DATAKOM

GENSET PRODUCTS

METERING & CONTROL

REMOTE MONITORING

PRODUCT CATALOGUE

36 Years

About us

Datakom was founded in 1988 as an electronics design house of 3 people, exclusively providing electronic device design services with two engineers.

Datakom established its manufacturing department in 1990. Since 1994 the company has adopted the strategy of designing and producing company's own products. Today, Datakom is a top player in the generator electronics sector, offering the largest product portfolio in the market. Datakom's constant search for innovation and improvement assures that it will remain a leading name in the generator electronics market and will continue to increase the company's market share.

Datakom plans to progress in fields of energy quality, monitoring of electrical transmission and distribution network along with carbon footprint analysis and reporting. Datakom prioritizes energy quality in company's future plans and allocates a sizeable budget for R&D investments on this field.

Datakom offers products with monitoring features. These devices connect to the Rainbow SCADA internet monitoring service directly, with additional plug-in modules. Rainbow SCADA requires no installation and adds new features frequently, offering a minimal cost of ownership. The advantages of Rainbow SCADA has quickly made it the preferred monitoring tool of many companies.

Datakom is committed to become a leader in the power electronics industry. The company has already introduced high efficiency 3-4kW charging modules for telecom power systems. The R&D is ongoing on EV fast charging rectifiers.

Datakom has design, production, technical support, sales and after sales departments on site, which reduces production costs and provides a better service quality to its customers. Datakom believes in unconditional customer satisfaction. The company uses only the highest quality materials and constantly seeks for improvement in the quality of products. The quality management system plays a critical role in leading the world market.

Datakom is a firm believer that constant improvement is the key to securing a strong position in the market. Datakom redirects most of its investments to the R&D department, to ensure dynamism and productivity. Currently 25% of Datakom's employees are directly part of the R&D team, while 30% of all employees are involved in the R&D activities. Datakom allocates 15% of company's turnover to R&D, exceeding the average investment of the electronics sector.

In 2024, Datakom moved to its new factory of 5000m2 big. With increased production and storage spaces, Datakom is now able to supply its products in higher quantities.

Today Datakom manufactures more than 400 genuine electronic products and employs 75 people, of which 30% are experienced electrical and electronics engineers graduated from leading universities of our country. Datakom is ambitious to become one of Turkey's first ranked technology companies and take a seat among the technological leaders of the world.

Datakom is proud to preserve its originality in the market, while marching with firm and strong steps towards the company's goals.

General Manager
Mehmet Metin HEKIMOGLU


DATAKOM
TECHNOLOGY
IS NOW FOR
EVERYONE
YOUR RELIABLE
PARTNER
in GENSET
CONTROL


KMCO


DATAKOM
DATAKOM


LEAD-FREE

“Datakom by the numbers”

- **Founded in**
  1988

- **Number of products**
  400+

-**Production**
300’000 units / year

- **Present in**
  80+ countries

- **Workers**
  75

- **Engineers**
  20

“Your technology partner Datakom, innovative products, affordable prices.”

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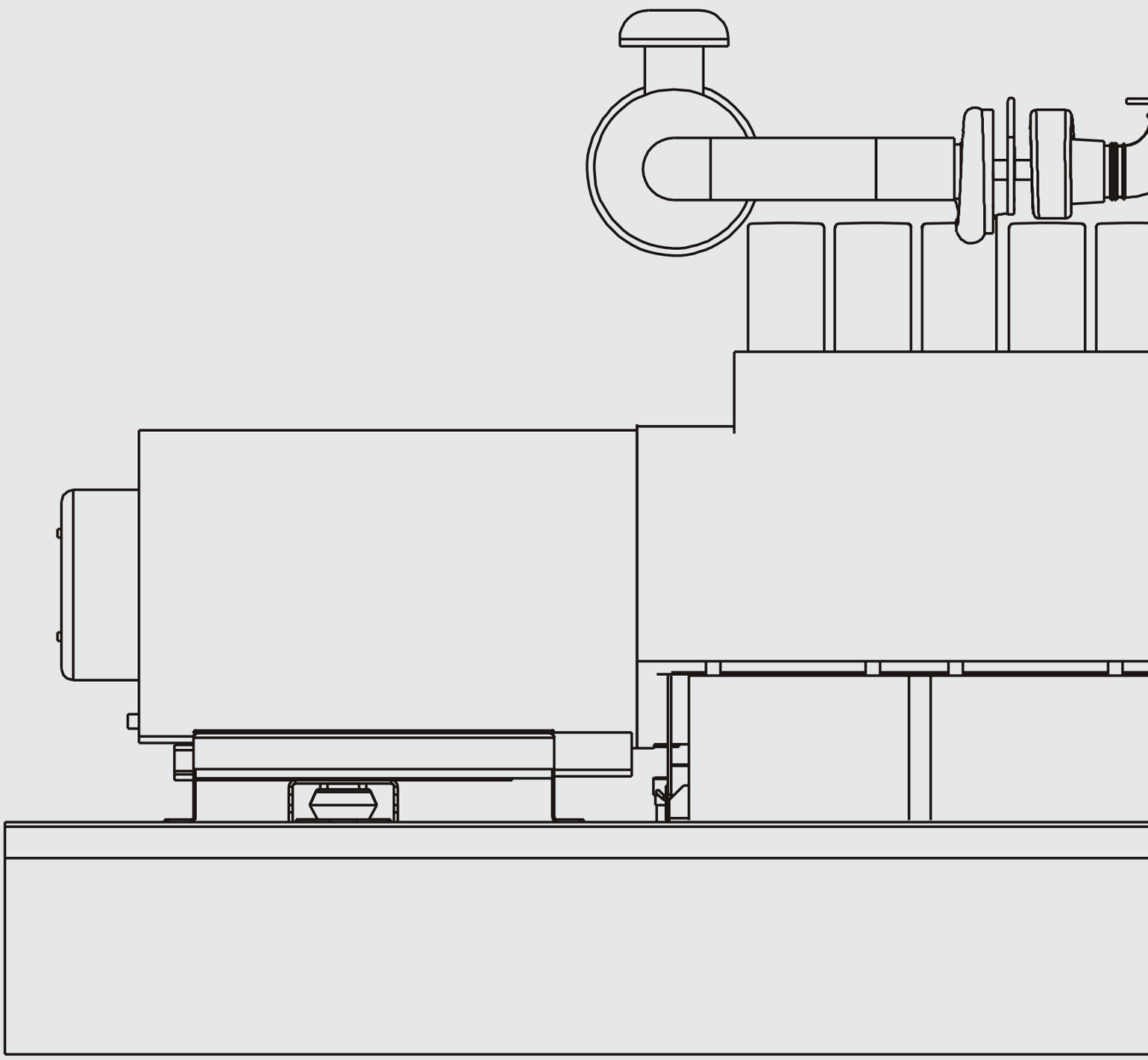
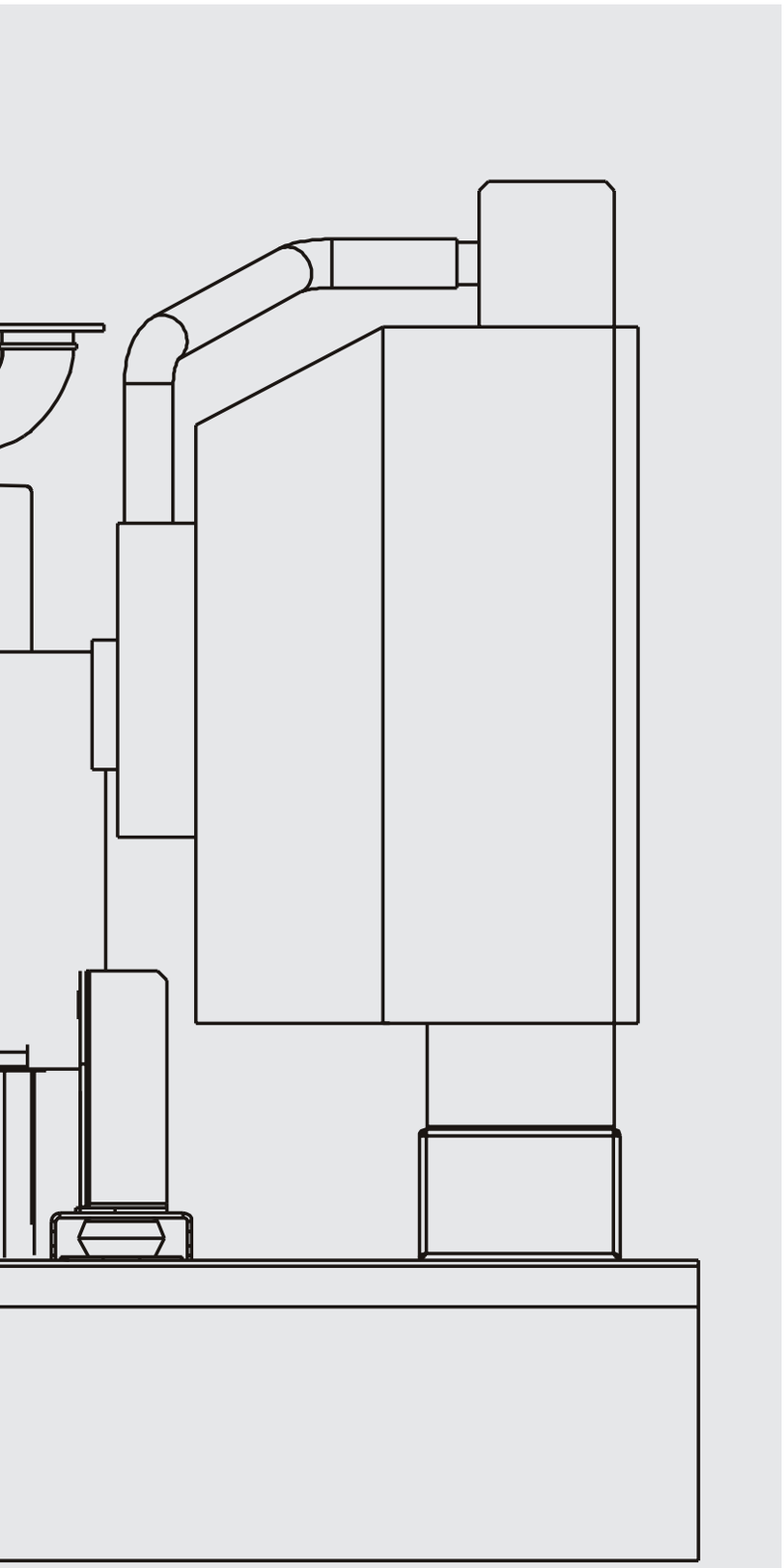




GENSET PRODUCTS

> Advanced Genset Controller / D-700 MK3

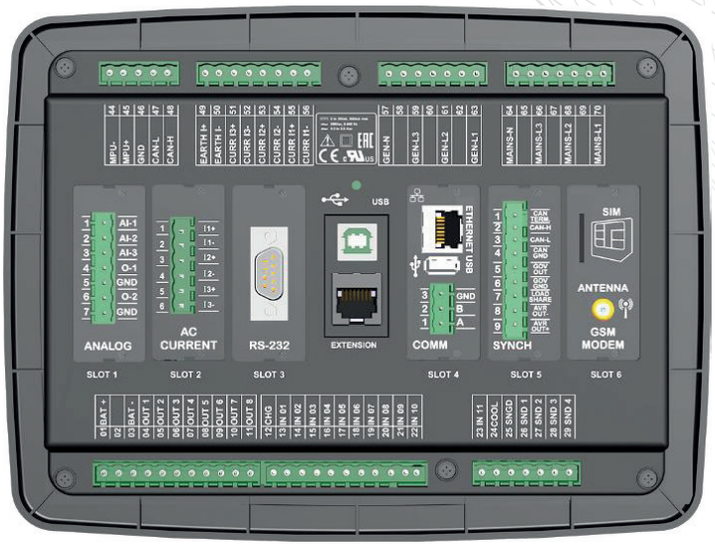
THE NEW D-700 MK3

- BOTH AMF AND SYNCHRONIZING
- SAME UNIT FOR ALL FUNCTIONS
- INTERNET BASED
- MULTI-PROTOCOL
- FLEXIBLE WITH PLUG-IN MODULES
- AUTO LEARNING

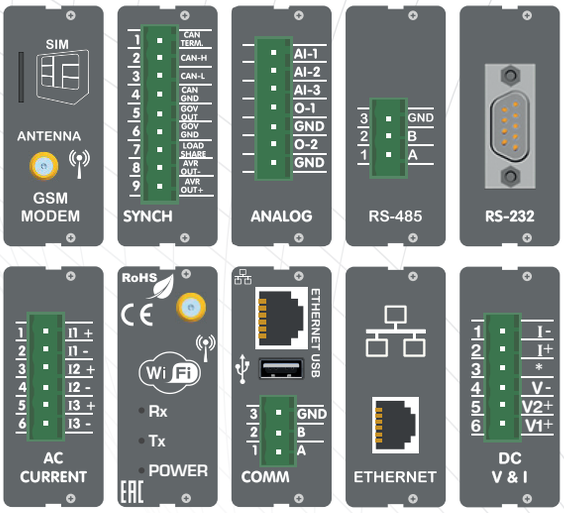
FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 4.3” 480x272pixels color LCD
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- Synchroscope & check synch
- Allows closed transfers
- 11 configurable digital inputs
- Inputs expandable to 43
- 8 configurable digital outputs
- Outputs expandable to 40
- 7 configurable analog inputs
- 2 configurable analog outputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple topologies
- 6xCT, true mains metering
- Supports up to 48 gensets
- Automatic learning/self adjust
- Direct governor & AVR control
- Voltage and phase matching
- kW & kVAr load sharing
- True soft transfer in both ways
- PLC functions
- Fire pump functionality
- Dual battery support
- Dual crank motor support
- Dual charge alternator support
- DC genset functionality
- DPF regeneration functionality
- Peak Lopping / peak shaving
- Mains de-coupling protection
- R.O.C.O.F protection
- Vector shift protection
- Reverse power protection
- Over/under freq. Protection
- Over/under voltage protection
- Smart load management
- Smart genset sequencing
- Run/stop priority support
- Equal aging of gensets
- Base load (power export)
- Unmanaged distributed power export support
- AVR & GOV droop support
- Dead bus sensing
- 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
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Contactor & MCB drive
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- 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
- SNMP v1 v2c v3 support
- Mobile genset support
- Automatic GSM geo-location
- GPS connectivity (USB&RS232)
- Dynamic DNS support
- Easy USB firmware upgrade
- IP65 rating with standard gasket

