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SYSTEM 2000 GENERATOR CONTROL

GCS 2000 • 100 - 6000 AMP

17.6 MW System Control for Cernavoda Nuclear Power Plant, Romania

GENERAL DESCRIPTION

The **System 2000** series of generator control switchgear represents over 25 years of product development and system design experience. Each product option has been field tested and certified by qualified T.T.I. engineering and field service personnel providing our customers with proven quality and reliability.

Standard designs are available to fit most applications and can be adapted to fit an owner's specific requirements. Custom engineered systems and design recommendations are available for those applications requiring a unique design approach. The **System 2000** series of products can be utilized with diesel or gas engine generator sets, as well as gas, steam or hydro electric turbines. Applications include prime power, cogeneration distributed generation and standby.

By incorporating advanced communication interfaces, **System 2000** products can operate in harmony with any site or building management system, providing maximum equipment utilization and total energy management.

All T.T.I. products are certified by OSHA's nationally recognized testing laboratory (NRTL), the Canadian Standards Association (CSA). T.T.I. systems and products meet or exceed applicable CSA, I.E.C. and U.L. standards and can be supplied to meet other appropriate standards. For offshore contracts or marinized applications, specific standards such as Lloyds, DNV or ABS can be applied to meet your project needs.

For 25 years T.T.I. has used internal quality programs to help exceed our customer needs for product quality, service and support. Our Q.A. programs have enabled us to supply equipment to the Department of National Defence and the Ministry of Transport certified to NATO standards, level AQAP-9 and AQAP-4, and to CSA Standard Z299.3. Today ISO 9000 Q.A. registration has become the standard for quality assurance program recognition around the world. T.T.I. is an ISO 9001 registered company. We consider our formal ISO 9001 registration to be recognition of our long established QA policies.

At T.T.I. we are specialists in generator electrical control. Our dedication and commitment to this highly specialized sector of the market has allowed us to develop **"System 2000"** and to pass on our experience and quality through a comprehensive product package.

THOMSON TECHNOLOGY INC. • 19214 - 94TH AVENUE, SURREY, B.C., CANADA V4N 4E3

TELEPHONE: (604) 888-0110 • FAX: (604) 888-3381 • E-MAIL: ttinfo@tti.bc.ca • www.tti.bc.ca

STANDARD MODELS

GCS 2000 • 100 - 6000 AMP SERIES

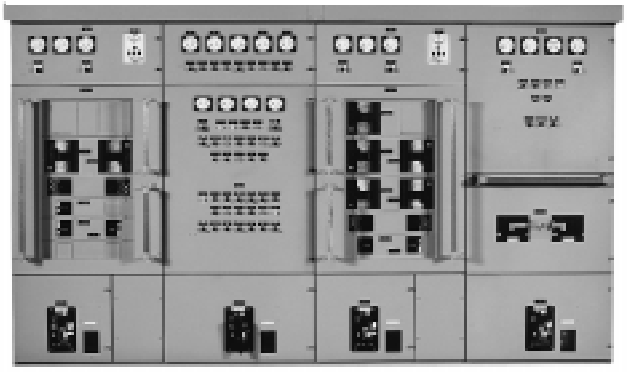
GCS 2200MV CG/PG-UPT

Automatic cogeneration, peak shaving and stand-by control system.

RATING: 4200KW, 4160V, 4 generators

OWNER: Windsor Utilities Commission

SITE: Windsor, Ontario



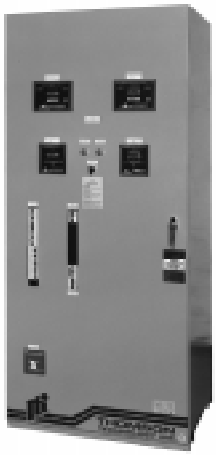
GCS 2200 M

Dual synchronizing marine switchgear.

