

Overview

纲要

SmartGen fuel gas control system can monitor genset's operating parameters in real time, and solve the problem of the automatic switch between industrial power and genset power faultlessly.

SmartGen燃气控制系统实时监测燃气机组运行参数，完美解决了工业电源和发电自动切换的功能。

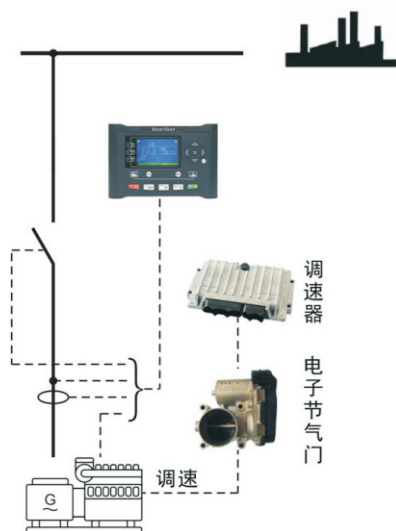
SmartGen fuel gas control system realizes the controlling of idling, high speed, normal shutdown, emergency shutdown, etc. It also has upper computer remote control, parameter storage, fault display, sound-light alarm, system protection, and other functions.

SmartGen燃气控制系统实现了燃气发电机组怠速、高速、正常停机、紧急停机等控制，具有上位机远程控制、参数存储、故障显示、声光报警和系统保护等功能。

Application---Normal Fuel Gas Genset Control

应用方案---常规型燃气机组控制

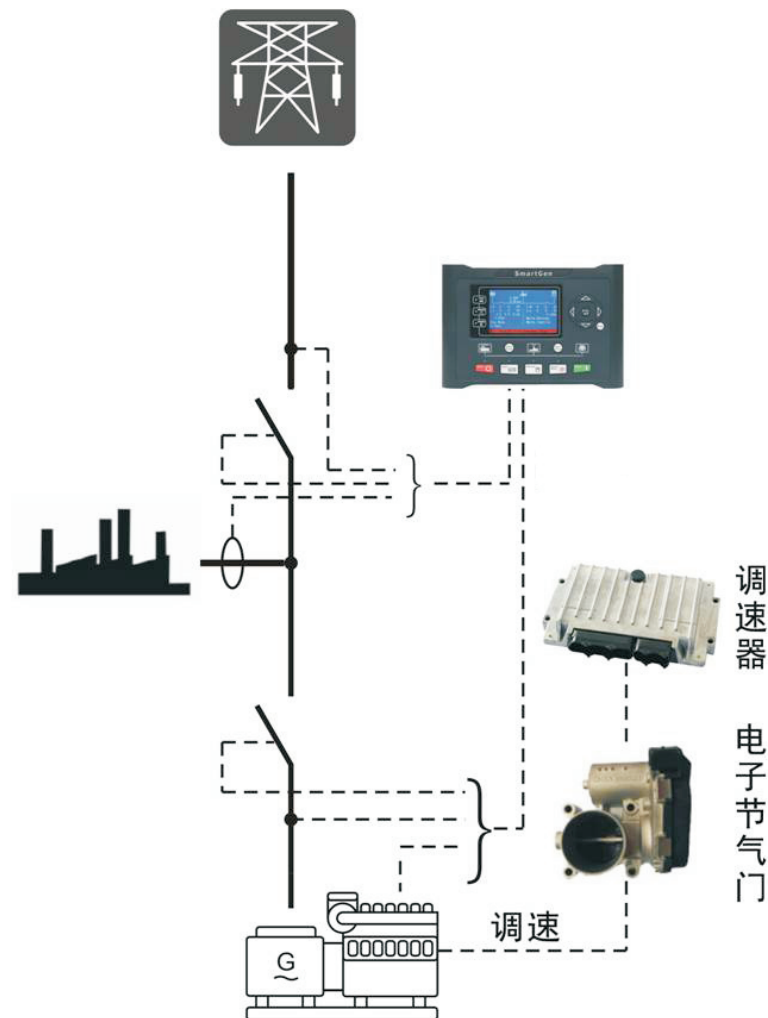
Self-starting/自启动方案 (HGM410、HGM6110U、HGM9310MPU、HGM9610)



Single genset automation:
genset automatic start/stop
can be controlled by remote
start signal.