Dimensions
D-700 MK3 : 245 x 188 x 36mm (WxHxD)



Backpanel view



PLUG-IN MODULES

- 2G GSM Modem
- 4G-2G GSM Modem
- Wi-Fi (802.11 b/g/n)
- Ethernet 100 Mbps
- USB Host
- RS-232 (isolated)
- RS-485 (isolated)
- Synchro/LoadShare Module
- 3x AC Current Inputs
- 3x Analog Inputs
- 2x Analog Outputs
- DC Voltage and Current Inputs
- Tilt Detector

FUNCTIONALITIES

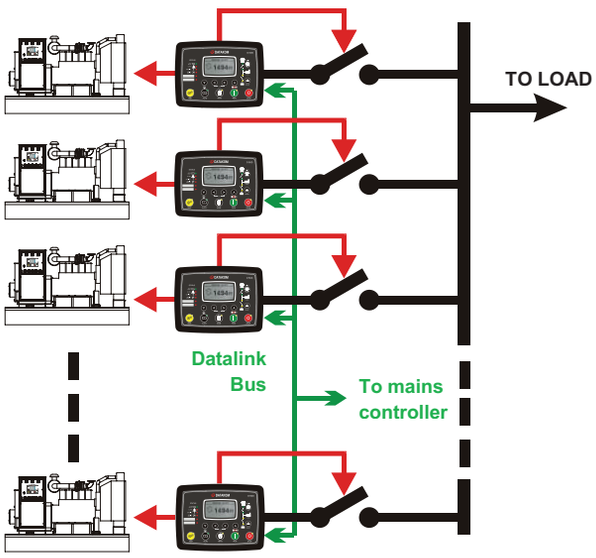
- Multi genset synch & load share
- Mains synchronization
- Single genset parallel with mains
- DC genset controller
- AMF unit (uninterrupted transfer)
- ATS unit (uninterrupted transfer)
- Remote start controller
- Manual start controller
- Engine controller
- Remote display panel
- Fire pump controller

COMMUNICATION

- Central Monitoring
- Embedded Web Server
- USB
- GPS (geo-location)
- SMS
- E-mail
- Modbus
- Modbus TCP/IP
- SNMP v1 v2c v3
- HTML
- UDP
- SNTP

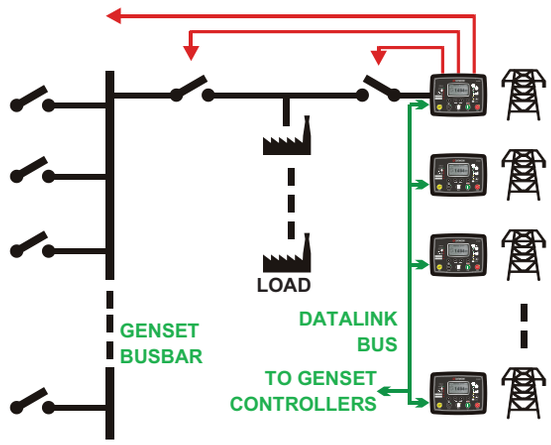
MULTI GENSET SYNCHRONIZATION

Up to 48 gensets may be paralleled on the same busbar. Smart load management is a standard feature.

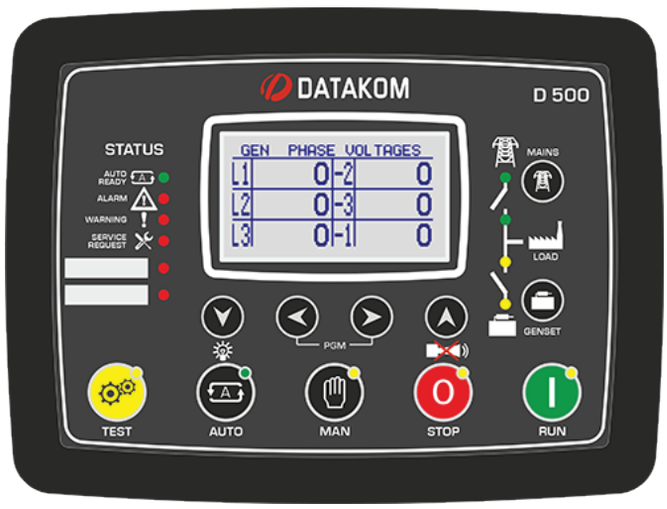


MAINS SYNCHRONIZATION

Up to 16 mains controller per system are supported. Mains controllers provide the REMOTE START signal and handle synchronization of the complete genset system with mains.



Advanced Genset Controller / D-500 MK3



THE NEW D-500 MK3

- BOTH AMF AND SYNCHRONIZING
- SAME UNIT FOR ALL FUNCTIONS
- INTERNET BASED
- MULTI-PROTOCOL
- FLEXIBLE WITH PLUG-IN MODULES
- AUTO LEARNING

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
- 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
- 7 configurable analog inputs
- 2 configurable analog outputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple topologies
- 6xCT, true mains metering
- Supports up to 48 gensets
- Automatic learning/self adjust
- Direct governor & AVR control
- Voltage and phase matching
- kW & kVAr load sharing
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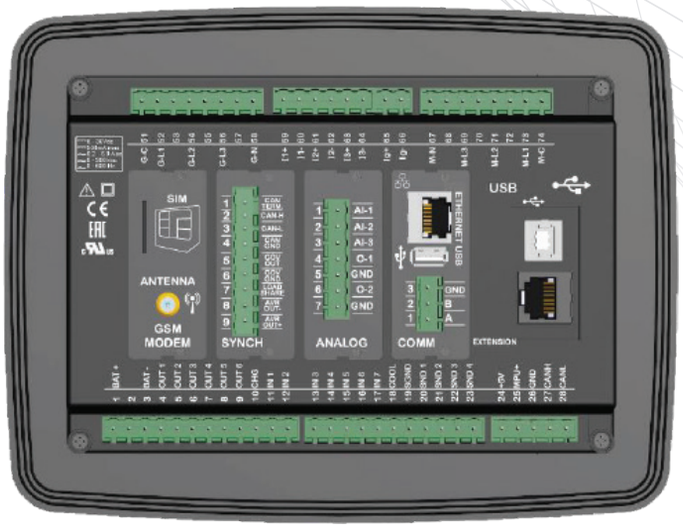
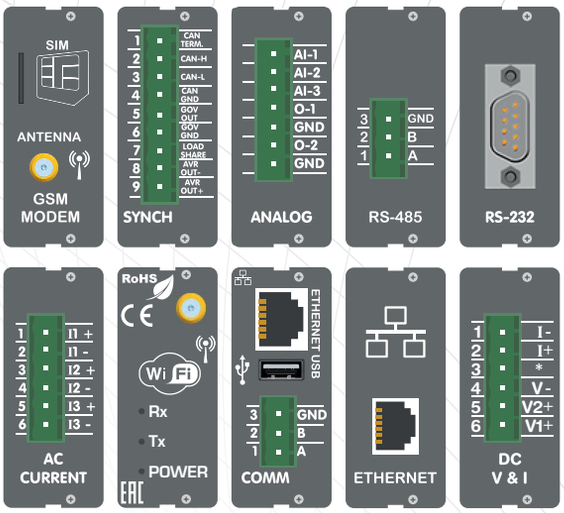
- PLC functions
- DC genset functionality
- DPF regeneration functionality
- Peak Lopping / peak shaving
- Mains de-coupling protection
- R.O.C.O.F protection
- Vector shift protection
- Reverse power protection
- Over/under freq. Protection
- Over/under voltage protection
- Smart load management
- Smart genset sequencing
- Run/stop priority support
- Equal aging of gensets
- Base load (power export)
- Unmanaged distributed power export support
- AVR & GOV droop support
- Dead bus sensing
- 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
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Contactor & MCB drive
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- 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
- SNMP v1 v2c v3 support
- Mobile genset support
- Automatic GSM geo-location
- GPS connectivity (USB&RS232)
- Dynamic DNS support
- Easy USB firmware upgrade
- IP65 rating with standard gasket

Dimensions
D-500 MK3 : 211 x 162 x 42mm (WxHxD)



Backpanel view



PLUG-IN MODULES

- 2G GSM Modem
- 4G-2G GSM Modem
- Wi-Fi (802.11 b/g/n)
- Ethernet 100 Mbps
- USB Host
- RS-232 (isolated)
- RS-485 (isolated)
- Synchro/LoadShare Module
- 3x AC Current Inputs
- 3x Analog Inputs & 2x Analog Outputs
- DC Voltage and Current Inputs
- Tilt Detector

FUNCTIONALITIES

- Multi genset synch & load share
- Mains synchronization
- Single genset parallel with mains
- DC genset controller
- AMF unit (uninterrupted transfer)
- ATS unit (uninterrupted transfer)
- Remote start controller
- Manual start controller
- Engine controller
- Remote display panel

COMMUNICATION

- Central Monitoring
- Embedded Web Server
- USB
- GPS (geo-location)
- SMS
- E-mail
- Modbus
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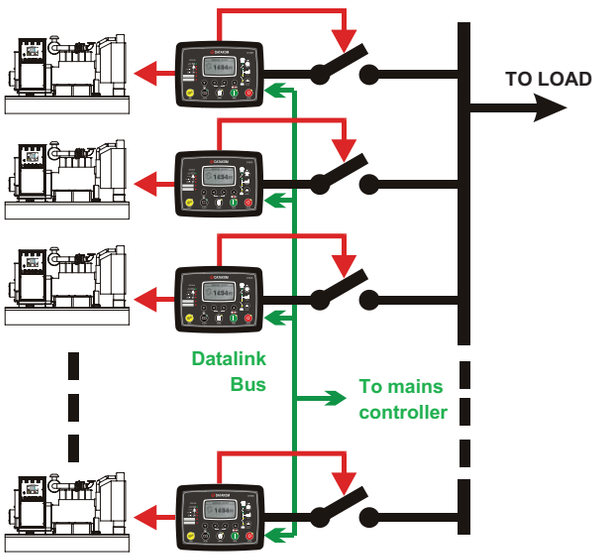
- SNMP v1 v2c v3
- HTML
- UDP
- SNTP

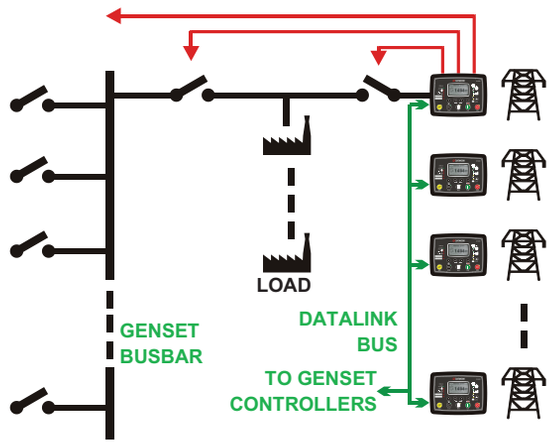
MULTI GENSET SYNCHRONIZATION

Up to 48 gensets may be paralleled on the same busbar. Smart load management is a standard feature.

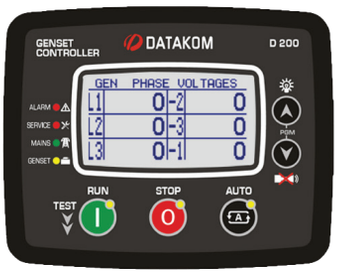


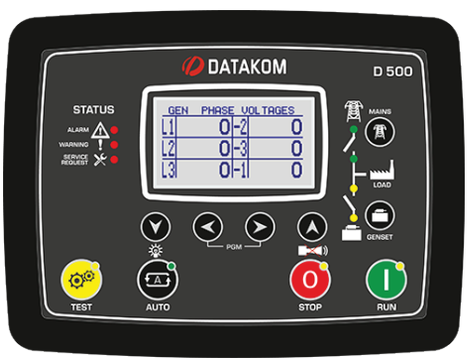
MAINS SYNCHRONIZATION

Up to 16 mains controller per system are supported. Mains controllers provide the REMOTE START signal and handle synchronization of the complete genset system with mains.



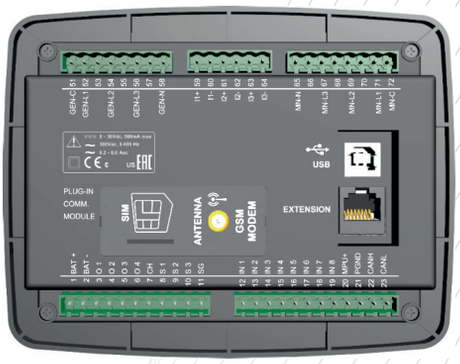
Multifunctional Units /D-500 LITE MK3 / D-300 MK3 / D-200 MK3 / D-100 MK2





COMMUNICATION D-100 MK2

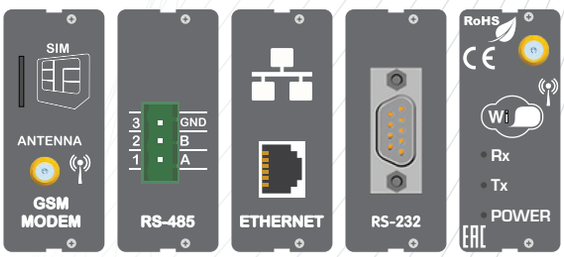
- USB Device
- J1939-CANBUS (optional)
- Geo-locating through GSM
- Internet Central Monitoring
- SMS message sending
- Free PC software: Rainbow Plus
- Modbus RTU



Backpanel view

COMMUNICATION D-200 MK3 / D-300 MK3 D-500 LITE MK3

- USB Device
- J1939-CANBUS
- Geo-locating through GSM
- Internet Central Monitoring
- SMS message sending
- E-mail sending
- Free PC software: Rainbow Plus
- Modbus RTU (2400-57600baud)
- ModbusTCP/IP
- HTML
- UDP



FUNCTIONALITIES

- AMF unit
- ATS unit
- Remote start controller
- Manual start controller
- Engine controller
- Remote display panel

PLUG-IN MODULES

- 2G GSM Modem
- 4G-2G GSM Modem
- Wi-Fi (802.11 b/g/n)
- Ethernet 100 Mbps
- RS-232 (isolated)
- RS-485 (isolated)

FEATURES

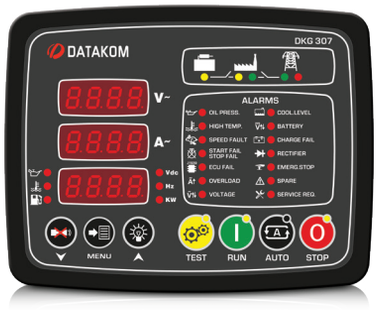
- Diesel and gas genset support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- 4 configurable digital inputs
- 5 configurable digital outputs
- 3 configurable analog inputs
- CANBUS-J1939
- 3 configurable service 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

