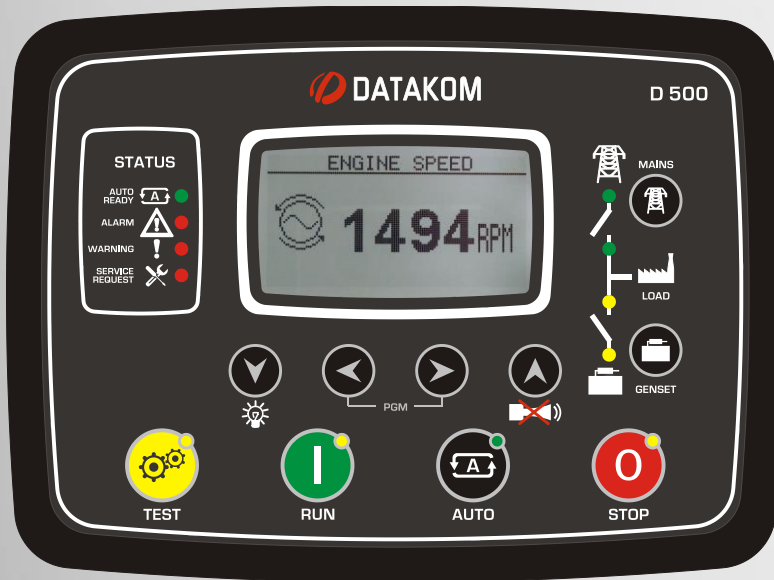# TECHNOLOGY IS NOW FOR EVERYONE

WEB BASED
D-500

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

COMMUNICATIONS

Ethernet port (10/100Mb)
GSM-GPRS
Internal GPRS modem (optional)
Embedded web server
Web monitoring
Web programming
Central Monitoring through internet
SMS message sending
E-mail sending
Free PC software: Rainbow Plus
Free Central Monitoring (100 genset)
Modbus RTU through RS-485
Modbus TCP/IP
SNMP
USB Host
USB Device
RS-485 port, adjustable baud rate
RS-232
Micro SD card slot (optional)
J1939-CANBUS
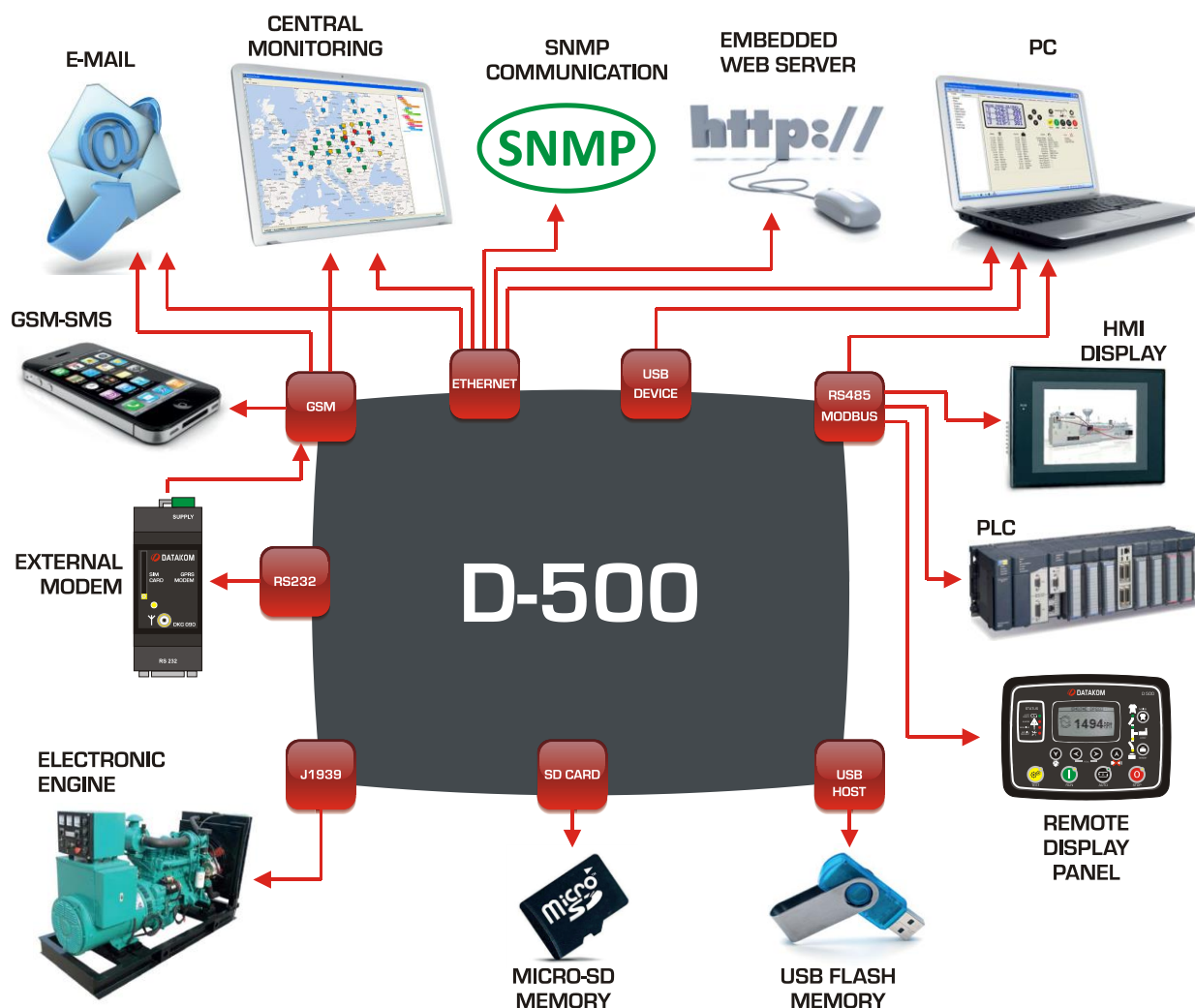
FUNCTIONALITIES

