COST EFFECTIVE MODERN TECHNOLOGY

WEB BASED D-100
The D-100 is the lowest cost genset controller ready for internet monitoring.

FEATURES
- Diesel and gas genset support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- 4 configurable digital inputs
- 5 configurable digital outputs
- 3 configurable analog inputs
- CANBUS-J1939
- 3 configurable service alarms
- Dual mutual standby with equal aging of gensets
- Manual “speed fine adjust” on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel consumption counter
- Modem diagnostics display
- Configurable from USB & GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring
- Mobile genset support
- Automatic GSM geo-location
- Easy USB firmware upgrade
- IP65 rating with optional gasket

COMMUNICATION
- 4-band GPRS modem (optional)
- USB Device
- J1939-CANBUS (optional)
- Geo-locating through GSM
- Internet Central Monitoring
- SMS message sending
- E-mail sending
- Free PC software: Rainbow Plus
- Modbus RTU

FUNCTIONALITIES
- AMF unit
- ATS unit
- Remote start controller
- Manual start controller
- Engine controller

MEASUREMENTS
- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVAR, pf
- Engine speed
- Battery voltage

TOPOLOGIES
- 3 ph 4 w, star & delta
- 3 ph 3 w, 2 CTs
- 2 ph 3 w
- 1 phase 2 wires
**Technical Specifications**

- **Alternator voltage:** 0 to 300 V-AC (Ph-N)
- **Alternator frequency:** 0-100 Hz.
- **Mains voltage:** 0 to 300 V-AC (Ph-N)
- **Mains frequency:** 0-100 Hz.
- **Topology:** 1-2-3 phases, with or without neutral
- **DC Supply Range:** 8.0 to 36.0 V-DC.
- **V-A-cos Accuracy:** 0.5% + 1 digit
- **kW-kVA-kVAr Accuracy:** 1.0% + 1 digit
- **Current consumption:** 300 mA-DC max @ 12V-DC
- **Current inputs:** from current transformers. .../5A.
- **Digital inputs:** input voltage 0 to 36 V-DC.
- **Analog input range:** 0-5000 ohms.
- **DC Outputs:** Protected mosfet semiconductor outputs, rated 1Amp@28V-DC
- **Cranking dropouts:** survives 0V for 100ms.
- **Charge Alternator Excitation:** 2W.
- **Display Screen:** 2.9", 128x64 pixels
- **USB Device:** USB 2.0 Full speed

- **Operating temperature:** -20°C to 70°C (-4 to +158 °F)
- **Storage temperature:** -40°C to 80°C (-40 to +176°F)
- **Maximum humidity:** 95% non-condensing.
- **IP Protection:** IP65 from front panel, IP30 from the rear (with gasket)
- **Dimensions:** 133 x 107 x 46mm (WxHxD)
- **Panel Cut-out Dimensions:** 117 x 87 mm minimum
- **Weight:** 250 g (approx.)
- **Case Material:** High Temperature, non-flammable ABS/PC
- **Installation:** Flat surface mounting on a Type 1 enclosure. Rear retaining plastic brackets.

**EU Directives Conformity**
- 2006/95/EC (low voltage)
- 2004/108/EC (electro-magnetic compatibility)

**Norms of reference:**
- EN 61010 (safety requirements)
- EN 61326 (EMC requirements)
### RAINBOW PLUS PROGRAM

**Scada Parameter Adjustment**

#### RAINBOW SCADA CENTRAL MONITORING

**Fleet Display on Map, online monitoring**

**Smartphone Support**

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**Real time monitoring**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Voltage</td>
<td>113.30 Vdc</td>
</tr>
<tr>
<td>Engine RPM</td>
<td>1500 Rpm</td>
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<tr>
<td>Oil Pressure</td>
<td>N/A Bar</td>
</tr>
<tr>
<td>Coolant Temp</td>
<td>N/A °C</td>
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<tr>
<td>Oil Temp</td>
<td>135.7 °F</td>
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<tr>
<td>Fuel Level</td>
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<td>Engine Run Hours</td>
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<td>Total kWh</td>
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<td>Total kWh (Hour)</td>
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<td>Mains S Total</td>
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<tr>
<td>Mains P Total</td>
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<tr>
<td>Mains P Total (Hour)</td>
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</tr>
<tr>
<td>Mains Q Total (Hour)</td>
<td>0.0 kWh</td>
</tr>
</tbody>
</table>

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TYPICAL CONNECTIONS

ALTERNATOR

L1 L2 L3 N

MAIN

L1 L2 L3 N

LOAD

L1 L2 L3 N

FUSE FUSE FUSE

G-C M-C

GENSET

SIM CARD

GSM ANT.

GENSET

MAIN

L1 L2 L3 N

FUSE FUSE FUSE

Battery Negative must be grounded

*1 Connect to engine body, close to the senders.

*2 Ground from one end only.

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