

Remote Annunciator



The RDP-110 is a powerful remote display to match Blue Star Power Systems, Inc's DGC-2020 control panel. It may be powered from the engine starting batteries at 12 or 24VDC. The RDP-110 uses RS-485 communications between itself and the DGC to reduce the number of wires required to activate all the alarms to four. The RS-485 communications can be used on remote displays up to 4000 feet away from the DGC. The RDP-110 has 18 LEDs to indicate Alarms, Pre-Alarms and operating conditions of the emergency standby generator system. It has an audible alarm horn rated at 80db (from a distance of two feet). The RDP-110 also comes complete with a conduit box for easy installation. The RDP-110 is available in two mounting configurations: surface and semi-flush mount. This panel complies with the requirements of NFPA 110.



Standard Features

- ▶ Annunciation of 16 alarms and pre-alarms as detected by the DGC
- ▶ Annunciation of 2 status indicators
- ▶ Audible alarm horn
- ▶ Lamp Test and Alarm Silence switches
- ▶ Power supply inputs for 12 or 24VDC
- ▶ RS-485 communications
- ▶ Two mounting configurations
- ▶ Conduit box included
- ▶ Designed for use in harsh environments
- ▶ UL recognized & CSA certified

Specifications

Power Input

- ▶ DC Voltage: 8-32VDC (2W max.)

Communications Port

- ▶ RS-485 interface with DGC

Isolation

- ▶ 1800VDC for one minute between chassis ground and AC voltage input. 700VDC for one minute between any of the following groups:
 - Chassis ground
 - Battery and RS-485 terminals
 - AC voltage inputs

Operating Range

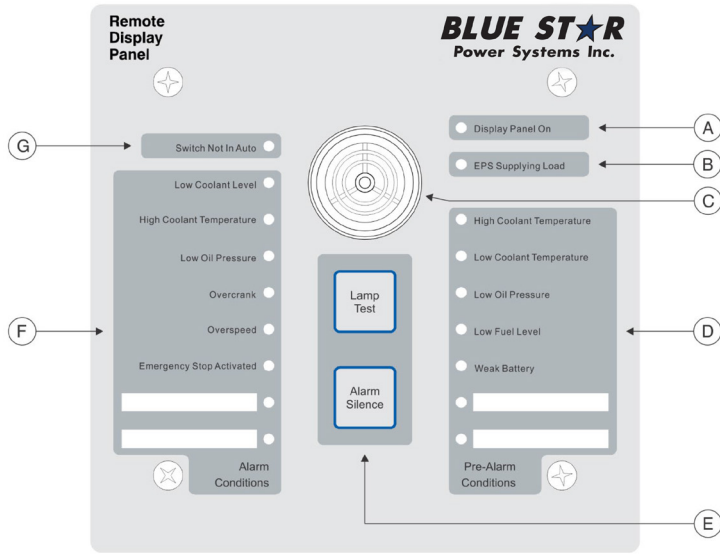
- ▶ Up to 4000 ft. from the DGC
- ▶ Recommended Wire - Belden 9463

RFI (Radio Frequency Interference)

- ▶ Type tested using a 5W handheld transceiver operating at random frequencies centered around 144MHz and 440MHz with the antenna located within six inches of the device in both vertical and horizontal planes

Environmental and Physical

- ▶ Operating temperature: -40°F to +158°F
- ▶ Storage temperature: -40°F to +185°F
- ▶ Salt Fog: Qualified to ASTM 117B-1989
- ▶ Vibration: The device withstands 2g in each of three mutually perpendicular planes, swept over the range of 10 - 500Hz for a total of six sweeps, 15 minutes each sweep, without structural damage or degradation of performance
- ▶ Shock: 15g
- ▶ Weight: 6.5 pounds (3 kilograms)



Front Panel LED Indicators

- (A) Green Display Panel On LED lights when control power is applied to the RDP-110C.
- (B) Green EPS Supplying Load LED lights when the genset is supplying more than 2% of rated load.
- (C) The horn sounds when an alarm or pre-alarm exists or the connected DGC is not operating in Auto mode. The horn is silenced by pressing the Alarm Silence pushbutton (locator E).

- (D) The amber Pre-Alarm LEDs light when the corresponding pre-alarm setting is exceeded. Conditions annunciated by the pre-alarm LEDs include:
 - ▶ High coolant temperature,
 - ▶ Low coolant temperature,
 - ▶ Low oil pressure,
 - ▶ Low fuel level,
 - ▶ Weak battery,
 - ▶ Battery overvoltage, and
 - ▶ Battery charger failure.

When the RDP-110C is used with a DGC-2020, the bottom two LEDs (Battery Overvoltage and Battery Charger Failure) can be reprogrammed to indicate other pre-alarm conditions. See Programmable Alarm and Pre-Alarm Configuration for information about configuring the two programmable pre-alarm indicators.

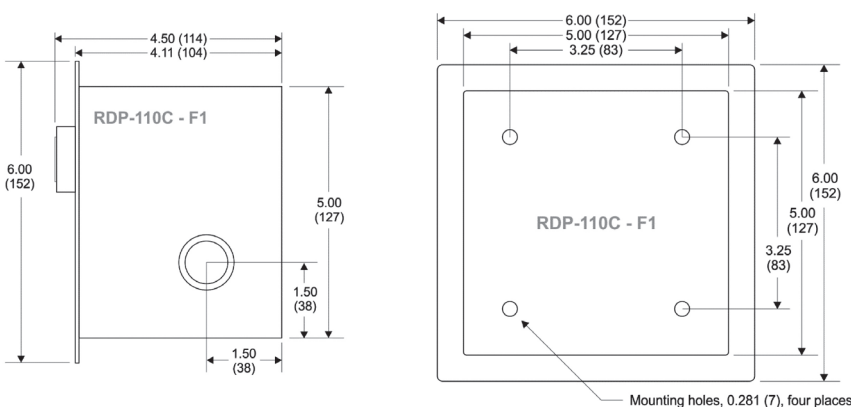
- (E) RDP-110C controls consist of two pushbuttons.
 - ▶ The Alarm Silence pushbutton silences the horn (locator C).
 - ▶ The Lamp Test pushbutton can be used to verify operation of all RDP-110C LEDs and the horn.

- (F) The red Alarm LEDs light when the corresponding alarm settings are exceeded. Conditions annunciated by the alarm LEDs include:
 - ▶ Low coolant level,
 - ▶ High coolant temperature,
 - ▶ Overcrank,
 - ▶ Overspeed,
 - ▶ Emergency stop activated,
 - ▶ Fuel leak/sender failure, and
 - ▶ Sender failure.

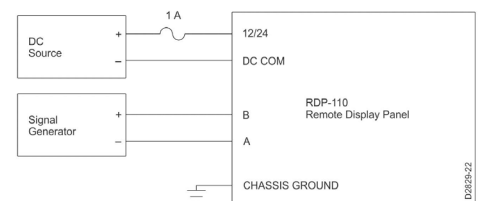
When the RDP-110C is used with a DGC-2020, DGC-2020ES, or DGC-2020HD, the bottom two LEDs (Fuel Leak/Sender Failure and Sender Failure) can be reprogrammed to indicate other alarm conditions. See Programmable Alarm and Pre-Alarm Configuration for information about configuring the two programmable alarm indicators.

- (G) Red Switch Not in Auto LED lights when the DGC is not operating in Auto mode.

Outline Diagram: Rear and Side Views



Wiring Diagram



Please consult Blue Star electrical drawings for verification.