Multifunctional Units/Comparison Chart

	D-100 MK2	D-200 MK3	D-300 MK3	D-500 LITE MK3	D-500 MK3	D-700 MK3
2.9" B&W LCD Display	■	■	■	■	■	-
4.3" Color LCD Display	-	-	-	-	-	■
Display Heating for-40°C Operation	Opt	Opt	Opt	Opt	Opt	-
USB Port	■	■	■	■	■	■
Mains Genset Phase Voltage Inputs	3/3	3/3	3/3	3/3	3/3	3/3
Genset Phase CT Inputs	3	3	3	3	3	3
Ground CT Input	-	-	-	-	1	1
Total Digital Inputs	4	6	8	8	8	12
Coolant Level AC Input	-	-	■	■	■	■
16A Outputs	-	2	2	2	2	-
Total Outputs	5	5	6	6	8	8
Analog Inputs	3	3	3	3	4	5
CANBUS-J1939	Opt	Opt	■	■	■	■
MPU Input	-	Opt	■	■	■	■
Digital I/O Expansion	-	-	■	■	■	■
Total Number of Plug-in Modules	1	1	1	1	4	6
Modem Plug-in Positions -2G or 4G Modem -Ethernet -WiFi -RS485 -RS232	1	1	1	1	1	2
Analog Plug-in Positions -3x Analog Inputs + 2x Analog Outputs -3x Mains CT Inputs -DC Voltage and Current Inputs -Tilt Detector	-	-	-	-	1	2
Synchronization Plug-in Positions	-	-	-	-	1	1
Communication Module Plug-in Positions (Ethernet+USB Host+RS485)	-	-	-	-	1	1

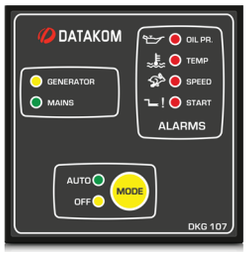
DKG-105

- Digital engine run-hours display
- Automatic mains failure monitoring
- Digital display of generator frequency
- Provision for energize to stop, preheat & choke outputs
- Digitally adjustable timers
- Dimensions: 78x78x54mm (WxHxD)



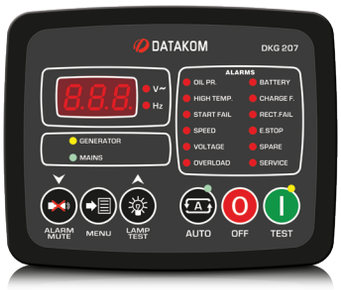
DKG-307

- J1939 CANBUS or MPU input option
- True RMS measurements
- Genset kW and PF measurements
- Battery backed-up real time clock
- Weekly operation schedule programs
- Built in daily / weekly / monthly exerciser
- Event logging with time stamp and measurements
- RS-232 serial port
- MODBUS communication
- Operating temp.:-40°C to +70°C
- Dimensions: 172x134x46mm (WxHxD)



DKG-107

- Automatic mains failure monitoring
- Automatic engine starting and stopping
- 3 phase mains voltage inputs
- 1 phase genset voltage input
- Dimensions: 72x72x52mm (WxHxD)



DKG-207

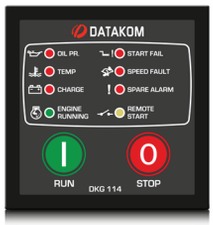
- Genset kW and PF measurements(1phase)
- Periodic maintenance request indicator
- Logic level serial port used with the optional RS-232 adapter
- Dimensions 133x107x39mm (WxHxD)

DKG-309

- J1939 CANBUS or MPU input option
- True RMS measurements
- Multiple language support (TR, EN, CN)
- Genset kW and PF measurements
- Battery backed-up real time clock
- Weekly operation schedule programs
- Built in daily / weekly / monthly exerciser
- Event logging with time stamp and measurements
- GSM SMS message sending on fault
- GSM and PSTN modem support
- MODBUS communication
- Dimensions: 172x134x46mm(WxHxD)

DKG-109

- J1939 CANBUS or MPU input option
- True RMS measurements
- Multiple language support (TR, EN, CN)
- Genset kW and PF measurements(1phase)
- Event logging with time stamp and measurements
- Logic level serial port
- Dimensions: 96x96x53mm (WxHxD)



DKG-114

- Optional energize to stop or preheat output,
- Offers jumper selectable operating parameters
- 50/60Hz selection
- Selectable engine running signal (from genset voltage or charge alternator),
- Dimensions: 72x72x43mm (WxHxD)

DKG-116

- Suitable for both gasoline and diesel gensets
- True RMS measurements
- Tamper proof engine hours display
- Dimensions: 102x55x40mm (WxHxD)

DKG-227

- Genset kW and PF measurements
- Engine hours run counter
- Periodic maintenance request indicator
- Statistical counters
- Dimensions:133x107x46mm (WxHxD)

DKG-119

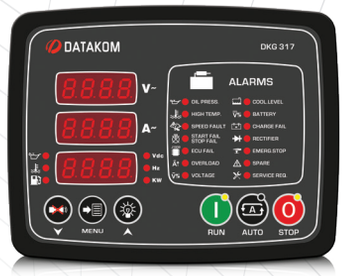
- J1939 CANBUS or MPU input option
- True RMS measurements
- Genset kW and PF measurements(1phase)
- Event logging with time stamp and measurements
- Logic level serial port
- Dimensions: 102x102x53mm (WxHxD)

DKG-110

- DIN rail mounted
- 10A fuel and alarm relay outputs,
- High temp. and low oil press. protection
- High/low speed protection
- 3 semiconductor lamp outputs
- Generator voltage input
- Standard dimensions, 36mm width

DKG-151

- 10A fuel and crank relay outputs,
- Charge alternator input
- High temp. and low oil press. protection
- High/low speed protection
- Spare alarm input
- 50/60Hz nominal frequency selection
- Energize to stop/start option
- Dimensions: 72x72x38mm (WxHxD)



DKG-317

- J1939 CANBUS or MPU input option
- True RMS measurements
- Genset kW and PF measurements
- Weekly operation schedule programs
- Built in daily / weekly / monthly exerciser
- Event logging with time stamp and measurements
- RS-232 serial port
- MODBUS communication
- Operating temp.:-40°C to +70°C
- Dimensions: 172x134x46mm (WxHxD)

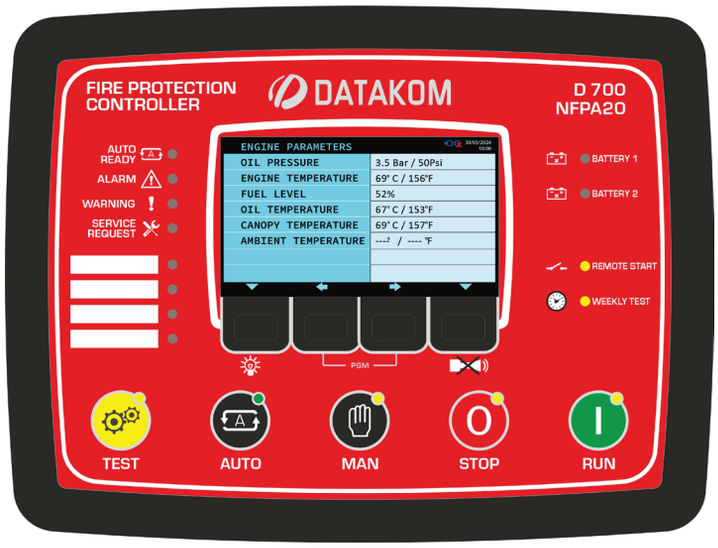
DKG-319

- J1939 CANBUS or MPU input option
- True RMS measurements
- Multiple language support (TR, EN, CN)
- Genset kW and PF measurements
- Battery backed-up real time clock
- Weekly operation schedule programs
- Built in daily / weekly / monthly exerciser
- Event logging with time stamp and measurements
- GSM SMS message sending on fault
- GSM and PSTN modem support
- MODBUS communication
- Dimensions: 172x134x46mm (WxHxD)

DKG-155

- 16A fuel and crank relay outputs,
- Charge alternator input
- High temp. and low oil press. protection
- High/low speed protection
- Spare alarm input
- 50/60Hz nominal frequency selection
- Dimensions: 72x72x52mm (WxHxD)

Fire Pump Controller D-700 MK3



D-700 MK3
FIRE PUMP CONTROLLER

- NFPA 20
- INTERNET BASED
- MULTI-PROTOCOL
- FLEXIBLE WITH PLUGIN MODULES

The D-700 MK3 Fire Pump Controller is a next generation controller for single diesel fire pump sets.The engine is operated on a switch signal, usually coming from a pressure switch.

Functional features of the controller correspond to NFPA 20 standard.The controller supports dual independent starter batteries with dual independent crank motors.

The controller is capable of measuring and displaying the voltage and charging current of each battery-rectifier set. Charger failure alarms are also monitored and retransmitted through internet.

Cranking is attempted alternatively through each crank motor in order to achive better readiness for operation required in safety equipment.

The controller supports a comprehensive set of protections and alarms. All fault conditions are transferrable to a central monitoring system in order to keep the system up and ready for operation all times.

In AUTO mode, all alarms (except Emergency Stop and Critical Overspeed) are disabled and the diesels runs to death.

The controller supports the NFPA 110 compliant DKG-224 annunciator for displaying alarms in an additional remote location through its RS-485 port.

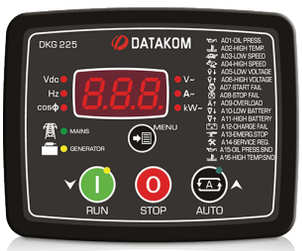
The internet communication capabilities of the controller includes Ethernet, WiFi and GSM connections.

The controller comes ready for internet monitoring, control and maintenance.
It supports GSM-SMS controls and commands.

FEATURES

- Diesel and gas engine support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- Downloadable languages
- 11 configurable digital inputs
- 8 configurable digital outputs
- Input and output expansion
- 7 configurable analog inputs
- Input for second battery voltage
- Inputs for battery charge currents
- CANBUS-J1939 & MPU operation
- 3 configurable service alarms
- PLC functions
- Multiple automatic exerciser
- Automatic fuel pump control
- Fuel filling & fuel theft alarms
- Battery charge run enabled
- Fuel filling counter
- Fuel consumption counter
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring ethernet , GPRS & WiFi
- GPS connectivity (USB&RS232)
- IP65 rating with standard gasket

Genset Products/Automatic Mains Failure Unit With Internal Charger



DKG-225

DKG-225, is a low cost AMF controller for 12V-DC gensets, featuring an internal battery charger.

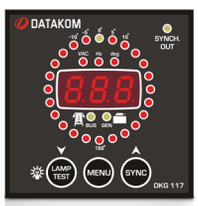
Internal fuel and crank relays are rated at 40Amps@12V-DC and do not require external relays.

Thus a typical transfer panel will simply consist on one DKG-225 and two contactors, reducing material cost, panel size and production time.

FEATURES

- Internal battery charging rectifier
- 40 Amp rated Fuel and Crank outputs
- Front panel adjustable parameters
- Stop, preheat and choke output capability
- Survives cranking voltage dropouts
- Compact dimensions, panel mounted

Genset Products/Manual Synchronization



DKG-117 96x96 mm ve 72x72 mm

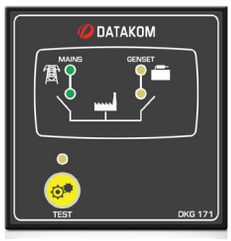
- 10A check synch relay output
- Programmable ΔV, Δf, Δθ for check synch relay
- 1 phase genset voltage input
- 1 phase busbar voltage input
- Synch Check Enable input
- Dead Bus Enable input
- Auto power off
- Adjustable parameters
- Dimensions:102x102x53mm (WxHxD)
- Dimensions:72x72x52mm (WxHxD)

DKG-217

- Zero power consumption at rest
- 10A check synch relay output
- Programmable ΔV, Δf, Δθ for check
- 3 phase genset voltage inputs
- 1 phase genset CT input
- 1 phase busbar voltage input
- Engine oil pressure measurement
- Engine coolant temperature measurement
- Configurable digital inputs:5
- Genset kW and PF measurements(1phase)
- Periodic maintenance request indicator
- Front panel configurable
- Engine hours run counter
- Dimensions: 133x107x46mm (WxHxD)

DATAKOM

Genset Products / ATS Controllers



DKG-171

DKG-171 is a low cost,microprocessor controlled unit designed to monitor 3-phase mains voltages, send remote start command to the generating set and make changeover of both generator and mains contactors.

The genset is supposed to be controlled by a Remote Start type control unit.

DKG-173

DKG-173 is a DIN Rail mounted ATS controller not requiring DC supply.

The unit monitors 3-phase mains voltages, sends remote start command to the generating set and performs changeover of both generator and mains contactors.

DKG-175

DKG-175 is a DIN Rail mounted microprocessor controlled ATS controller without requring DC supply.

The unit monitors 3-phase mains voltages, sends remote start command to the generating set and performs changeover of both generator and mains contactors.

DKG-329

DKG-329 is designed to monitor 3-phase mains voltages, send remote start command to generating sets and control the changeover of both generator and mains contactors.

DKG-329-DUAL

The DKG-329 is designed to control a 3-phase transfer panel having 1 mains and 2 gensets. It monitors 3-phase mains voltages, send remote start command to generating sets 1 and 2 and control the changeover of both generator and mains contactors.

Genset Products / Phase Selector Relay

DKG-193

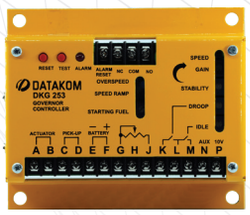
The Datakom DKG-193 Phase Selector Relay monitors mains phases to output one phase within preconfigured limits. This ensures power continuity for single phase systems by using the healthiest phase.

If the output phase voltage goes outside the programmed limits for the programmed fault duration, another phase is selected and supplied to the output of the device. If none of the input phases are within the limits, No Phase alarm LED turns on.

Genset Products / Governor Controllers

DKG-255

The DKG-255 is a microprocessor controlled digital speed control unit designed to control the engine speed with fast and accurate response to load changes.
The DKG-255 connects to a forward acting proportional electric actuator and a magnetic speed sensor.



