# COST EFFECTIVE MODERN TECHNOLOGY

**GENSET CONTROLLER**

**DATAKOM** D 200

ENGINE SPEED

**1494** RPM

MAINS
GENSET
ALARM
SERVICE

PGM

RUN STOP AUTO
TEST
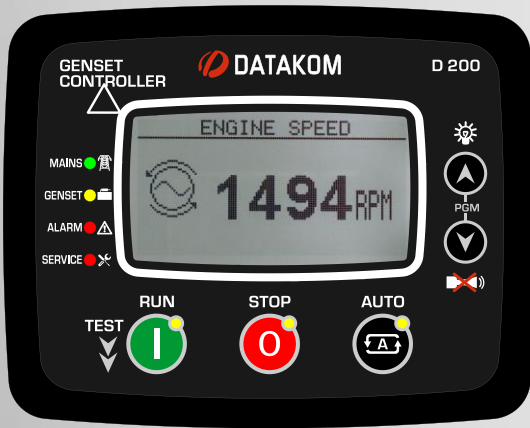I O

## WEB BASED
# D-200

**The D-200 is the lowest cost genset controller ready for internet monitoring.**

## FEATURES

- Diesel and gas genset support
- 400Hz operation support
- **400 event logs, full snapshot**
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- 16Amp MCB & GCB outputs
- 6 configurable digital inputs
- 5 configurable digital outputs
- 3 configurable analog inputs
- *Standard* MPU input
- Optional 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 filling counter
- 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

## 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

## 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*

## TOPOLOGIES

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

**DATAKOM**

**E-MAIL**

**GEO LOCATION**

**CENTRAL MONITORING**

**PC**

**GSM-SMS**

**GSM**

**USB**

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RUN  STOP  AUTO
TEST  I  O  A

**ELECTRONIC ENGINE**

**J1939**

**(OPTIONAL)**
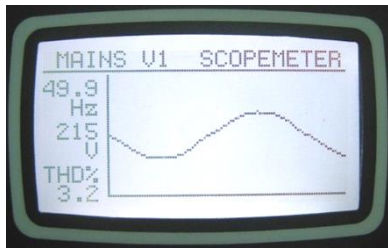
# D-200

# 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 @ 12V-DC
**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
**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.

## 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 (Certificate # - 20140725-E314374)
   -CAN/CSA C22.2 No. 14-13 – Industrial Control
   Equipment

## WAVEFORM DISPLAY & HARMONIC ANALYSIS



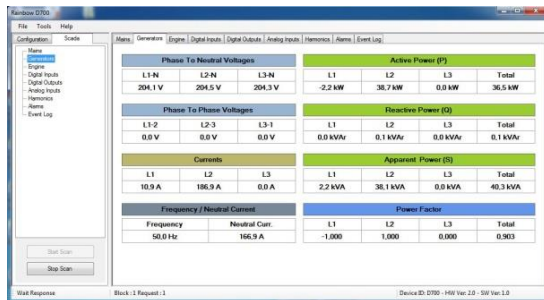**Waveform Display**          **Graphical Harmonics**          **Digital Harmonics Display**
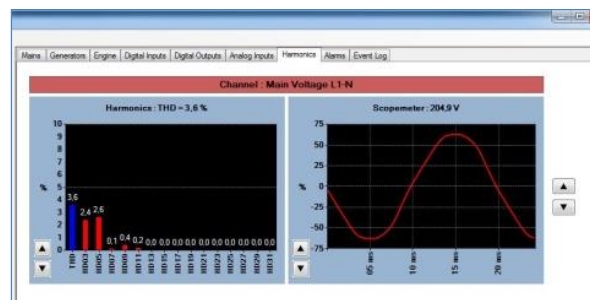
## RAINBOW PLUS PROGRAM
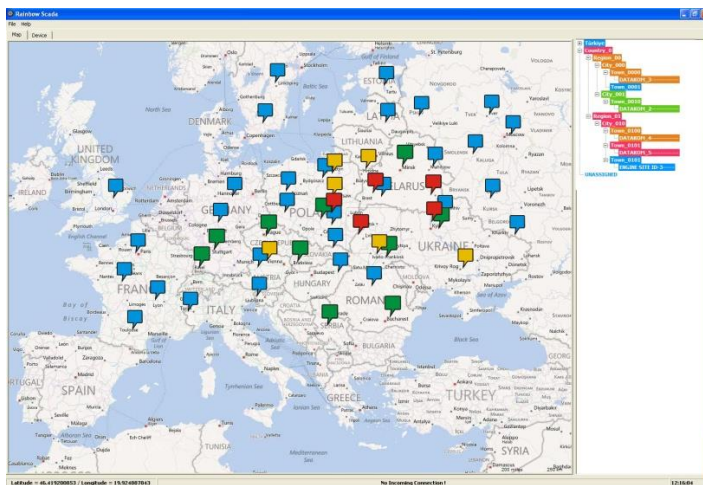


**Scada**                    **Harmonic analysis & Waveform**

## RAINBOW SCADA CENTRAL MONITORING



**Fleet Display on Map, online monitoring**          **Smartphone Support**



**Real time monitoring**

**LOAD**

L1 L2 L3 N

**ALTERNATOR**

**MAINS**

| ALTERNATOR | MAINS |
|---|---|
| L1 | L1 |
| L2 | L2 |
| L3 | L3 |
| N | N |

FUSE FUSE FUSE

GC MC

FUSE FUSE FUSE

SIM CARD

GSM ANT.

8 to 36Vdc, 500mA max
300Vac, 0-600 Hz
0.2 to 6.0 Aac

| GEN-C 51 | G-L1 52 | G-L2 54 | GEN-L3 56 | GEN-N 58 | I1+ 59 | I1- 60 | I2+ 61 | I2- 62 | I3+ 63 | I3- 64 | MAINS-N 65 | MAINS-L3 67 | MAINS-L2 69 | MAINS-L1 71 | MAINS-C 72 |

| BAT + 1 | BAT - 2 | OUT 1 3 | OUT 2 4 | OUT 3 5 | CHG 6 | SND 1 7 | SND 2 8 | SND 3 9 | SGND 10 | IN 1 11 | IN 2 12 | IN 3 13 | IN 4 14 | IN 5 15 | IN 6 16 | MPU+ / CAN-H 17 | MPU- / CAN-L 18 |

USB

To ECU
J1939-H
J1939-L *3

BATTERY 12/24V
Fuse

Crank

Fuel
Alarm
D+/WL Charge Alternator
Oil Press. Sender
Temp. Sender
Fuel Lev. Sender
Sender Gnd *1
Low Oil Pressure
High Temp
Emergency Stop
Low Coolant Level
Spare Input 1
Spare Input 2

*2

MPU *3

S

Starter Motor

Battery Negative must be grounded

*1 Connect to engine body, close to the senders.
*2 Ground from one end only.
*3 Optional terminals

# DATAKOM