TECHNOLOGY IS NOW FOR EVERYONE

WEB BASED

D-500

The D-500 is an advanced genset controller capable of every possible communication and functionality

FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot parameters front panel
- Battery charge run enabled
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- Synchroscope & check synch
- Allows closed transfers
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- Inputs expandable to 40
- 8 configurable digital outputs
- Outputs expandable to 40
- 4 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- 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
- Fuel filling & fuel theft alarms
- Battery back-up real time clock
- Idle speed control
- All editable
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem & ethernet diagnostics
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring ethernet & GPRS
- Mobile genset support
- Automatic GSM geo-location
- Voltage unbalance protection
- GPS connectivity (USB&RS232)
- Dynamic DNS support
- Easy USB firmware upgrade

COMMUNICATIONS

- *Ethernet (10/100Mb)*
- *4-band GPRS modem (optional)*
- *USB Host & USB Device*
- *RS-485 (2400-115200baud)*
- *RS-232 (2400-115200baud)*
- *Micro SD card slot*
- *J1939-CANBUS*
- *Geo-locating through GSM*
- *GPS support (USB & RS-232)*
- *Embedded web server*
- *Web monitoring & programming*
- *Internet Central Monitoring*
- *SMS message sending*
- *E-mail sending*
- *Free PC software: Rainbow Plus*
- *Modbus RTU & Modbus TCP/IP*
- *SNMP (with TRAP messages)*
- *SNTP*