DKG-253

The DKG-253 is a low cost electronic governor control unit designed to control the engine speed with fast and accurate response to load changes.
The unit features an adjustable internal overspeed alarm relay with indicating led.
This relay provides supplementary speed protection in case of speed control failure

FEATURES

- 12 and 24V operation
- Capable of governing various engines
- Forward acting actuator output
- Fast and accurate response
- Starting fuel adjustment
- Speed ramp adjustment
- 10 Amps continuous current output
- Overspeed alarm output
- Adjustable rated and idle speeds
- Isochronous and droop operation
- Gain and stability adjustments
- External speed adjustment capability
- Synchronizing and load sharing input
- Switchmode output circuit
- Speed sensor failure detection
- Battery reverse voltage protection
- Output short circuit protection
- Rugged design
- Enamel protected electronic circuit
- Small dimensions (130x110x27mm)
- Low cost

Genset Products / Battery Charger Controller

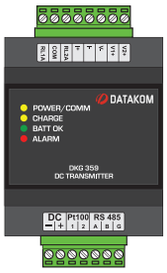
DKG-190

DKG-190 is a high tech product,designed to decrease genset operating engine hours mainly in telecommunication industry.

DKG-190 prevents the genset from running by feeding it with AC voltage until battery voltage level is lower than the set point

The genset starts running when AC voltage from DKG-190 is cut.

Therefore, genset runtime is controlled by the DKG-190.



DKG-359

DKG-359 is a precision measurement tool designed for DC power systems to measure DC voltage and DC current.

The unit has 2 voltage measurement inputs, and one DC shunt type current measurement input.

DATAKOM

Genset Products / DC Genset Controller

DKG-379

The DKG-379 is an advanced DC genset controller for both variable and fixed speed systems. It is presented in 3 different versions, as ANALOG DRIVE, POWER DRIVE and CANBUS DRIVE.

The controller has a precision PID loop providing exact matching of the optimal charging characteristics, as well as overvoltage, overcurrent, overspeed, overheat protections.

The POWER DRIVE version provides a 7 Amp-DC output, interfacing directly to the engine actuator or alternator excitation winding without the need for a governor controller or AVR.

The CANBUS DRIVE version connects to ECU driven electronic engines providing engine control, protection and instrumentation without extra senders. ECU alarms are displayed in text.

All versions offer a 0-10V analog output for speed or voltage control.

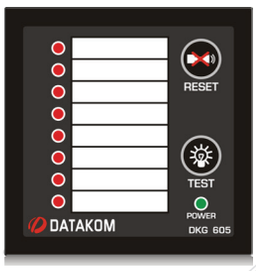
The fixed speed operation stops the genset precisely when batteries are fully charged, providing fuel economy and maintenance cost reductions.

The unit has precision, fully isolated measuring inputs for the battery bank voltage and the charge current. It supports both "positive to ground" and "negative to ground" installations. The current is measured through a DC current shunt placed in positive or negative output of the genset.

FEATURES

- Compatible with 12V, 24V and 48V DC systems
- DC power drive output (7A-DC)
- ECU connection through J1939 CAN option
- 0-10V analog control output
- solated Volt - Amp measurements
- Battery temperature input for PT100 sensor
- Optimal charging, provides longer battery life
- Temperature dependent battery charging
- Thermal protection, short circuit protection
- Dual genset mutual standby operation
- 100 event logs with time stamp and measurements
- Battery backed-up real time clock
- Built in daily / weekly / monthly exerciser
- Field adjustable parameters
- RS-232 serial port
- Free MS-Windows Remote monitoring SW
- GSM and PSTN modem support
- GSM SMS message sending on fault
- MODBUS communications
- Multiple language support

Genset Products / Alarm Annunciator Unit



The DATAKOM model DKG-605 is a compact 8 channel programmable alarm annunciator unit used in generating sets and diesel engines.

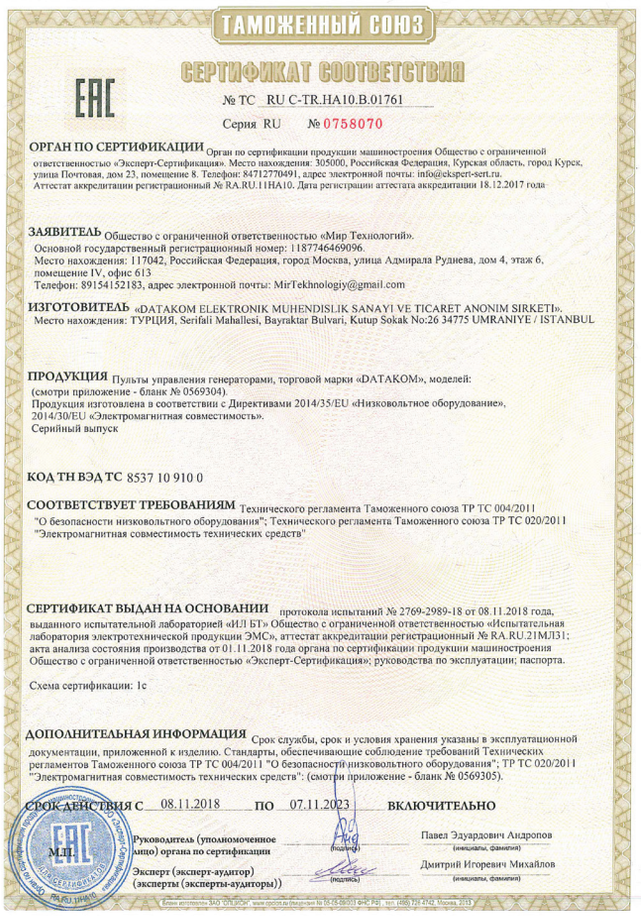
Multiple DKG-605 units may be connected in parallel to form a larger scale alarm system.

The unit is designed to be used as either an alarm extension module or a stand-alone alarm annunciator and shutdown device.

The programming is made through the DKG-605-P hand terminal unit.

FEATURES

- Panel mounted,
- 8 input channels,
- 2 relay outputs,
- 8 semiconductor outputs,
- 44 programmable parameters,
- Generator voltage input,
- Survives cranking dropouts,
- Configurable inputs,
- Standard dimensions, 72x72mm,
- Plug-in connection system
- Low cost



ТАМОЖЕННЫЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ТС RU C-TR.HA10.B.01761

Серия RU № 0758070

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации продукции машиностроения Общество с ограниченной ответственностью «Эксперт-Сертификация». Место нахождения: 305000, Российская Федерация, Курская область, город Курск, улица Почтовая, дом 23, помещение 8. Телефон: 84712770491, адрес электронной почты: info@ekspert-sert.ru. Аттестат аккредитации регистрационный № RA.RU.11HA10. Дата регистрации аттестата аккредитации 18.12.2017 года

ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью «Мир Технологий». Основной государственный регистрационный номер: 1187746469096. Место нахождения: 117042, Российская Федерация, город Москва, улица Адмирала Руднева, дом 4, этаж 6, помещение IV, офис 613. Телефон: 89154152183, адрес электронной почты: MirTekhnologiy@gmail.com

ИЗГОТОВИТЕЛЬ «DATAKOM ELEKTRONIK MUHENDISLIK SANAYI VE TICARET ANONIM SIRKETI». Место нахождения: ТУРЦИЯ, Serifali Mahallesi, Bayraktar Bulvari, Kutup Sokak No:26 34775 UMRANIYE / ISTANBUL

ПРОДУКЦИЯ Пульты управления генераторами, торговой марки «DATAKOM», моделей: (смотри приложение - бланк № 0569304). Продукция изготовлена в соответствии с Директивами 2014/35/EU «Низковольтное оборудование», 2014/30/EU «Электромагнитная совместимость». Серийный выпуск

КОД ТН ВЭД ТС 8537 10 910 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза ТР ТС 004/2011 "О безопасности низковольтного оборудования"; Технического регламента Таможенного союза ТР ТС 020/2011 "Электромагнитная совместимость технических средств"

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ протокола испытаний № 2769-2989-18 от 08.11.2018 года, выданного испытательной лабораторией «ИЛ БТ» Общество с ограниченной ответственностью «Испытательная лаборатория электротехнической продукции ЭМС», аттестат аккредитации регистрационный № RA.RU.21МЛ31; акта анализа состояния производства от 01.11.2018 года органа по сертификации продукции машиностроения Общество с ограниченной ответственностью «Эксперт-Сертификация»; руководства по эксплуатации; паспорта.

Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы, срок и условия хранения указаны в эксплуатационной документации, приложенной к изделию. Стандарты, обеспечивающие соблюдение требований Технических регламентов Таможенного союза ТР ТС 004/2011 "О безопасности низковольтного оборудования"; ТР ТС 020/2011 "Электромагнитная совместимость технических средств": (смотри приложение - бланк № 0569305).

СРОК ДЕЙСТВИЯ С 08.11.2018 **ПО** 07.11.2023 **ВКЛЮЧИТЕЛЬНО**

М.П. **Руководитель (уполномоченное лицо) органа по сертификации** (подпись) Павел Эдуардович Андропов (инициалы, фамилия)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Дмитрий Игоревич Михайлов (инициалы, фамилия)

Бланк изготовлен ЗАО "ОПЦИОН", www.opcion.ru (лицензия № 05-05-09/003 ФНС РФ), тел. (495) 726 4742, Москва, 2013

Certificate of Registration

nqa global assurance

This is to certify that the Quality Management System of

Datakom Elektronik Mühendislik Sanayi ve Ticaret Anonim Şirketi

Şerifali Mahallesi Bayraktar Bulvarı Kutup Sokak No:26 34775 Ümraniye, İstanbul, Türkiye

applicable to

Design, Manufacture, Marketing, Repair and Service of electronic equipment

has been assessed and registered by NQA against the provisions of

ISO 9001:2015

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA

Certificate No:	22547
ISO Approval Date:	10 April 2007
Reissued:	20 March 2024
Valid Until:	29 March 2027
EAC Code:	19

Managing Director

UKAS MANAGEMENT SYSTEMS 0015

The use of the UKAS Accreditation Mark indicates accreditation in respect of those activities covered by the accreditation certificate number 015 held by NQA.
NQA is a trading name of NQA Certification Limited, Registration No. 06351758. Registered Office: Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZX, UK
This certificate is the property of NQA and must be returned on request.

CERTIFICATE OF COMPLIANCE

Certificate Number	20140725-E314374
Report Reference	E314374-20101224
Issue Date	2014-JULY-25
Issued to:	DATAKOM ELEKTRONIK MUHENDISLIK LTD STI SERIFALI MAHALLESI, BAYRAKTAR BULVAR KUTUP SOKAK NO:26 UMRANIYE 34775 TURKEY
This is to certify that representative samples of	COMPONENT - ENGINE GENERATOR CONTROLS SEE ADDENDUM PAGE
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 6200, Controls for Stationary Engine Driven Assemblies CSA C22.2 No. 14-13, Industrial Control Equipment
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: ᴿᴿ, may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada: ᴿᴿ and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.

William R. Carney, Director, North American Certification Programs
UL LLC

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Page 1 of 2

Certificate of Registration

nqa global assurance

This is to certify that the Environmental Management System of

Datakom Elektronik Mühendislik Sanayi ve Ticaret Anonim Şirketi

Şerifali Mahallesi Bayraktar Bulvarı Kutup Sokak No:26 34775 Ümraniye, İstanbul, Türkiye

applicable to

Design, Manufacture, Marketing, Repair and Service of electronic equipment

has been assessed and registered by NQA against the provisions of

ISO14001 : 2015

This registration is subject to the company maintaining an environmental management system, to the above standard, which will be monitored by NQA

Certificate No:	91755
ISO Approval Date:	29 March 2018
Reissued:	20 March 2024
Valid Until:	29 March 2027
EAC Code:	19

Managing Director

UKAS MANAGEMENT SYSTEMS 0015

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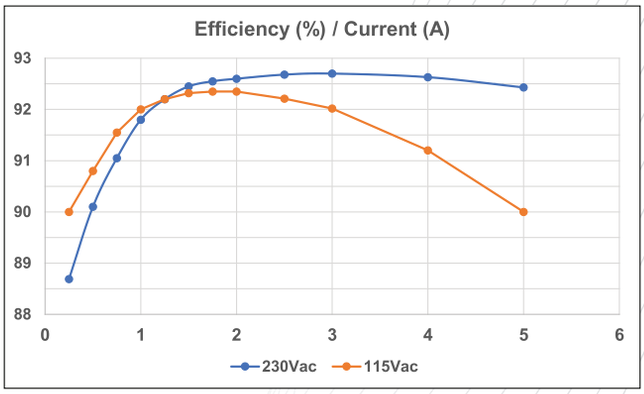
BATTERY CHARGERS

SBC-5A 12/24V AUTO SELECT
5.0 AMPERES 4 STAGES 90-300 VAC



BC-5A series are microprocessor controlled, high efficiency and compact battery chargers featuring a smart charging algorithm allowing faster charge and longer battery life.

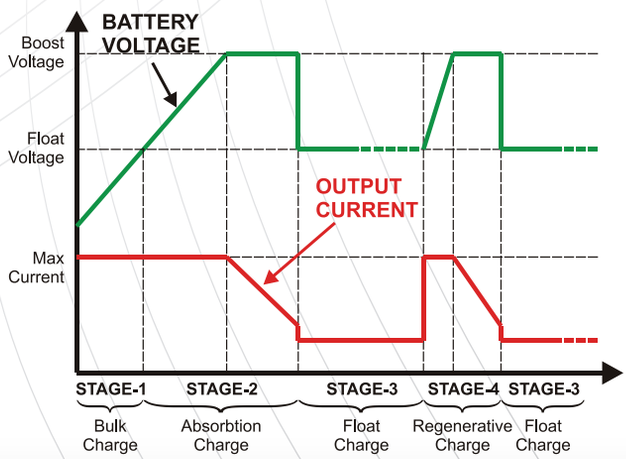
The overload protection is current limiting type, not hiccup. Chargers deliver their rated current indefinitely under short circuit or overload conditions. In case of overheating, the charger will reduce the output current automatically and continue operation without interruption.

Chargers offer green mode of operation that consists on reducing the operating frequency when the load decreases. Thus chargers reduce their losses helping protection of the environment. At very small loads, they enter into a burst mode to reduce the consumption further.

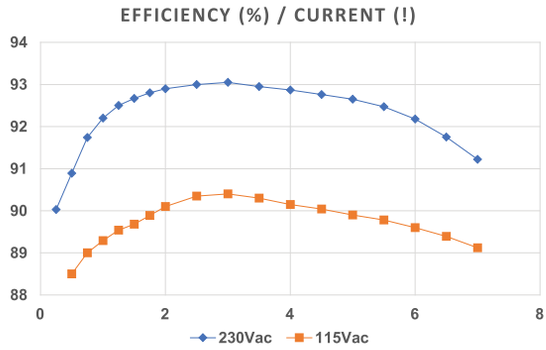
The peak efficiency of chargers exceed 92%, resulting in lower long-term operational costs.