AMF unit with uninterrupted transfer
ATS unit with uninterrupted transfer
Remote start controller
Manual start controller
Engine controller
Remote display & control unit
400 Hz enabled
Waveform display of V & I
Harmonic analysis of V & I
CTs at genset or load side
Long term recording on flash card

TOPOLOGIES

2 phases 3 wires, L1-L2
2 phases 3 wires, L1-L3
3 phases 3 wires, 2 CTs
3 phases 3 wires, 2 CTs (L1-L2)
3 phases 3 wires, 2 CTs (L1-L3)
3 phases 4 wires, star
3 phases 4 wires, delta
1 phase 2 wires

DATAKOM

COMMUNICATIONS

E-MAIL

CENTRAL MONITORING

SNMP COMMUNICATION

SNMP

EMBEDDED WEB SERVER

http://

PC

GSM-SMS

GSM

ETHERNET

USB DEVICE

RS485 MODBUS

HMI DISPLAY

EXTERNAL MODEM

RS232

D-500

PLC

ELECTRONIC ENGINE

J1939

SD CARD

USB HOST

REMOTE DISPLAY PANEL

MICRO-SD MEMORY

USB FLASH MEMORY

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.
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
RS-232 Port: selectable baud rate

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: IP54 from front panel, IP30 from the rear.
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.
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 Compatibility:
　　UL 508 - Industrial Control Equipment
CSA Compatibility:
　　CAN/CSA C22.2 No. 14-2005 – Industrial Control Equipment

WEB SERVER

Monitoring and Control

Event Log Display

Web Programming

RAINBOW PLUS PROGRAM

Scada

Waveform display & Harmonic analysis

Programming

Connection interfaces:

-USB
-IP (ethernet or GPRS)
-RS-485 Serial port

RAINBOW SCADA PROGRAM

Complete Fleet Display on Map

Monitoring & Control Screen

LOAD

L1 L2 L3 N

ALTERNATOR

MAINS

L1
L2
L3
N

L1
L2
L3
N

FUSE FUSE FUSE

GC

MC

FUSE FUSE FUSE

| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | | 59 | 60 | 61 | 62 | 63 | 64 | | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |

GEN-C 51
GEN-L1 52
53
G-L2 54
55
GEN-L3 56
57
GEN-N 58

I1+ 59
I1- 60
I2+ 61
I2- 62
I3+ 63
I3- 64

MN-N 65
66
MN-L3 67
68
MN-L2 69
70
MN-L1 71
MN-C 72

SIM CARD

⎓ 8 to 36Vdc, 500mA max
∿ 300Vac, 0-600 Hz

CE РG

USB-HOST

RS-232

ETHERNET

USB-DEVICE

I/O EXTENSION

GSM ANTENNA

Micro SD™

1 BAT +
2
3 BAT -
4 OUT 1
5 OUT 2
6 OUT 3
7 OUT 4
8 OUT 5
9 OUT 6
10 CHG
11 IN 1
12 IN 2
13 IN 3
14 IN 4
15 IN 5
16 IN 6
17 IN 7
18 IN 8
19 SGND
20 SND 1
21 SND 2
22 SND 3
23 SND 4
24 PGND
25 485-B
26 485-A
27 MPU+
28 MPU-
29 PGND
30 CANH
31 CANL

BATTERY 12/24V
Fuse
Crank
Fuel
Alarm
Preheat
Stop
Idle Speed
D+ / WL Charge Alternator
Low Oil Pressure
High Temp
Emergency Stop
Low Coolant Level
Spare Input 1
Spare Input 2
Spare Input 3
Force OFF Mode
Sender Gnd *1
Oil Press. Sender
Temp. Sender
Fuel Lev. Sender
Oil Temp. Sender

*2
MPU
J1939-H
J1939-L
*2

To BMS
To ECU

S
Starter Motor

⏚ Battery Negative must be grounded

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

DATAKOM