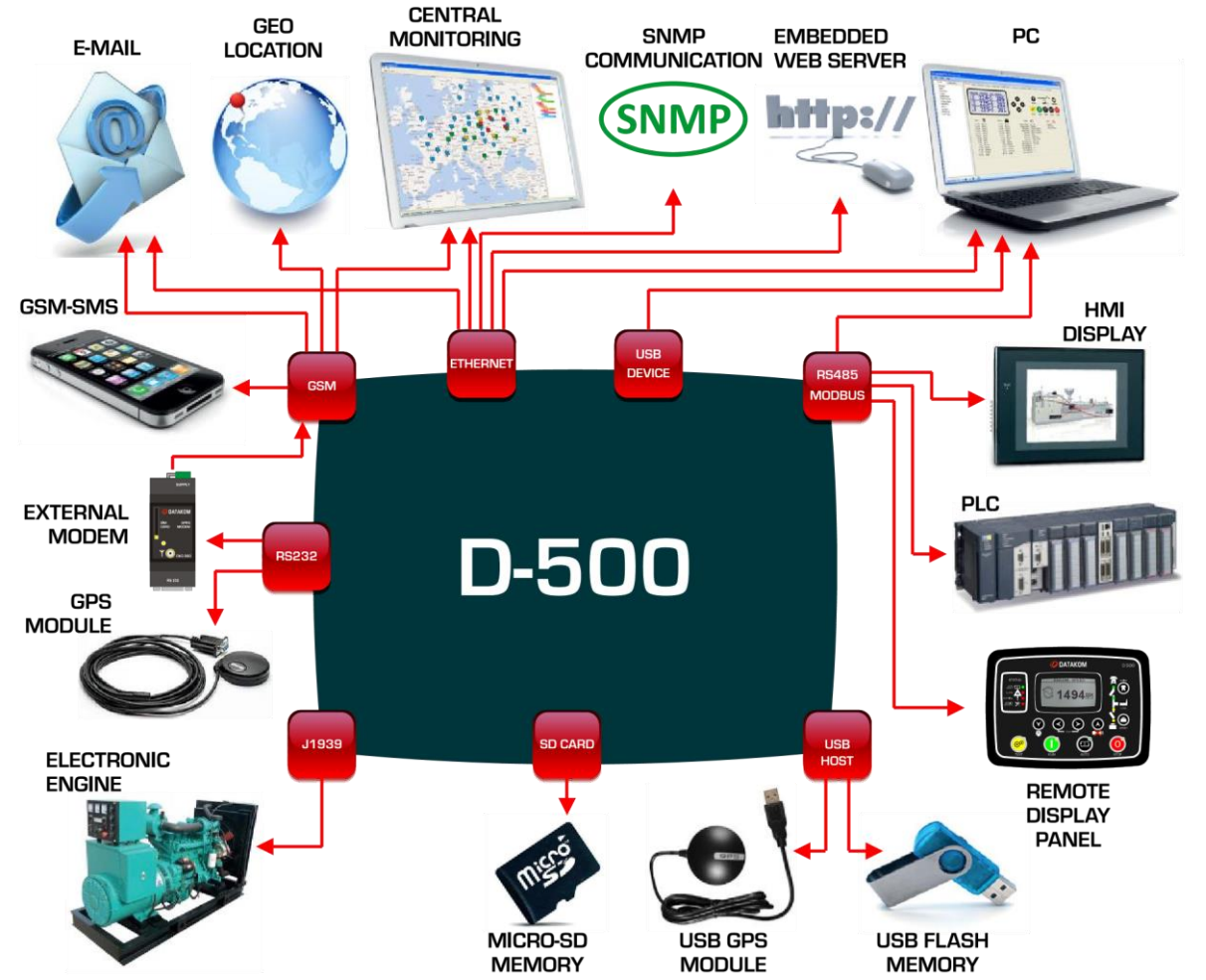
FUNCTIONALITIES

- *AMF unit (uninterrupted transfer)*
- *ATS unit (uninterrupted transfer)*
- *Remote start controller*
- *Manual start controller*

DATAKOM

- **IP65 rating with standard gasket**
- ***Engine controller***
- ***Remote display panel***
- **Harmonic analysis of V & I**
- **Mains & genset PN/PP voltages**
- ***Internal battery (optional)***
- **Mains & genset frequency**
- **Mains & genset phase currents**
- **Mains & genset neutral currents**
- **Mains & genset, phase & total, kW, kVA, kVAr, pf**
- **Engine speed**
- ***3 ph 4 w, star & delta***
- ***3 ph 3 w, 2 CTs***
- **Battery voltage**
- ***2 ph 3 w***
- ***1 phase 2 wires***
- ***Long term data record on flash***
- ***Input & output extension***

COMMUNICATIONS



TECHNICAL SPECIFICATIONS

Alternator voltage: 0 to 300 V-AC (Ph-N) **Alternator frequency:** 0-600 Hz. **Mains voltage:** 0 to 300 V-AC (Ph-N) **Mains frequency:** 0-600 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: 500 mA-DC max. **Current Inputs:** from current transformers. ../5A. **Digital inputs:** input voltage 0 to 36 V-DC. **Analog input range:** 0-5000 ohms. **Mains and genset contactor outputs:** 16Amps@250V **DC Outputs:** Protected mosfet semiconductor outputs, rated 1Amp@28V-DC **Cranking dropouts:** survives 0V for 100ms.

Magnetic pickup voltage: 0.5 to 50Vpk.
Magnetic pickup frequency: 0 to 20000 Hz.
Charge Alternator Excitation: 2W.
Display Screen: 2.9", 128x64 pixels
Ethernet Port: 10/100 Mbits
USB Device: USB 2.0 Full speed
USB Host: USB 2.0 Full speed
RS-485 Port: selectable baud rate (2400-115200baud)
RS-232 Port: selectable baud rate (2400-115200baud)
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: 200 x 148 x 46mm (WxHxD)
Panel Cut-out Dimensions: 176 x 121 mm minimum.
Weight: 450 g (approx.)
Case Material: High Temperature, non-flammable ABS/PC

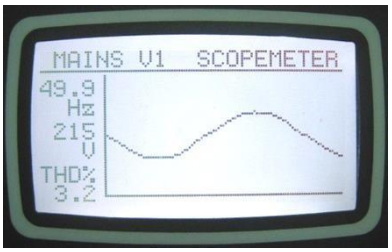
Installation: Flat surface mounting on a Type 1 enclosure. Rear retaining plastic brackets.

