d-SMART Un-classed Marine Information Sheet

Local Control Panel (LCP):

- The un-classed control system is housed in a RAL 7035 IP65 enclosure with hinged door or lid in RAL7035. Mounting is either (horizontal) alternator top mounting (via rubber A/V mounts) or remote (vertical) wall mounting to suit customer specific requirements.

- The standard d-SMART un-classed control system is managed by a ComAp microprocessor controller c/w backlit LCD operator interface and control pushbuttons. The controller handles operational, alarms and shutdowns for the generator set. Other microprocessor brands available on request.

- From the local control panel the following functions are available on the microprocessor controller:
  - Start generator.
  - Stop generator.
  - Mode select.
  - Horn/fault reset.
  - Full interrogation of the controller menus on the LCD interface.

- Additionally to the microprocessor controller the control panel facia includes the following:
  - Emergency stop pushbutton with shroud.
  - 80dBa @ 0.1m audible alarm sounder.

Shutdown Events:

- Digital input for low lubricating oil pressure *(not on emergency sets).*
- Digital input for high coolant temperature *(not on emergency sets).*
- Digital input for emergency stop.
- Mag Pickup Input for overspeed & underspeed shutdown.
- Any shutdown event will activate the common shutdown telemetry Volt.Free.Contacts.

Alarms:

- Digital input for low lubricating oil pressure *(on emergency sets only).*
- Digital input for high coolant temperature *(on emergency sets only).*
- Battery volts out of limits.
- Start failure.
- Stop failure.
- Pick-up failure.
- Analogue input monitoring for low lubricating oil pressure.
- Analogue input monitoring for high coolant temperature.
- Any alarm event will activate the common alarm telemetry Volt.Free.Contacts.

Analogue Data Displayed on Controller LCD:

- Engine R.P.M. viewable via LCD graphic gauge with value text.
- All configured hardwired analogue inputs viewable via bar graph indicators with value text.
- Analogue information from the engine ECM/EMS (if available depending on engine model) viewable via bar graph indicators with value text.
- Battery volts viewable via bar graph indicators with value text.

Statistics Displayed On Controller LCD:

- Hours Run.
- Number of successful starts.

Miscellaneous Information Displayed on Controller LCD:

- Digital I/O point's status (input/output channel on/off status).
- Alarm Lists.
- Engine Basic Settings / Alarm Parameters.

Telemetry Signals (Volt Free Changeover Contacts):

- Common Shutdown.
- Common Alarm.
- Remote Klaxon
- Engine Running.
- Control Voltage Healthy.

Engine ECM Canbus (J1939):

- Canbus connection (J1939) for communication to engine ECM if fitted on engine.

Remote Operation & Monitoring:

- Digital input for remote start (stop), Remote signal should be a latching Nomally Open contact, close to start.

- Digital input for remote emergency stop, signal should be held Nomally Closed contact, healthy, open to stop volt free contact.

Options:

- Optional Modbus connection via RS232 (max cable length 10m) for remote system monitoring of the *d-SMART* control system. Note: The range can be extended to 1000m cable length by the use of an optional combined RS232/RS485 port card. G&M will provide Modbus registers from the final "as tested" program, The Modbus manual section and also the contact details of the controller manufacturer technical support line to assist in the Modbus integration with clients monitoring system.

- **Optional** RS232/RS485 port card – should the Modbus option be selected then this port card will be required.

- **Optional** Remote Mimic Panel connection via RS232 (max 10m) for remote control and system monitoring of the *d-SMART* control system. Note: The range can be extended to 1000m by the use of an optional combined RS232/RS485 port card.

- **Optional** Remote annunciator with 15 lamps

- **Optional** 3 pole MCCB fitted in an IP54 enclosure c/w rotary handle, auxiliary contacts and secondary screening.

- **Optional** - The control panel painted to match the engine colour.

- **Optional** Low coolant sensor and associated wiring for radiator cooled sets

(Note1: The maximum number of interface ports is one RS232 port and one RS485 port).
(Note2: Spare I/O is not wired from the controller to terminals unless requested at the time of order).