Lineage Pluto Lite Controller

Pluto Lite Controller is our Microprocessor based controller designed to meet the needs of the most advanced power systems. Building on the Pluto platform, the Pluto Lite delivers state-of-the art performance by combining sophisticated control, monitoring, and remote network access with a single integrated unit. The controller has been designed to simplify plant administrative and surveillance routines as well as reduce operating, provisioning, and personnel expenses.

Configuration of the Pluto Lite can be performed via menu based front panel display, a local terminal or remote modem RS232. In addition to its standard integrated monitoring capabilities, this controller offers extensive external monitoring, distribution control, and peripheral monitoring designed for various inputs and transducers.

Applications

- EP48015 Power System
- SCADA RTU and FRTU DC Power System
- 3G/4G LTE Power application
- MICROCELL Power System

Key Features

Remote & local Access and Features

- RS232 Craft port for local or remote Via Modem connections
- T1.317 command language interface
- Future Options- Ethernet Port for Remote Monitoring **(Optional)**
- Future Option- RS485 port for MODBUS **(Optional)**
- Multiple password-protected security levels: User, Super-User, Administrator for all access

Standard System Features

- Monitoring and control of up to 3 RS485 serial connected serial switch mode rectifiers (Future 12 Nos)
- Plug & Play Design, Hot swappable, Connectors at rear side
- AC Input Low/High Voltage Cut-OFF/ Disconnect control feature
- Standard and custom User Defined system alarms
  - Alarm cut-off
  - Alarm test
  - Multiple-level alarm severity: Critical, Major, Minor, Warning, and record-only
- Built-in Buzzer for Audio Alarm feature
- Standard rectifier management features
  - Automatic rectifier restart
  - Adaptive Rectifier Management (ARM)/Energy Efficiency
  - Remote rectifier (on/off) control
  - Automatic rectifier sequence control
  - N + X redundancy check
- Alarm Input interface up to 4Nos. - Auxiliary inputs **(Optional)**
- Local viewing and configuration of system parameters, alarm thresholds, and user-definable alarm inputs and relays
- Integrated LCD display with tri colour backlit LED and Keypad
- 2 built-in Status LEDs
- Advanced Battery monitoring and control functions
- Slope thermal compensation mode voltage control
- Recharge current limit control
- Up to 1 Thermal probe monitoring for battery
- Battery discharge testing and reserve time prediction
- DC Distribution monitoring
  - Monitoring of up to 1 Shunts (Battery shunts)
  - Monitoring of up to 1 battery Fuses/MCBs **(Optional)**
  - Monitor and control up to 1 contactors (Configurable LVBD or LVLD)
  - Monitoring of 10 load distribution MCBs/Fuses **(Optional)**
- Display of parameters like AC voltage, DC Bus Voltage, Plant Current, Load Current, Battery current, Battery temperature etc...
- Alarm Test Feature
- Factory Defaults settings
- System Statistics – Time / Date stamped
- Alarm History – Time / Date stamped, up to 500 events
- Combination of LCD& LEDs for Visual Alarm
- Alarm Indication for Local Monitoring as per MTS
- Alarm Output up to 6 office alarms relays (60VDC @.5A)
- Provision for extension of 3 office alarms – 2 sets configurable (Local and Remote)
  - Default Alarms: AC Fail, Low Voltage, Rectifier Fail