CONFORMITY

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)

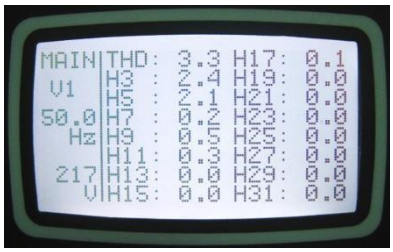
UL & CSA Compatibility:
- UL 6200, Controls for Stationary Engine Driven Assemblies (File# - 20140725-E314374)
- CAN/CSA C22.2 No. 14-13 – Industrial Control Equipment

WAVEFORM DISPLAY & HARMONIC ANALYSIS



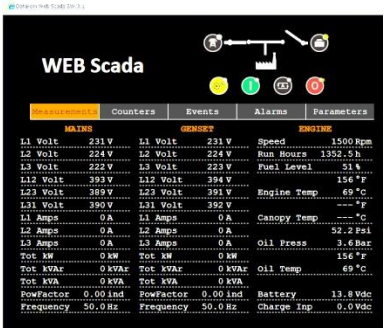
Waveform Display

Graphical Harmonics



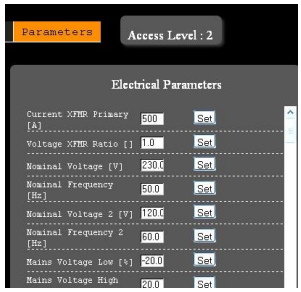
Digital Harmonics Display

WEB SERVER



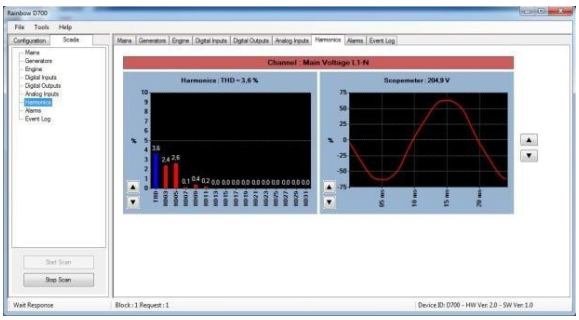
Monitoring and Control

Event Log Display



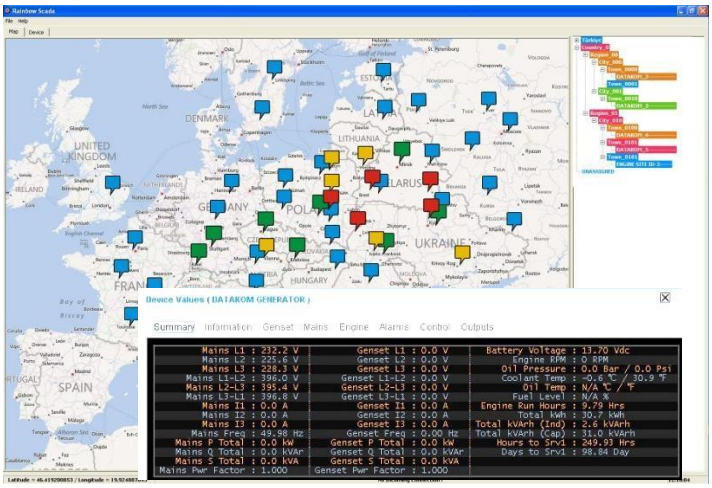
Web Programming

RAINBOW PLUS PROGRAM



Scada Screen **Waveform display & Harmonic Analysis**

RAINBOW SCADA CENTRAL MONITORING



Fleet Display on Map, online monitoring

Smartphone Support

TYPICAL CONNECTIONS