单机自动化：可通过远端开机信
号控制发电机组自动开机与停机

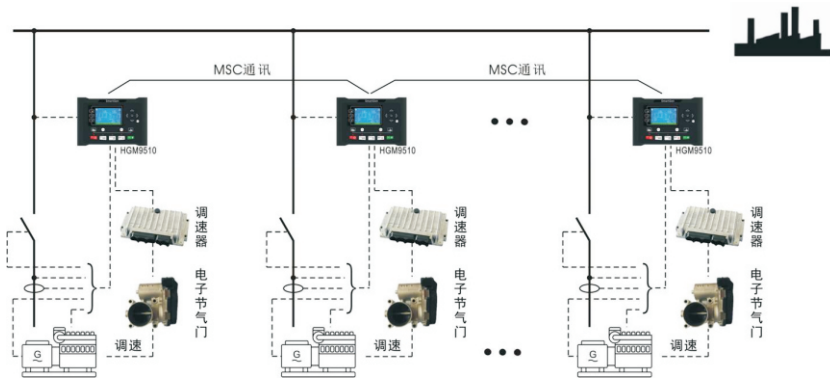
AMF Application/AMF应用方案 (HGM420、HGM6120U、HGM9320MPU、HGM9620)



AMF function: apply to single genset automation system(one mains and one genset)

AMF功能：适用于一市一机构成的单机自动化系统

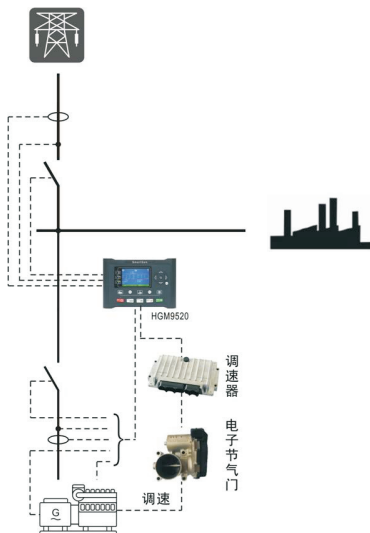
Genset in Parallel (HGM9510) 机组并联 (HGM9510)



Multi-parallel: help 32 gensets with same capacity/different capacity to realize automatic synchronization and load share.

机组并联：可满足多达32台同容量或不同容量的机组自动同步和负载均分

Single Genset Parallel in Grid (HGM9520) 单机并网 (HGM9520)



Single genset parallel in grid:
single genset parallel with mains
automatically/manually, and with
various parallel mode selection.

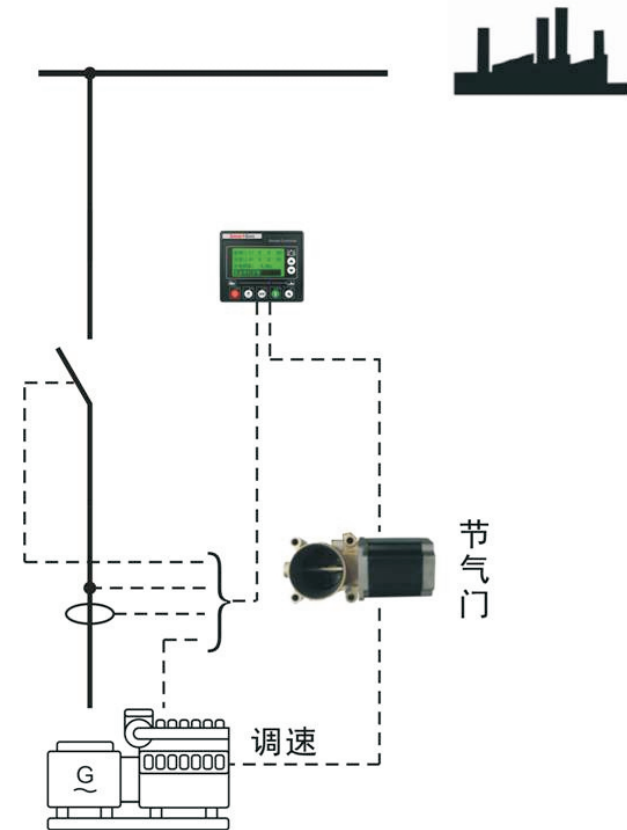
单机并网：单台发电机组与市电的手动/自动并联且有多种与市电并联运行的模式选择

Application---Professional Fuel Gas Genset Control

应用方案---专业型燃气机组控制

Application for Throttle Control (HSC940)

节气门控制应用方案 (HSC940)