RATING: 500KW, 480V, 2 generators and shore power

OWNER: BC Ferries Corporation

SITE: British Columbia



GCS 2100 PCS

Dual standby c/w TS 853-100 transfer switches, TSC 800 transfer switch controllers and MEC 20 engine generator controllers with communication interface module (CIM) and THS 2000 remote communication software.

RATING: 30, 60 and 100KW, 415V, Dual generators

OWNER: China Telecom

SITE: Multiple Microwave Repeater Stations

- Hunan Link
- Xi'an Chengdu Link
- Beijing / Wuhan / Guangzhou Link
- Shanghai / Wuhan Link
- Wuhan / Chongqing Link
- Chongqing / Chendu Link
- Guiyang / Nanning Link

STANDARD MODELS

GCS 2000 • 100 - 6000 AMP SERIES

GCS 2200

Prime power, auto synchronizing switchboard c/w MEC 100 engine controllers.

RATING: 3MW, 600V, 3 generators

OWNER: Gulf Oil Canada Ltd.

SITE: Jedney, Alberta

GCS 2200 PG-UPT®

Parallel Generation-Uninterruptible Power Transfer.

RATING: 500KW, 208/480V, 1 generator

OWNER: Madison Gas & Electric

SITE: Madison, Wisconsin

GCS 2200 PG-UPT/RMC

Parallel generation uninterrupted power transfer (PG-UPT®) c/w ECS 500 system controllers, data logging and LINK 500 remote monitoring software.

RATING: 1000KW, 600V, 2 generators

OWNER: Montreal Airport Authority

SITE: Dorval Airport Montreal, Quebec

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STANDARD MODELS

GCS 2000 • 100 - 6000 AMP SERIES

GCS 2100MV

4160V generator control switchgear c/w MEC 100 engine-generator controller.

RATING: 650KW, 4160V

OWNER: Children's Psychiatric Hospital

SITE: London, Ontario

GCS 2200CG

15 KV Cogeneration synchronizing, protection and distribution switchboard.

RATING: 4 MW, 12.4 KV

OWNER: Valley Medical Center

SITE: Renton, Washington, USA

SYSTEM 2000 PRODUCT DESCRIPTIONS

•GCS 2100	Single cell generator control system, designed for generator(s) operating as standby or prime power units for system voltages up to 600V.
•GCS 2100MV	Single cell generator control system, designed for generator(s) operating as standby or prime power units for system voltages up to 15KV.
•GCS 2200	Multiple cell generator control systems, designed for synchronized generators operating as standby or prime power units for system voltages up to 600V.
•GCS 2200MV	Multiple cell generator control systems, designed for synchronized generators operating as standby or prime power units for system voltages up to 15KV.

SYSTEM 2000 DESIGN OPTION EXAMPLES

•CG (Cogeneration)	Load displacement cogeneration contol system for gas fired reciprocating prime movers.
•PP (Peak Plus)	Utility intertie control system for automatic peak shaving operation.
•PG-UPT® (Parallel Generation Uninterruptible Power Transfer Distributed Generation)	Automatic synchronizing of generator sets to the utility supply for distributed generation application to allow for uninterrupted, soft power transfers during testing or utility supply re-transfer sequences.
•RMC (Remote Monitoring/Control)	Control, monitoring and data-logging system via MEC 20 and TSC 800 controllers, CIM (Communication Interface Module) and THS 2000 remote monitoring software.
•AS-R (Auto-synchronizing - Random Access)	Auto-synchronizing and load management by random access.
•AS-S (Auto-synchronizing - Sequential Access)	Auto-synchronizing and load management by sequential access.
•M (Marine)	Marinized switchgear to applicable standards, (Lloyds, DNV, ABS, Coastguard).
•PCS (Pulse Control System)	Remote control via pulsed input signals for Microwave repeater station applications.

Request additional information or specifications on any of the System 2000 products from your local T.T.I. office, agent or distributor. PG-UPT® is a registered trademark of Thomson Technology Inc.

NOTE: Specifications subject to change without notice.

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