FEATURES

- Very high efficiency, up to 92.7% (see charts)
- Wide operating voltage range (90-300VAC)
- Reverse battery connection protected
- LED status indicator
- Low power consumption at zero-load
- Green mode operation
- Output short circuit and overload protection
- High temperature protection
- Up to 4 stage charging with smart control
- Easy to use, DIP switch selections
- Battery life extending regenerative charging
- Two, three or four stage charging selections
- Supports lead-acid, Li-Ion and Ni-Cd batteries
- Rectifier fail output
- Wide operating temperature range
- Low output ripple & noise
- Low line and load regulations
- DIN rail mounted, small dimensions



BC-7A 12/24V 7AMP AUTO SELECT SMART BATTERY CHARGERS



BC-7A series are microprocessor controlled, high efficiency and compact battery chargers featuring a smart charging algorithm allowing faster charge and longer battery life.

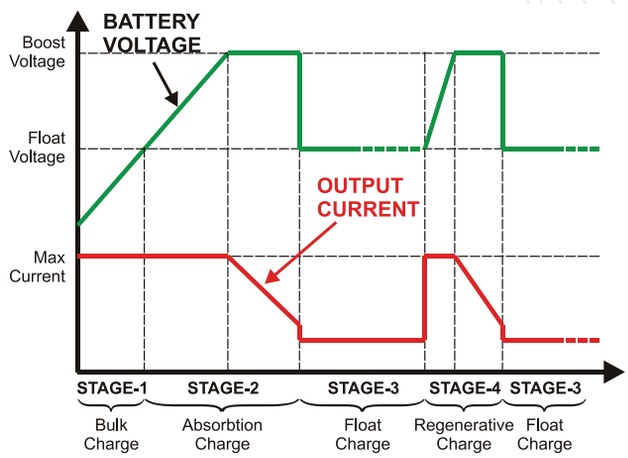
The overload protection is current limiting type, not hiccup. Chargers deliver their rated current indefinitely under short circuit or overload conditions. In case of overheating, the charger will reduce the output current automatically and continue operation without interruption.

Chargers offer green mode of operation that consists on reducing the operating frequency when the load decreases. Thus chargers reduce their losses helping protection of the environment. At very small loads, they enter into a burst mode to reduce the consumption further.

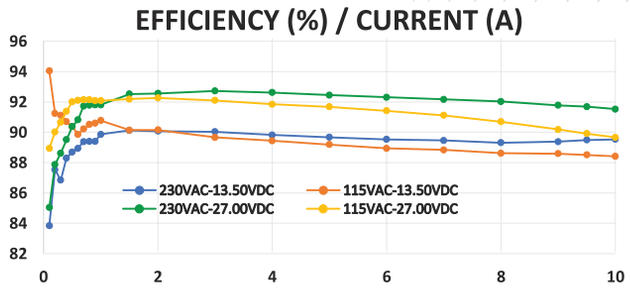
The peak efficiency of chargers reaches 93%, resulting in lower long-term operational costs.

FEATURES

- Very high efficiency, up to 93.1% (see charts)
- Wide operating voltage range (170-300VAC)
- Reverse battery connection protected
- LED status indicator
- Low power consumption at no-load mode
- Green mode operation
- Output short circuit and overload protection
- High temperature protection
- 2 stage charging for continuous connection
- Rectifier fail output
- Analog 0-5V current measuring output
- Wide operating temperature range
- Low output ripple & noise
- Low line and load regulations
- Small dimensions



SBC-10A-M 12/24V AUTOSELECT 10.0 AMPERES 4 STAGES 90-300 VAC



SBC-10A-M series are state of the art battery chargers featuring very high efficiency and low cost in a compact metallic casing.

Chargers are designed to withstand high levels of disturbances found in the harsh automotive environment.

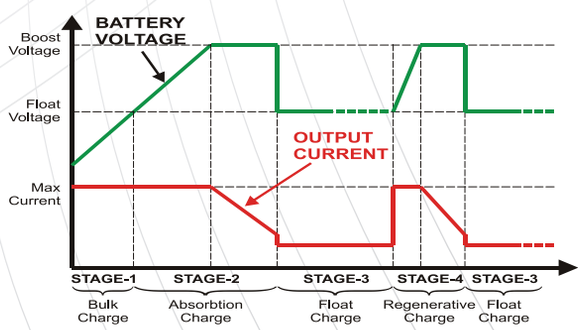
Chargers are practically impossible to destroy, having overload, short circuit, high temperature and reverse battery protections.

Chargers offer automatic battery voltage detection. Thus, the same module operates at 12V or 24V without the need of a manual selection, removing human errors. SBC-10A-M chargers have universal input voltage range, enabling the use in all countries with nominal voltages ranging from 110VAC to 277VAC. The nominal output is fully available at all 90-300VAC range without derating.

The peak efficiency reaches 92.5%, resulting in lower longterm operational costs. As an example, compared to a 24V/10A charger of 85% efficiency, with 30% average load and 20 years of operational life, SBC-10A-M will consume 1350 kW-hour less electrical energy. This leads to 135USD less energy expense per charger.

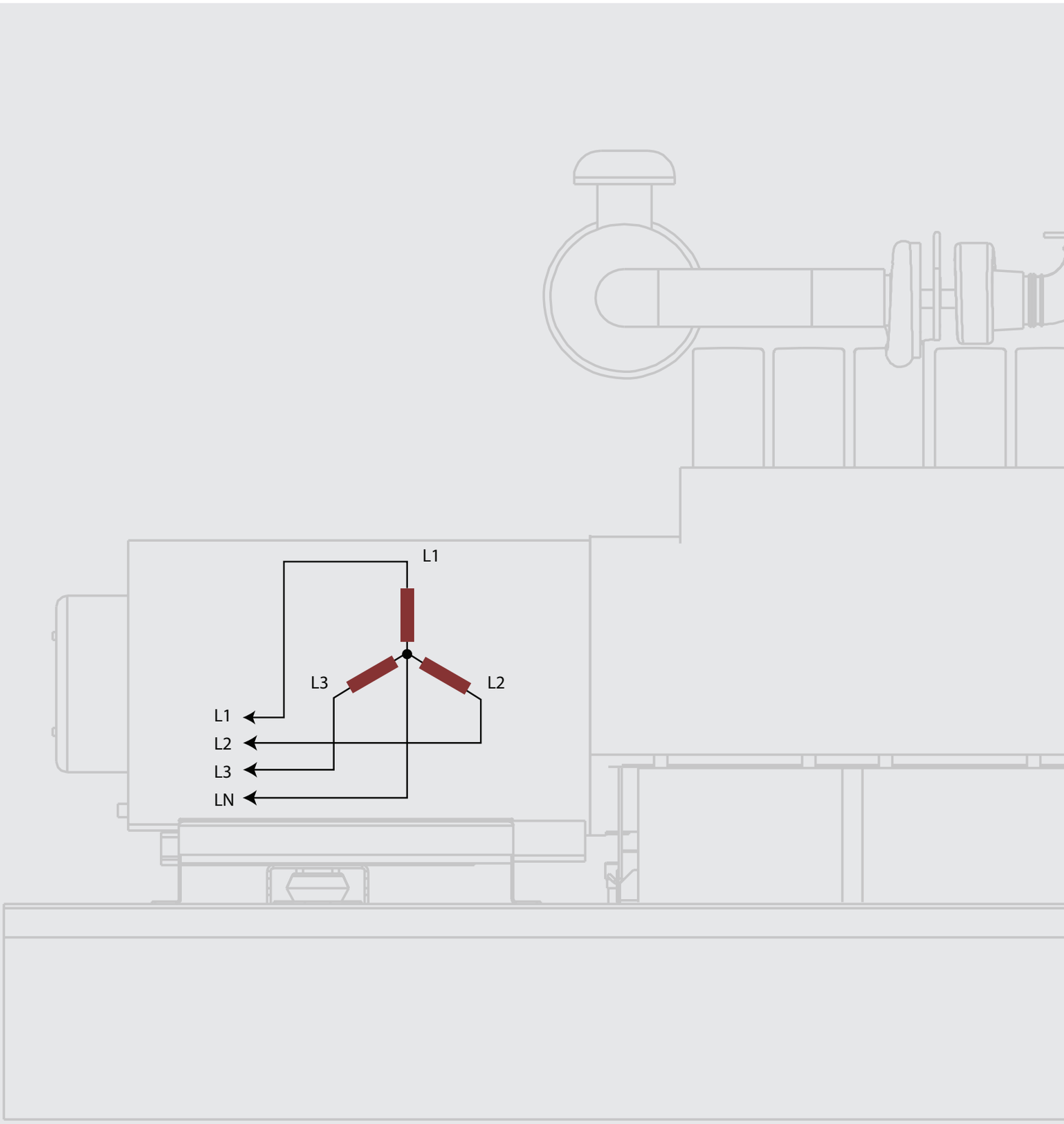
FEATURES

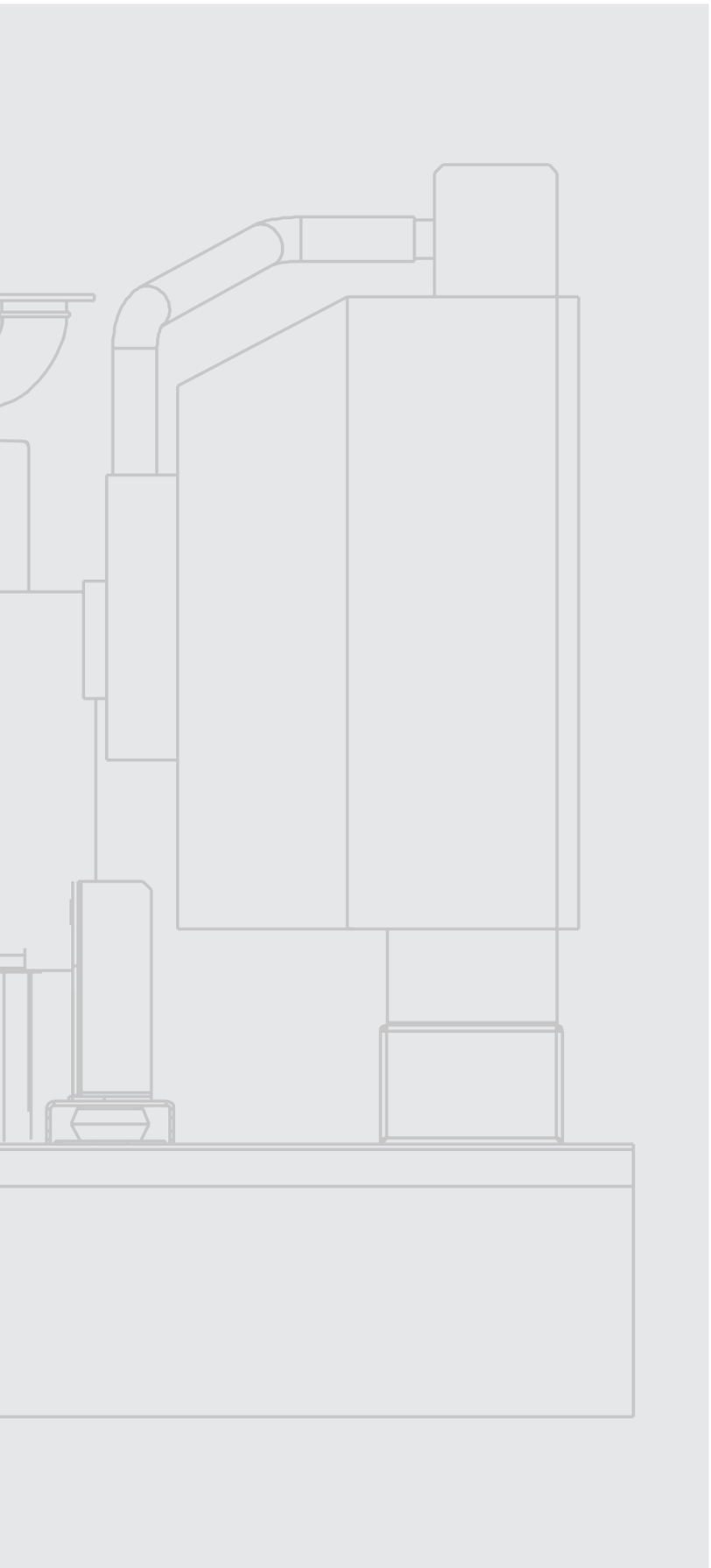
- Very high efficiency, up to 92.5% (see charts)
- Wide operating voltage range (90-300VAC)
- Reverse battery connection protected
- LED status indicator
- Low power consumption at zero-load
- Green mode operation
- Output short circuit and overload protections
- High temperature protection
- Up to 4 stage charging with smart control
- Easy to use, DIP switch selections
- Battery life extending regenerative charging
- Two, three or four stage charging selections
- Supports lead-acid, Li-Ion and NiCd batteries
- Rectifier fail output
- Analog 0-5V current measuring output
- Wide operating temperature range
- Low output ripple & noise
- Low line and load regulations
- Small dimensions
- Low weight



Battery Chargers

MODEL	OUTPUT CURRENT	OUTPUT VOLTAGE	2 STAGE CHARGING	4 STAGE CHARGING	220-240V SUPPLY	110-240V SUPPLY	BOOST CHARGE	BATTERY TYPE	PLASTIC CASE	METALLIC CASE
BC-3A-W	**3A**	**AUTO**	■			■		Lead-Acid	■	
BC-4A-P	**4A**	**AUTO**	■		■			Lead-Acid	■	
BC-5A	**5A**	**AUTO**	■		■			Lead-Acid	■	
BC-5A-W	**5A**	**AUTO**	■			■		Lead-Acid	■	
BC-125	**5A**	**12V**	■		■			Lead-Acid	■	
BC-245	**5A**	**24V**	■		■			Lead-Acid	■	
BC-5A-M	**5A**	**AUTO**	■		■			Lead-Acid		■
BC-125-M	**5A**	**12V**	■		■			Lead-Acid		■
BC-245-M	**5A**	**24V**	■		■			Lead-Acid		■
SBC-5A	**5A**	**AUTO**		■		■	■	Lead-Acid Li-Ion Ni-Cd	■	
SBC-125	**5A**	**12V**		■		■	■	Lead-Acid Li-Ion Ni-Cd	■	
SBC-245	**5A**	**24V**		■		■	■	Lead-Acid Li-Ion Ni-Cd	■	
SBC-5A-M	**5A**	**AUTO**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■
SBC-125-M	**5A**	**12V**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■
SBC-245-M	**5A**	**24V**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■
BC-7A-M	**7A**	**AUTO**	■		■			Lead-Acid		■
BC-247-M	**7A**	**24V**	■		■			Lead-Acid		■
BC-10A-M	**10A**	**AUTO**	■		■			Lead-Acid		■
BC-1210-M	**10A**	**12V**	■		■			Lead-Acid		■
BC-2410-M	**10A**	**24V**	■		■			Lead-Acid		■
SBC-10A-M	**10A**	**AUTO**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■
SBC-1210-M	**10A**	**12V**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■
SBC-2410-M	**10A**	**24V**		■		■	■	Lead-Acid Li-Ion Ni-Cd		■


