alternator (gen-set) unit
- Applicable to any range of generators, frequency (50/60Hz) and voltage
- It controls up to 3 gen-sets working together, in island and sharing load, being also able to control the plant grid switch

The control GCS-G captures the following parameter:

- Alternator
- Synchronization
- Gas ramp
- Batteries charger
- Cooling control
- Thermal recovery
- Auxiliary equipment status
- Power output

GCS-P

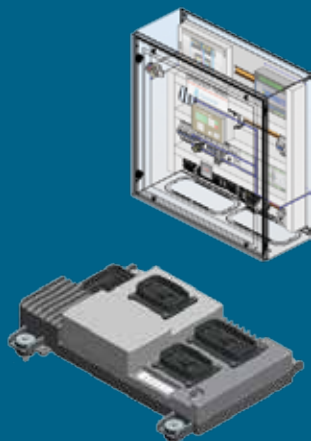
- GCS-P governs the different elements of the power plant
- GCS-P system controls the GCS-G gen-sets when > 3 gen-sets operate in island mode or a complex installation is required
- GCS-P system governs:
 - GCS-G units as the master of the gen-sets
 - The operation of the grid switch
 - Co-generation machines
 - Additional ancillary operations

GCS system

GCS-E
engine

GCS-G
gen-set

GCS-P
plant



**Published by
Siemens Energy, Inc. 2017**

Siemens AG
Power & Gas Division
Freyeslebenstr. 1
91058 Erlangen
Germany

Siemens Energy, Inc.
4400 N Alafaya Trail
32826 Orlando, FL
USA

Siemens Holding Spain, S.A.
Barrio de Oikia, 44
20759 Zumaia (Gipuzkoa) Spain
PO Box 30

Tel: (Int'l +34) 943 86 52 00
Fax: (Int'l +34) 943 86 52 10

For more information, please contact
our Customer Support Center.
Phone: +49 180 524 70 00
Fax: +49 180 524 24 71
(Charges depending on provider)
E-mail: support.energy@siemens.com

Article-No. PGDR-B10012-00-4AUS

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