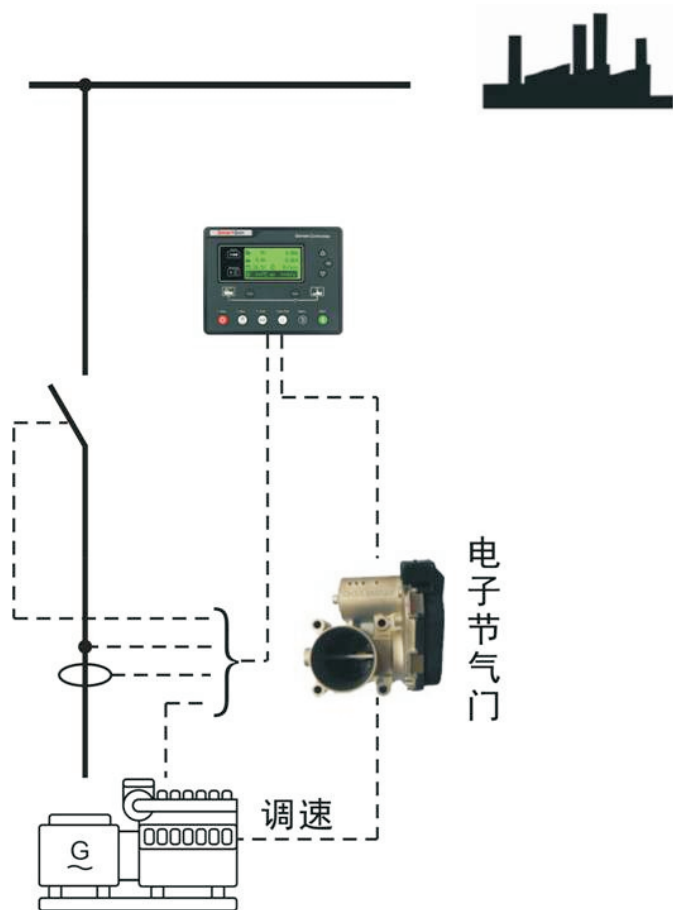


Single genset automation: automatic start/stop can be controlled by remote start signal, and speed adjustment can be realized by driving stepper motor to adjust throttle.

单机自动化：可通过远端开机信号控制发电机组自动开机与停机且通过驱动步进电机调整节气门开度，来进行速度调节。

Application for Electronic Throttle Control (HSC960)

电子节气门控制应用方案(HSC960)



Single genset automation: automatic start/stop can be controlled by remote start signal, and speed adjustment can be realized by driving DC motor to adjust throttle.

单机自动化：可通过远端开机信号控制发电机组自动开机与停机且通过驱动直流电机调整节气门开度，来进行速度调节。

Characteristics— Normal Fuel Gas Genset Control

产品特点---常规型燃气机组控制

HGM410 / HGM420



Characteristics:

1. Control and protection for engine and generator
2. Automatic start or mains fail self-starting function (AMF function)
3. Chinese, English, Spanish and Russian display
4. 4 digital inputs, 6 relay outputs and 4 analog inputs (2 public input ports)

特点:

1. 发动机和发电机控制与保护
2. 自动起动或市电异常自启动功能 (AMF功能)
3. 中文、英文、西班牙文和俄文多语言显示选择
4. 4个开关量输入, 6个继电器输出和4个模拟量输入 (其中2个与输入口公用)

Characteristics— Normal Fuel Gas Genset Control

产品特点---常规型燃气机组控制

HGM6100U Series

HGM6100U系列



Characteristics:

1. Control and protection for engine and generator
2. Automatic start or mains fail self-starting function(AMF function)
3. 5 digital inputs, 6 relay outputs and 3 analog
4. Remote control via Modbus RS485 (Only HGM6110UC and HGM6120UC have this function)

特点:

1. 发动机和发电机控制与保护
2. 自动启动或市电异常自启动功能（AMF功能）
3. 5个开关量输入/6个继电器输出/3个模拟量输入
4. 通过Modbus RS485实现远程监控（仅HGM6110UC和HGM6120UC有此功能）

HGM9300 Series

HGM9300系列



HGM9310MPU / 9310CAN

HGM9320MPU / 9320CAN

Characteristics:

1. Engine and generator protection
2. Automatic start or mains fail self-starting function(AMF function)
3. Apply to EFI(J1939) or non-EFI engine
4. Remote monitoring via Modbus RS485
5. 8 digital inputs/8 relay outputs/5 analog inputs
6. Scheduled start/stop function
7. SMS control
8. Real-time clock & event log
9. Neutral line current detection
10. PLC (programmable logic control) function
11. With total run A/B and total energy A/B

特点:

1. 发动机和发电机保护
2. 自动启动或市电异常自启动功能（AMF功能）
3. 适用于电喷（J1939）或非电喷发动机
4. 通过Modbus RS485实现远程监控
5. 8个开关量输入/8个继电器输出/5个模拟量输入
6. 调度功能---定时开关机
7. 短信控制
8. 实时时钟 & 历史记录
9. 零线电流检测
10. 具有PLC(可编程逻辑控制)功能
11. 具有累计运行A、B与累计电能A、B

HGM9600 Series

HGM9600系列



Characteristics:

1. Automatic start or mains fail self-starting function (AMF function)
2. Apply to EFI (J1939) or non-EFI engine
3. Engine and generator protection
4. USB Programming interface
5. Remote monitoring via Modbus RS485
6. 8 digital inputs/8 relay outputs/5 analog inputs
7. Scheduled start/stop function
8. SMS control
9. Real-time clock & event log
10. Neutral line current detection
11. With total run A/B and total energy A/B
12. Network port communication (Ethernet)
13. Micro SD card---record permanent preservation

特点:

1. 自动启动或市电异常自启动功能 (AMF功能)
2. 适用于电喷 (J1939) 或非电喷发动机
3. 发动机和发电机保护
4. USB编程接口
5. 通过Modbus RS485实现远程监控
6. 8个开关量输入/8个继电器输出/5个模拟量输入
7. 调度功能---定时开关机
8. 短信控制
9. 实时时钟 & 历史记录
10. 零线电流检测
11. 具有累计运行A、B与累计电能A、B
12. 网口端口通信 (ETHERNET)
13. Micro SD卡---历史记录永久保存

HGM9510



Characteristics:

1. Genset parallel with genset
2. Automatic synchronization and load power share
3. Power management mode
4. Control and protection for genset and bus
5. GOV and AVR automatic adjustment
6. J1939 engine communication
7. USB programming interface
8. Remote monitoring via Modbus RS485
9. PLC (programmable logic control)
10. Uninterrupted power and cyclic starting up, it is fit to use in the field
11. Start/stop reserve set based on the data of automatic load detection
12. Controlling 32 gensets in parallel automatically in 1 minute
13. Single genset parallel in grid---genset is constant power output

特点:

1. 机组与机组并联
2. 自动同步与负载功率均分
3. 可设置功率管理模式
4. 发电机组和母排控制保护
5. GOV和AVR自动调节
6. J1939发动机通讯
7. USB编程接口
8. 通过Modbus RS485实现远程监控
9. 可逻辑编程 (PLC)
10. 不断电循环开机, 适合野外作业
11. 自动检测负载大小来开启和关闭备用机组
12. 可控制32台机组1分钟全部自动并联
13. 单机并网模式---发电机组恒功率输出

HGM9520



Characteristics:

- 1.Single genset parallel with mains
- 2.Automatic synchronization and load power share
- 3.Control and protection for genset and mains
- 4.GOV and AVR automatic adjustment
- 5.J1939 engine communication
- 6.USB programming interface
- 7.Remote monitoring via Modbus RS485
- 8.PLC(programmable logic control)
- 9.Genset constant power output
- 10.Mains controlling mode
- 11.Load takeover mode
- 12.AMF controlling mode
- 13.Islanding Mode

特点:

- 1.单台机组与市电并联
- 2.自动同步与负载功率分配
- 3.发电机组与市电控制保护
- 4.GOV和AVR自动调节
- 5.J1939发动机通讯
- 6.USB编程接口
- 7.通过Modbus RS485实现远程监控
- 8.可逻辑编程 (PLC)
- 9.发电机组恒功率输出
- 10.市电控制模式选择
- 11.负载接收模式选择
- 12.AMF控制模式选择
- 13.孤岛模式选择

Characteristic---Professional Fuel Gas Genset Control

产品特点---专业型燃气机组控制

HSC940



- 1.Control and protection for fuel gas engine and generator
- 2.132*64 LCD display, four languages(Chinese, English, Spanish and Russian) display
- 3.Speed adjustment function(via driving stepper motor) (2-phase hybrid stepper motor, drive current $\leq 1A$)
- 4.5 digital inputs and 6 relay outputs
- 5.SMS control function

- 1.燃气发动机和发电机的控制与保护
- 2.液晶显示LCD为132×64，四种语言(简体中文、英文、西班牙文、俄文)显示
- 3.具有速度调节功能(通过驱动步进电机)(2相混合式步进电机，驱动电流 $\leq 1A$)
- 4.5个开关量输入和6个继电器输出口
- 5.短信控制功能

HSC960



- 1.Control and protection for fuel gas engine and generator
- 2.Used silicone panel and keys that having strong ability to adapt to the environment and temperature
- 3.Speed adjustment function(via driving DC motor,drive current $\leq 6A$)
- 4.5 digital inputs, 6 repay outputs, and 5 analog inputs
- 5.RS485 communication interface
- 6.Maintenance function

- 1.燃气发动机和发电机的控制与保护
- 2.采用硅胶面板及按键,适应环境高低温能力强
- 3.具有速度调节功能(通过驱动直流电机,驱动电流 $\leq 6A$)
- 4.5个开关量输入、6个继电器输出口和5个模拟量输入
- 5.RS485通信接口
- 6.保养功能