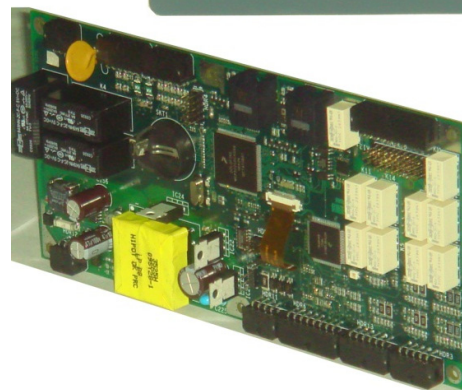


Features

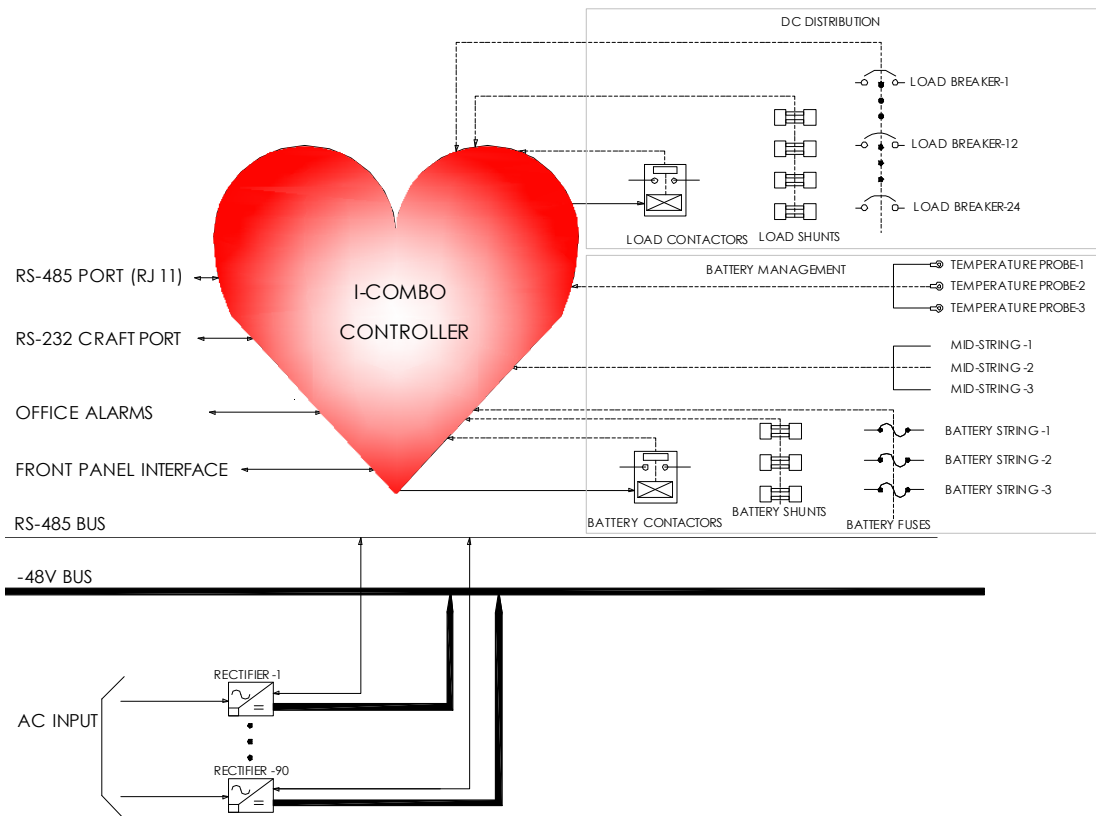
- Supports up to 24 rectifier modules
- Integrated LCD display and Keypad
- Door or panel mountable
- Up to 6 Binary inputs (PF contacts)
- 6 to 10 office alarm relays – 3 for alarm severity , 7 for various alarms (all user assignable)
- Advanced Battery monitoring and control functions
 - ✓ Slope thermal compensation mode voltage control
 - ✓ Recharge current limit control
 - ✓ Multiple contactor control
 - ✓ Up to 3 Mid-string voltage monitoring (optional)
 - ✓ Up to 3 Thermal probe monitoring
 - ✓ Battery discharge testing and reserve time prediction
- Remote monitoring capability – via RS-485 MODBUS protocol (optional)
- Local monitoring capability – via RS-232 Craft Port
- DC Distribution monitoring
 - ✓ Monitoring of 24 load distribution MCBs/Fuses
 - ✓ Monitoring of 4 load shunts
 - ✓ Monitoring of 3 battery Fuses/MCBs
 - ✓ Monitor and control of 6 Load contactors (common disconnect level)
 - ✓ Monitor and control of 3 battery contactors (common disconnect level)
- Display of AC voltage and current of rectifier
- Alarm Test Feature
- Local viewing and configuration of system parameters, alarm thresholds, and user-definable alarm inputs and relays
- Energy efficiency algorithm/Automatic Rectifier ON-OFF Management at low loads
- Emergency Power Off (EPO) feature for emergency battery disconnect
- Secure access – 3 access security levels
- Factory Defaults settings
- System Statistics – Time / Date stamped
- System History – Time / Date stamped, up to 500 events
- Digital communications to all system devices
- EasyView option