Specifications –Pluggable Version	
Input Voltage Ranges (power)	-48 volts: from -36Vdc to -60Vdc (48V Version) +24 Volts for 21V to 30Vdc (24V Version)
Input Power	5 watts (Power increases depending up on additional circuitry)
Input Power Connections	(HDR3) 7-pin connector on the Controller Backplane PCB
Front Panel LCD user interface	128X 64 dot LCD; Severity sensitive backlit LCD;
	Two status LEDs; (AC, DC)
System Configuration Methods	Front panel LCD display and menu keys; (P1) DB9 for RS232 asynchronous port on the Controller Backplane PCB– T1.317 or EasyView or Modem
Internal Interface	(J1) 10 Pin Connector – LED and Key pad operation on the Controller Main PCB (HDR1) 12 Pin Connector – Display Connection on the Controller Main PCB (HDR2) 4 Pin Connector for RS485 port on the Controller Backplane PCB - Rectifier communication (HDR4) 10 Pin Connector – Internal Programming (P2 & HDR1) 48Pin Connector – Main controller PCB to Back plane PCB Mating connector – Signal Interface
External Interface (Future Options)	(P3) RJ11 for RS485 port on the Controller Backplane PCB - MODBUS - **Optional** (P2) RJ 45 for Integrated 10/100Base-T Ethernet port on the Controller Backplane PCB -**Optional** (J1) Mini USB Port on the Controller Display PCB - **Optional**
Maximum Number Of Power Units /Rectifiers	3Nos (12 Nos future Options)
AC Input Disconnect (Low & High)	PIN1 & PIN2- SNAP on Type on the Controller Backplane PCB for system AC input Disconnect due to High/Low Voltage
Low-Voltage Disconnects	Manages 1 contactors (load/Battery) PIN3-48V Coil for External DC Contactor PIN4 - 48V Contacts for External DC Contactor Drive PIN5-DC Bus –Ve PIN6-24V Contacts- **Optional**
Voltage, Current & Temperature Monitoring	(HDR4) 4 Pin Connector – AC Voltage Measurement & AC Current (Optional) on Controller Backplane PCB (HDR3) – 7 Pin Connector - DC bus Voltage, Battery Voltage, 1 x10K temperature probes for battery, Load Shunt **(Optional)** on Controller Backplane PCB (HDR5) - 3 Pin connector- MCB Fail Sensing input - **Optional**
Alarm and Control Inputs (Future Use)	(HDR6) 12-pin connector for 4 alarm inputs with Common Isolated Ground - **Optional**
Alarm Contact Outputs	(HDR7) 12 Pin Connector - 6 (3+3) User configurable Outputs; Wire size: 28 AWG stranded or solid (J2) 18 Pin Connector – Jumper setting for Alarm NO/NC Selection
Alarm Contact Ratings	60 VDC, 0.5A
Voltage Measurement Accuracy	±1% for DC,
Resolution	0.1Vdc
Plant Current Measurement Accuracy	±1% of full scale
Resolution	0.1A dc
Temperature Measurement Accuracy	±2°C
Resolution	0.1°C
Environmental	
Operating Temperature Range	-25 to +65°C (-5 to 149°F)
Storage Temperature Range	-40 to 85°C (-40 to 185°F)
Altitude	-50 to 3,000 meters*Note 1
Humidity	10% to 95% non-condensing
Audible Noise	--
Dimensions	1U,

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

Note: As a result of continuous product improvement, all specifications are subject to change without prior notice. All performance parameters are valid at Nominal input (230Vac) and nominal output (48Vdc) conditions unless otherwise specified.

Applicable Standards Reference Only (System level)	
EMI	As per CISPR-22
EMC	IEC 61000-4-5, Level 1 (Surge immunity limits)
	IEC 61000-4-6, Level 3 (RF Conducted susceptibility immunity limits)
	IEC 61000-4-3, Level 3 (Radiated Electromagnetic Field immunity limits)
	IEC 61000-4-4, Level 4 (EFT/ Burst immunity limits)
	IEC 61000-4-2, Level 4 (ESD Immunity limits)
Environment	RoHS compliant

Ordering Information		
Product	Description	Comcode
Pluto Lite Controller – Pluggable	Pluto Lite Controller Main board	150023605+150026629
	Controller Back Plane – 48V Version	150025012

Country of Sale	
South Asia	India, Sri Lanka
SE Asia	Indonesia, Malaysia, Vietnam, Laos,
Africa	Nigeria, Kenya, Tanzania, Ghana
NA	-
CALA	-
European	-

Contact Us

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