L1
L3
L2
L1
L2
L3
LN

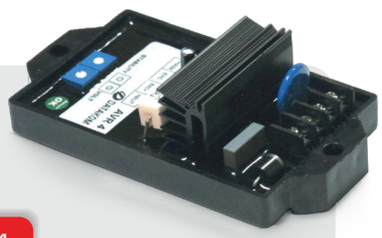


VOLTAGE REGULATORS

DATAKOM

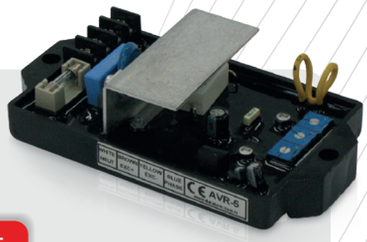
Alternator Voltage Regulators

125x68x35mm



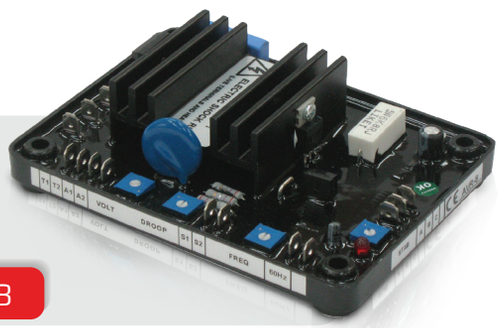
AVR - 4

126x68x35mm



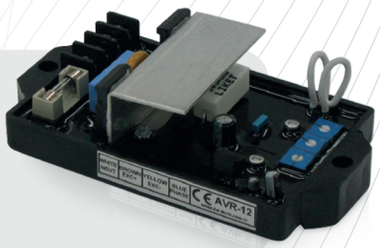
AVR - 5

133x98x35mm



AVR - 8

126x68x35mm

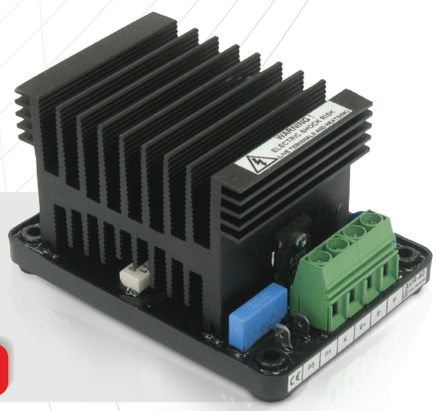


AVR - 12

126x68x35mm

AVR - 20

Height: 80mm



AVR - 40

Alternator Voltage Regulators

Voltage Regulator is an electronic device which lets the alternator to produce fixed output voltage. It has open chassis, resin molded design and is intended to be mounted in the alternator's terminal box.

AVR measures the voltage between one of the alternator phases and the neutral point and adjusts the DC voltage applied to the excitation winding until reaching the desired voltage.

The output stage of the device is a Half Wave tyhristor output associated with a free wheeling diode. Basically the unit is compatible with all brushless type alternators. A stability adjustment potentiometer is also provided for this purpose.

The AVR has a special relay-less electronic circuit design. The required minimum residual voltage for build up is 5 VAC. The unit does not include moving parts; therefore it is able to operate in highly vibrating environments.

	AVR-4	AVR-5	AVR-8	AVR-12	AVR-20	AVR-40	AVR8-380
Output Current	4A	5A	8A	10A	20A	40A	8A
Min. Input Voltage (V)	190	190	190	190	190	190	190
Max. Input Voltage (V)	260	260	260	260	260	260	450
Max. Output @230V L-N	115	115	115	115	115	115	200
Voltage Adjust Pot		■	■	■	■	■	■
External Voltage Adjust	■	■	■	■	■	■	■
Stability Adjustment	■	■	■	■	■	■	■
50 / 60 Hz selection	■	■	■	■	■	■	■
Low Freq. Protection	■	■	■	■	■	■	■
Voltage Adjust Input	■	■	■	■	■	■	■
CT Droop Input			■			■	■
Overload Protection			■			■	■
High Temp. Protection			■			■	■
Input Low Voltage Prot.			■			■	■
Output Current Limit			□			□	
Isolated Measuring Input							■

Digital Voltage Regulator / AVR-10-D

DATAKOM AVR-10-D is a microprocessor controlled digital voltage regulator designed for synchronous brushless alternators. It features high static and dynamic voltage stability in a compact and low-cost package. The device has open chassis, resin molded design and is intended to be mounted inside the
alternator's terminal box.

The output stage of the device is a Half Wave thyristor output associated with a freewheeling diode.The unit does not include moving parts; therefore, it is able to operate in highly vibrating environments.
The unit regulates the alternator voltage by adjusting the DC voltage applied to the excitation winding. It uses digital PID algorithms for the maximum precision and the best dynamic response.
The unit supports both AREP, PMG or shunt regulated alternators. It has separate inputs for voltage measurement and the excitation supply.

The internal supply is derived from excitation supply inputs and has an operating range of 35- 300VAC. Thus, the output voltage regulation range is as wide as 42-277VAC Ph-N (73- 480VAC Ph-Ph) in SHUNT mode and 15-277V in AREP or PMG modes.
The required minimum residual voltage for buildup is 3 VAC.
The standard unit comes ready for flawless operation with most alternators; however, it also provides a complete set of programmable parameters allowing precise adaptation to the alternator and the application in question.

The device has 3 phase network connection and measures both phase-to-neutral and phase-tophase voltage of the alternator.
It is also able to handle single phase alternators.

The unit continually monitors the alternator frequency and provides a LAM (load acceptance module) function (also known as knee-function) for protection against overloading of the engine. When the engine rpm drops, the alternator voltage is proportionally reduced in order to protect the diesel engine from stopping.

The unit provides a soft-start feature preventing excessive excitation currents and voltage oscillations at startup phase.
The sensing loss protection feature limits the excitation current and protects the windings if no voltage is present on the sensing inputs after 10 seconds.

The unit continually measures the excitation current and the heatsink temperature, providing protection against overexcitation and overheating.

The unit supports multiple gensets parallel operation. Both ±3V and 0-10V analog load sharing inputs are provided.

FEATURES

- Supports both AREP-PMG-SHUNT operations
- 10 Amps continuous current output capability
- 20 Amps forcing for 10 seconds
- Requires only 3VAC for build-up
- Microprocessor controlled
- 3 phase network connection
- Phase-phase or phase-neutral voltage control
- Selectable voltage regulation modes
- Single phase or 3 phase operation capability
- Compatible with 50 and 60Hz alternators
- Wide voltage range (42-277VAC Ph-N)
- 1 phase alternator load current connection
- Automatic reactive load sharing capability
- Automatic droop capability (positive or negative)
- Automatic alternator power limiting
- Analog load sharing inputs (±3V and 0-10V)
- LAM for low frequency protection, knee function
- Soft recovery from severe overloads
- Exciter over current protection
- High Temperature protection
- Sensing loss protection
- Programmable parameters
- All parameters programmable on the unit
- Optional non-isolated USB port
- Optional isolated RS-485 port
- Optional isolated CANBUS port
- Wide supply voltage range, 35-305VAC
- Wide voltage regulation range, 42-277VAC
- Resin molded design against vibration

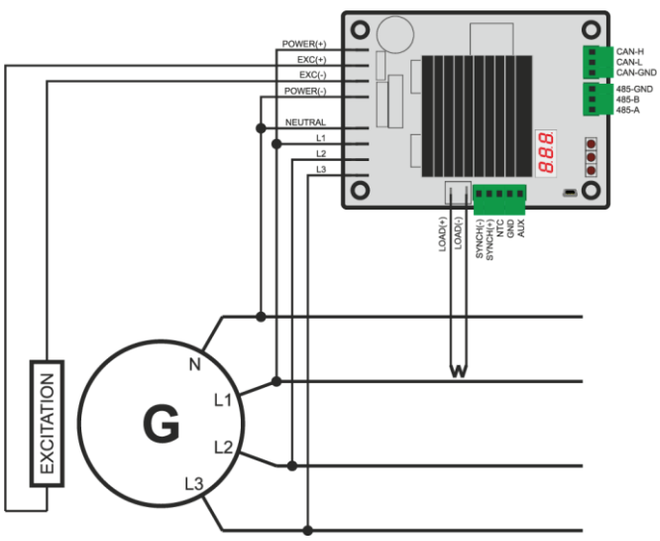
COMMUNICATION PORTS

USB-C type: it is used for computer connection. Warning: The AVR may be live! A USBisolator module should be used between the AVR and the computer.

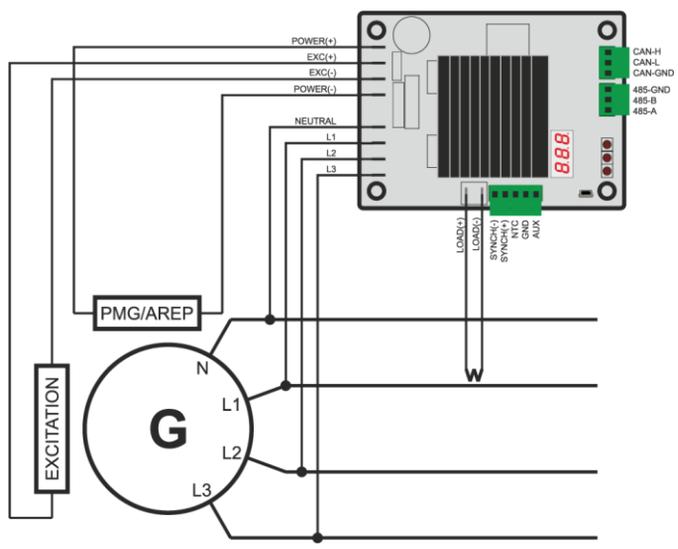
RS-485 (optional): it is used for PLC and automation systems connections.

CANBUS (optional): It is used for remote control of the AVR in synchronizing applications. Through CANBUS, the unit is directly connected to D-series synchronizing control modules.

CONNECTION DIAGRAM SHUNT ALTERNATOR



CONNECTION DIAGRAM AREP ALTERNATOR



EARTHQUAKE DETECTORS

DSD-060 is a high-tech unit which detects seismic acceleration. On the occurrence of an earthquake it closes relay contacts to shutdown any critical devices such as generators, elevators, valves and industrial equipment. Thus it is possible to minimize the probable damage that occurs after an earthquake.

DSD-060 is a very cost effective device for shutdown applications. The device is based on highly reliable dual axis silicon micromachined acceleration sensors. It is lightweight, small, maintenance free and capable of performing selftest.

The unit has two independent relay outputs. The seismic properties of the standard output are conformal to ANSI Z.21-70(1981) and ASCE 25-97 standards. The auxiliary relay output which is more sensitive is intended for warning purposes.

The unit has a user adjustable sensitivity potentiometer. The adjustment range is between low and high limits allowed by the standards.

APPLICATIONS

Generators and Industrial Equipments: After a heavy earthquake, generally the AC power is cut in order to prevent short circuit and fire risk. However, if an automatic generator is available, it runs automatically and causes possible damage. The DSD-060 gives a shutdown signal to the generator control panel if the seismic motion exceeds the predefined level. Therefore DSD-060 may be used in all critical installations to be shutdown during an earthquake.

Elevators: If an earthquake happens in daytime, especially in work hours, too many people get stuck in the elevators. Additionally the displacement of counterweights from guides and wire ropes from pulleys can be hazardous and needs expensive repairs if the elevators are permitted to continue operation. DSD-060 Earthquake Shutdown Device will issue a shutdown signal to the elevator control panel. The elevator should not be given in service unless an elevator mechanic has the opportunity to examine the mechanical system and make any necessary repairs.

Natural Gas, LPG, LNG facilities: Natural Gas and LPG are often used in industrial facilities and in houses. The crack and the leakage occurred on the pipes and valves during a strong earthquake cause fire risk. The DSD-060 will help to minimize fire risk by closing automatically explosive gas and chemical material valves during an earthquake.

FEATURES

- Conformal to ANSI Z.21-70 (1981)
- Conformal to ASCE 25-97
- Microprocessor controlled
- Semiconductor acceleration sensors
- Dual axis
- Non-seismic accelerations filtered
- Separate outputs for standard and high sensitivity
- Maintenance free
- Capable of performing self-test
- Operates on 10 to 30 volts DC
- Direct interface to gensets, elevators and alarm systems
- Overload protected relay outputs
- Resin molded design

DATAKOM DSD-080 Seismic Security Panel monitors seismic motions of a strong earthquake and provides relay output signals from it. Output signals are used to shut-off critical installations as natural gas and LPG systems, generators, elevators and the like.

The unit helps reducing damages of a probable earthquake. On its graphical display screen, the unit shows system status.
DSD-080 incorporates highly sensitive triple axis seismic sensors.

The unit is maintenance free and capable of making self-test. The earthquake sensing specifications of DSD-080 conforms to both ANSI Z21.80 (1981), ASCE 25-97 and TS-12884(2002) standards.

DSD-080 operates on mains with a battery backup. 24V/1.2A-h batteries are incorporated to the unit. The unit provides automatic battery charging feature. During long mains failures, if batteries get low, the unit gives audible and visible alarm.

FEATURES

- Wide operating voltage range (85-305VAC)
- Conformal to international earhquake standards
- Triple axis motion detection
- Automatic self-test
- Internal audible warning
- Internal 24V battery
- 5 programmable relay outputs (5Amp)
- Visual indicators for battery status
- Wide operating temperature range (-10...70°C)

SENSOR SPECIFICATIONS

Sensor type: Triple axis polysilicon semiconductor acceleration sensors.

Sensor operating limits: ±2g.

Sensor failure limit: more than 50g.