Overview

The I-Combo controller provides system monitoring and control features for EP power systems. These controllers monitor and control rectifier modules via a multi-drop RS485 digital communications bus. System status, parameters, settings, and alarm thresholds can be viewed and configured from the controller's front panel display. Assignment and configuration of alarm inputs and output relays can be performed from a laptop computer connected to a local RS-232

The Heart of a Sophisticated Power System



Automated System Setup

For automated installation and setup, the controller and rectifiers communicate via a digital interface. A newly added power module automatically identifies itself to the controller by transmitting its type and serial number, and the controller then sets the output voltage to the pre-established value. The digital interface automates the installation and setup process and eliminates the need to use potentiometers to separately set the output voltage or balance current sharing. On initial power up the controller senses the primary voltage (Rectifier) and automatically selects the appropriate set of configuration values for that voltage. Lineage Power has determined a set of default configuration parameters, but customized default values can be factory programmed per individual customer requirements.

Mounting Options

A stand – alone board version for door or panel mounting along with the integrated front panel

I-Combo
Digital Battery plant Controller

Specifications

Input Voltage Ranges (power)	-48 volts: from -36V _{dc} to -60V _{dc}
Input Power	10.0 watts maximum
Input Power Connections	(HDR12) 6-pin connector
Front Panel LCD user interface	128X 64 dot LCD; Severity sensitive backlit LCD; Three status LEDs; (BD, AC, DC)
System Configuration Methods	Front panel LCD display and menu keys; (P5) DB9 for RS232 asynchronous port – T1.317 or EasyView or Modem; (P2) RJ11 for RS485 port - Rectifier communication
External Interface	(P4) RJ11 for RS485 port - MODBUS (P1) -Future option
Maximum Number Of Power Units	24 rectifiers (90 EP rectifiers, future options)
Low-Voltage Disconnects	Manage up to 3 Battery contactors (common disconnect) up to 6 load contactors (common disconnect)
Temperature Monitoring	Up to 3 x10K temperature probes

System Input/Output

Alarm and Control Inputs	(HDR7) 10-pin connector for 6 alarm inputs;
Alarm Contact Outputs	(HDR10) 6 /10 User configurable Form-A/Form-B (Selectable) Outputs; (J30) used to configure the output for Form-A/Form-B Wire size: 28-16 AWG stranded or solid
Alarm Contact Ratings	60 VDC, 0.5A
Voltage Measurement Accuracy	± 0.5% of full scale
Resolution	0.1V
Plant Current Measurement Accuracy	± 0.5% of full scale
Resolution	1A
Temperature Measurement Accuracy	±1°C
Resolution	0.1°C

Environmental

Operating Temperature Range	-5 to +75°C (-5 to 167°F)
Storage Temperature Range	-40 to 85°C (-40 to 185°F)
Altitude	-50 to 4,000 meters* ^{Note 1}
Humidity	10% to 95% non-condensing
Audible Noise	< 60 dBA
Earthquake Rating	Zone 4, upper floors (GR-63-CORE section 4.4.1)

Applicable Standards – System Level

Radiated and Conducted Emissions	FCC Part 15, Class B EN55022 (CISPR22), Class A
Electromagnetic Immunity	Telcordia GR-1089-CORE
Electrostatic Discharge	EN61000-4-2 Level 3
RF Immunity	IEC61000-4-3 Level 3, 10 V/m
Conducted Immunity	IEC 61000-4-6 Level 3, 10V
Voltage Dips, Interruptions, and Variations	IEC 61000-4-11, EN55024 (CISPR24)
RoHS Compliance	RoHS

*Note 1: For altitudes above 1500meters, de-rate the temperature by 0.656 °C per 100 meters.

Ordering information

Please contact your Lineage Powers' Sales Representative for pricing, lead-time/availability of the listed model nos. and incase of any customized requirement.

Comcode	Available Model	Remarks
CC109152360	I-Combo controller with full configuration	1 No.
CC109163408	I-Combo controller with Reduced version (6 Digital Output)	1 No.
CC109162640	Display Board for CC109163408	

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