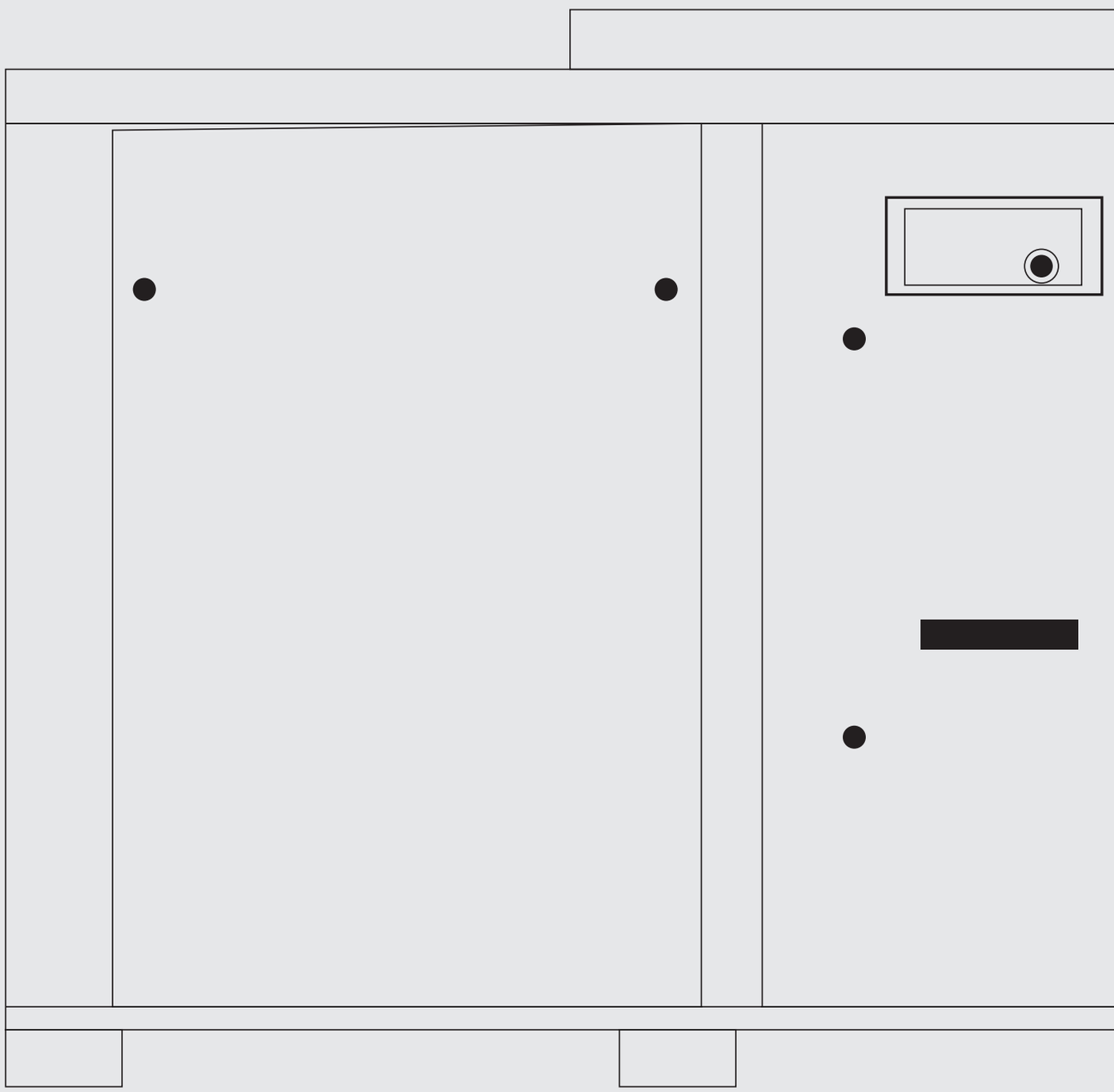
Acceleration threshold: TS12884, ANSI Z21.80 (1981), ASCE 25-97

Detection delay: 0.5sn. maximum

Frequency range: 0.5Hz to 25Hz

TECHNICAL SPECIFICATIONS

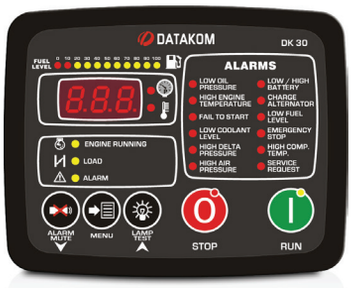
Operating voltage	**:** 85 to 305VAC
Supply power	**:** 4W maximum.
Battery charge voltage	**:** 27.5VDC (+/-0.2V)
Battery charge current	**:** 100mA. maximum
Low battery voltage limit	**:** 22V. (+/- 0.3V)
Current drain from battery	**:** 15mA. max from 24VDC (All relays passive) Additional 6mA for each energized relay.
Battery capacity	**:** 24VDC, 1.2A-h
Operation from battery	**:** >24 hours (typically 72 hours)
Self test	**:** At power-on and reset.
Switching	**:** 5 relay outputs (5A / 30VDC / 250VAC)
Audible warning	**:** 85dB/1m buzzer.
Operating temperature range	**:**-10 to +70 °C
Relative humidity	**:** 10% to 90% (non condensing)
Weight	**:** 1900 grams (approximative)
Dimensions:	192 x 120 x 65mm (W x H x D)



COMPRESSOR CONTROLLERS

DATAKOM

Diesel Compressor Controller / DK-30



The DK-30 is a high-tech product providing control and protection of diesel engine driven, screw or piston type air compressors. The controller incorporates all functions needed in a compressor control panel. Thus no additional modules are necessary resulting in lower panel cost.

The controller features full engine protection and instrumentation through analog and digital inputs and outputs. It acts also as an overspeed protection relay protecting the engine from overspeeding. In order to prevent battery drain, in STOP mode, the controller turns completely off, consuming zero current. The engine rpm is read through the magnetic pickup sender installed on the engine flywheel.

FEATURES

- Automatic operation via output pressure
- Load solenoid control
- Analog speed control output
- Multiple compressor support
- Comprehensive engine instrumentation
- Detailed engine protection
- Engine overspeed protection
- Zero power consumption at rest
- Flexible engine hours calculation algorithm
- Early start function preventing pressure drop
- History records
- 5 independent service counters
- Magnetic pickup input
- 6 programmable digital outputs
- 6 programmable digital inputs
- 3 programmable engine analog sender inputs
- 2 air pressure sensor inputs
- 2 air temperature sensor inputs
- Adjustable sensor characteristics
- Logic level serial port
- MODBUS-RTU communications
- Password protected front panel programming
- Low panel depth, easy installation
- Wide operating temperature range
- Sealed front panel (IP65 with gasket)

Electric Compressor Controller / DK-45 MK2

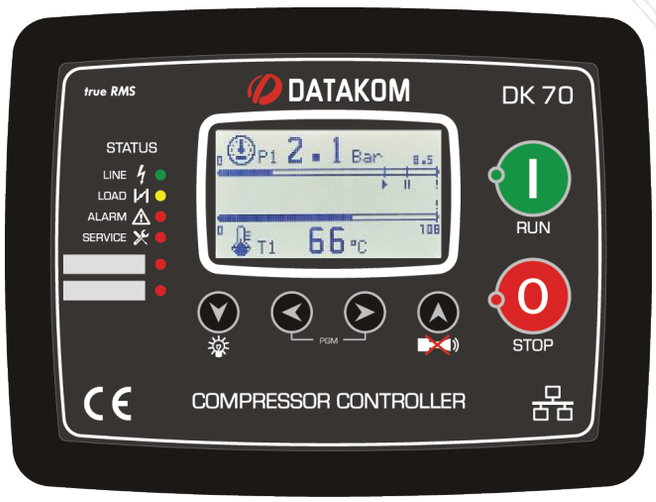
DK-45 is a high-tech product providing control of screw or piston type air compressors driven by electric motors. The unit incorporates all functions needed in a compressor control panel; thus, it eliminates the need for additional modules, resulting in lower panel cost.

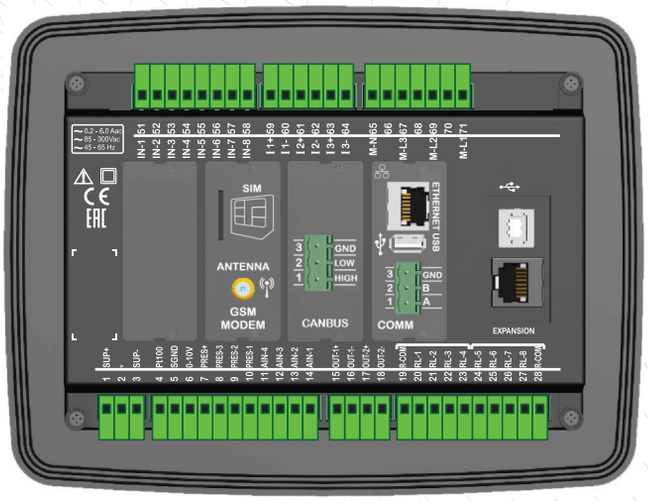
The unit is directly supplied from the 400/230V utility network. It provides fail contact and sensor supplies internally, removing the need for a supply transformer in the panel.

FEATURES

- Graphical LCD screen: 128x64 pixels, 2.9”
- Automatic operation from output pressure
- Voltage protection relay function
- Phase order protection function
- Flexible motor hours calculation algorithm
- 0-10V Analog speed control output
- Multiple compressor support
- Early start function preventing pressure drop
- Dryer control function
- Event records
- 5 independent service counters
- Supports various topologies
- Wide operating temperature range
- Sealed front panel (IP65 with gasket)
- Displays utility mains voltages
- No external transformer needed
- Star / Delta start-up
- Frequency inverter driving capability
- Load solenoid control
- 5 programmable relay outputs
- Optically isolated, programmable digital inputs
- 2 pressure sensor inputs
- 2 temperature sensor inputs
- Adjustable sensor characteristics
- USB communication port
- RS-485 MODBUS communication
- Password protected front panel programming
- Low panel depth, easy installation

Electric Compressor Controller / DK-70 MK2





DK-70 is a next generation compressor controller providing control of screw or piston type air compressors driven by electric motors. The same controller provides the combination of wide communication capabilities together with a reliable and low-cost design.

The unit incorporates all functions needed in a compressor control panel; thus, it eliminates the need for additional modules, resulting in lower panel cost.

The early start function analyzes the air consumption trend and runs the compressor before the pressure falls below the low limit. Using the Weekly Schedule Exerciser and Pressure Calendar functions, the compressor can be scheduled to work on given hours and days of the week with given set pressure values.

The unit is directly supplied from the 400/230V utility network. It provides fail contact and sensor supplies internally, removing the need for a supply transformer in the panel.

The unit complies and mostly exceeds world's tightest safety, vibration and environmental standards for the industrial category. Software features are complete with easy firmware upgrade process through USB port. The Windows based PC software allows monitoring and programming through USB, RS-485, Ethernet and GPRS. The Rainbow Scada web monitoring service allows monitoring and control of an unlimited number of gensets through any web browser.

FEATURES

- Ethernet (optional)
- GSM-GPRS-SMS (optional)
- WiFi (optional)
- Embedded Web Server
- Web programming and monitoring
- Multiple compressor support (optional)
- Modbus RS-485 (optional)
- RS-232 (optional)
- Modbus TCP/IP- SNMP
- USB Host (optional)
- USB Device

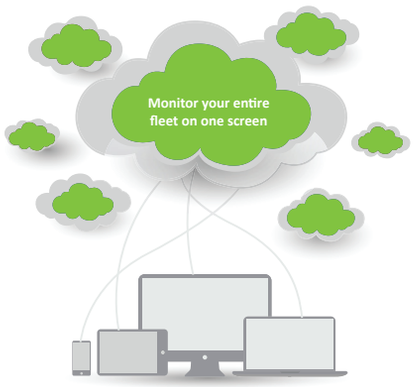
FUNCTIONALITIES

- Equal aging, multiple compressor support
- Weekly Schedule Exerciser and Pressure Calendar functions
- 5 independent service counters
- Star / Delta start-up
- 0-10V and 4-20mA Analog speed control output
- 8 programmable relay outputs
- 8 programmable digital inputs
- 3 pressure sensor inputs
- 4 temperature sensor inputs
- Adjustable sensor characteristics
- V&I harmonic distortion and scopemeter
- Sealed front panel (IP65 with gasket)

Remote Monitoring & Control

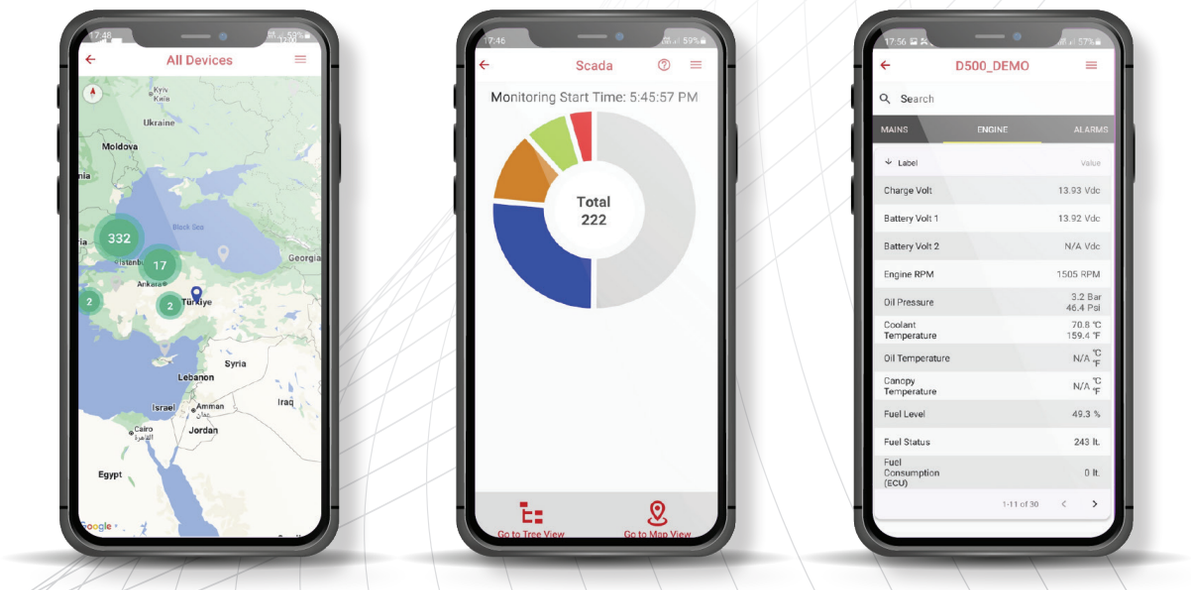
Remote Monitoring & Control

Rainbow Scada is an internet based universal remote monitoring and control program, flexible enough to integrate all kinds of intelligent control modules, independently of the manufacturer and function.



FEATURES

- Rainbow SCADA is Internet-based universal remote monitoring and control software
- Each type of control module can be integrated regardless of the manufacturer or function
- Plug-and-play with push structure
- Single server supports up to 60’000 devices
- Provides data security, data is sent to only server
- Uses internet-based interactive World map
- Real time display of status of devices are shown on the map, and on side panel
- Hierarchical configuration and clustering
- Remote control of devices
- Supports all Datakom products, which are integrated with DKG 210 gateway
- Supports all devices, which supports Modbus protocol, by integrating DKG 210 gateway
- Data recording, analysis and reporting
- Tablet and smartphone interfaces



Remote Monitoring / Modem and Gateway

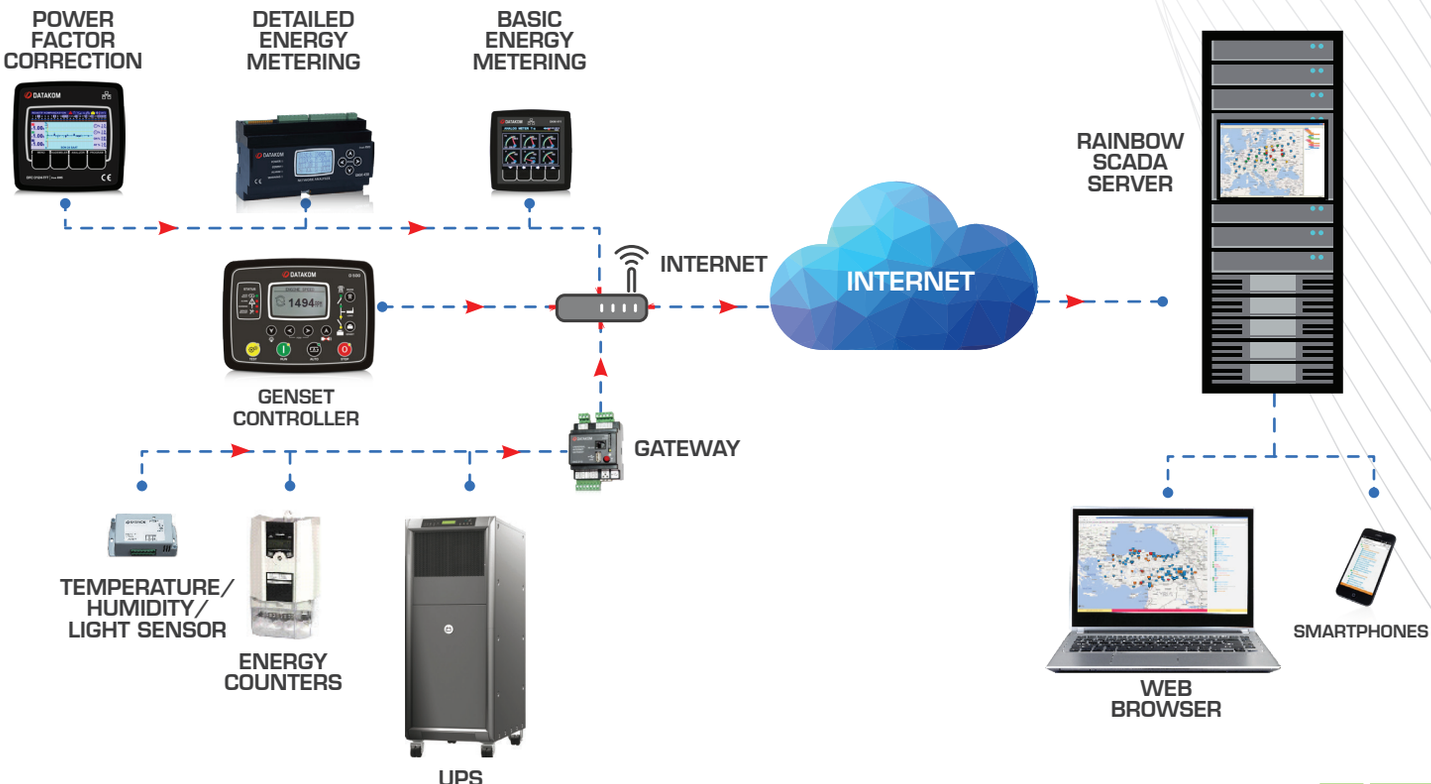
DKG-090 GSM-GPRS Modem

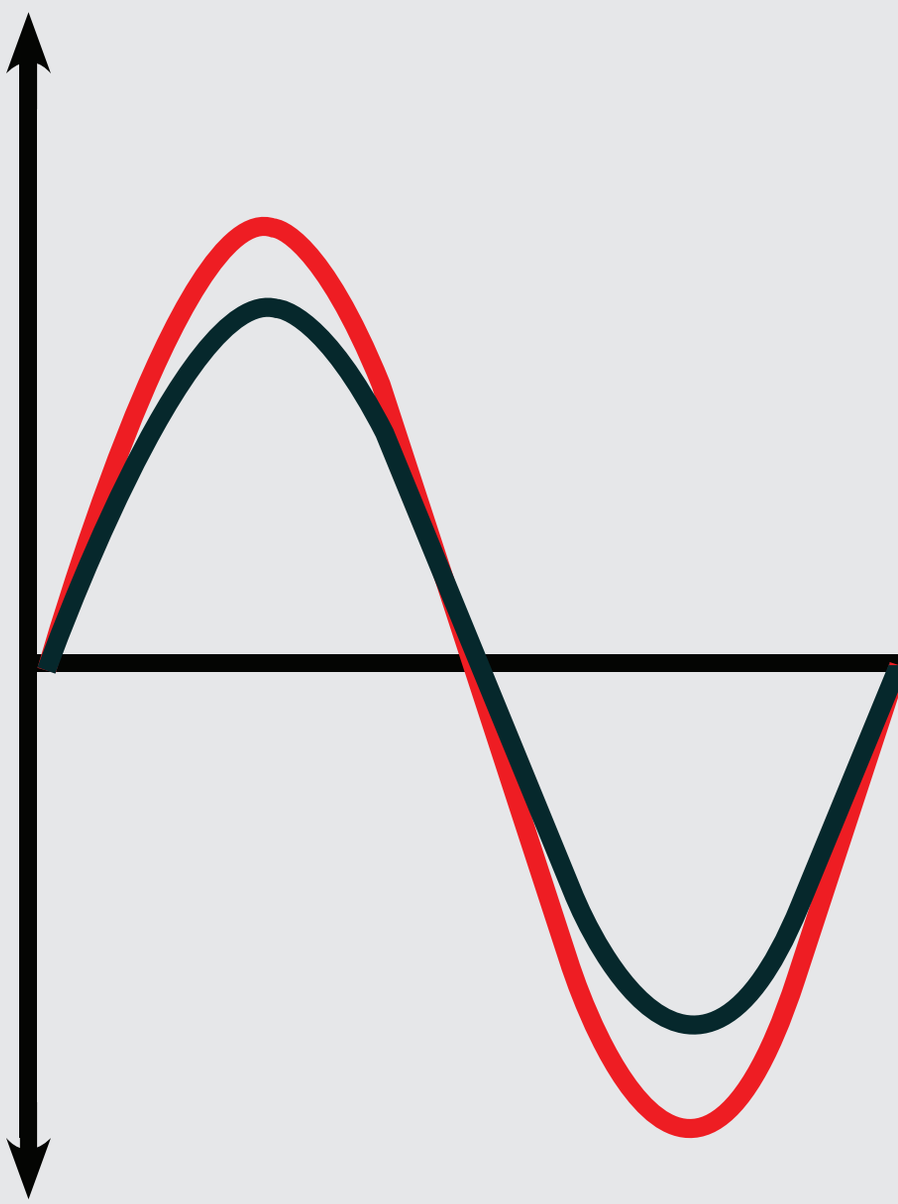
- Quad-band GSM/GPRS 850/900/1800/1900MHz
- GPRS Class 12 communication
- Magnetic antenna with 2m cable supplied together with module
- Allows remote monitoring, control, parameter setting through GPRS network
- Connects all Datakom IP enabled modules to Rainbow Scada
- Supports E-Mail and SMS sending
- Lock-up free operation with Datakom IP enabled models
- DIN Rail mounted

DKG-210 Gateway

- Plug & play IP system, easy installation
- Provides data security with dynamic IP
- AC and DC supply types available
- Free PC configuration software
- Internal GPRS modem with magnetic antenna
- Ethernet and GPRS connection support
- Dual RS-485 ports
- RS-232 port
- USB Host port
- 2 x Digital inputs
- 2 x Relay Outputs
- GPRS can back-up the Ethernet
- DIN rail mounted

DATAKOM RAINBOW SCADA REMOTE MONITORING SYSTEM





METERING & CONTROL

DFC-0124-TFT

Reactive Power Controller

FEATURES

- 5” color LCD display, 480x272 pixels
- 30 days long graphical compensation history
- User friendly menu system, ease of use
- Easy and fast setup
- Automatically corrects faulty voltage/current connections
- Automatic setup under load
- MV current measuring version available
- Adjustable measurement period: 10-100ms
- Power factor correction delay as low as 20ms
- 120 MIPS, 32 bit ARM core microprocessor
- 24-18-12 step output options
- All outputs can drive static contactors
- All outputs can drive 1-2-3 phase capacitors or reactors
- Always exact correction with SVC outputs
- 0.5% measurement accuracy, true RMS measurements
- 32 bit power measurements
- Operation in low currents (3mA)
- Ready for remote monitoring through Ethernet and GPRS
- Remote control of steps
- Remote parameter editing
- Automatic geo-positioning through GPRS
- Embedded website
- Long term data recording on USB flash memory
- 250 event records with date-time and measurements
- Independent target COS for the generator
- Display of 1-2-3 phased steps on screen
- Harmonic distortion display (31 harmonics)
- Oscilloscope, waveform display
- Battery backed-up real time clock
- User configurable display screens
- User configurable relay outputs
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Reduced panel depth: 69mm
- Sealed front panel (IP65 with gasket)

TECHNICAL SPECIFICATIONS

Power supply	: 85-305V AC, 45-65Hz
Power Consump.	: < 10 VA
Voltage	: 5- 300 V AC (F-N) 10- 520 V AC (F-F)
Current	: 0.003- 6.5 A AC
Frequency	: 30- 100 Hz
Accuracy:	
Voltage/Current	: % 0.5 + 1digit
Frequency	: % 0.2 + 1 digit
Power(kW,kVAr)	: % 1.0 + 2 digit
Power factor	: % 0.5 + 1 digit
SVC Outputs	: 50mA @ 12V DC
Current burden	: < 0.5VA (per phase)
Voltage burden	: < 0.1VA (per phase)
Dimensions	: 164x164x69mm (WxHxD)

COMMUNICATIONS

- Modbus RTU RS-485, 2400-115200 baud
- Modbus TCP/IP
- SNMP
- TCP/IP server
- TCP/IP client
- UDP
- SMTP
- SNTP
- Dynamic DNS support
- Embedded website, HTML
- GSM-SMS sending
- E-mail sending
- Central Monitoring through IP

COMMUNICATION PORTS

- Internal GPRS modem
- Internal Ethernet 10/100Mb
- RS-485 isolated (Modbus RTU)
- RS-232 for external GPRS modem
- USB Host for data recording on flash memory
- USB Device for PC connection

DFC-0124

Reactive Power Controller

FEATURES

- User friendly menu system, ease of use
- Easy and fast setup
- Automatically corrects faulty voltage/current connections
- Automatic setup under load
- MV current measuring version available
- Adjustable measurement period: 10-100ms
- Power factor correction delay as low as 20ms
- 100 MIPS, 32 bit ARM core microprocessor
- 24-18-12 step output options
- All outputs can drive static contactors
- All outputs can drive 1-2-3 phase capacitors or reactors
- Always exact correction with SVC outputs
- 0.5% measurement accuracy, true RMS measurements
- 32 bit power measurements
- Operation in low currents (3mA)
- Ready for remote monitoring through Ethernet and GPRS
- Remote control of steps
- Remote parameter editing
- Automatic geo-positioning through GPRS
- Embedded website
- Long term data recording on USB flash memory
- 250 event records with date-time and measurements
- Independent target COS for the generator
- Display of 1-2-3 phased steps on screen
- Harmonic distortion display (31 harmonics)
- Oscilloscope, waveform display
- Battery backed-up real time clock
- User configurable display screens
- User configurable relay outputs
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Reduced panel depth: 69mm
- Sealed front panel (IP65 with gasket)

COMMUNICATIONS

- Modbus RTU RS-485, 2400-115200 baud
- Modbus TCP/IP
- SNMP
- TCP/IP server
- TCP/IP client
- UDP
- SMTP
- SNTP
- Dynamic DNS support
- Embedded website, HTML
- GSM-SMS sending
- E-mail sending
- Central Monitoring through IP

COMMUNICATION PORTS

- Internal GPRS modem
- Internal Ethernet 10/100Mb
- RS-485 isolated (Modbus RTU)
- RS-232 for external GPRS modem
- USB Host for data recording on flash memory
- USB Device for PC connection

TECHNICAL SPECIFICATIONS

Power supply	: 85-305V AC, 45-65Hz
Power Consump.	: < 10 VA
Voltage	: 5- 300 V AC (F-N) 10- 520 V AC (F-F)
Current	: 0.003- 6.5 A AC
Frequency	: 30- 100 Hz
Accuracy:	
Voltage/Current	: % 0.5 + 1digit
Frequency	: % 0.2 + 1 digit
Power(kW,kVAr)	: % 1.0 + 2 digit
Power factor	: % 0.5 + 1 digit
SVC Outputs	: 50mA @ 12V DC
Current burden	: < 0.5VA (per phase)
Voltage burden	: < 0.1VA (per phase)
Dimensions	: 164x164x69mm (WxHxD)

DFC-0112
Reactive Power Controller

FEATURES
- 12 step outputs
- Always exact correction with SVC outputs
- 0.5% measurement accuracy
- Measurement period: 100ms
- Easy automatic setup
- Automatic correction of connection faults
- Automatic detection of step failures
- 250 event records with time stamp
- Alphanumeric LCD display, 2x16 characters
- Isolated RS-485 communication port
- Optional RS-232 GPRS modem port
- Reduced panel depth
- Sealed front panel (IP54)

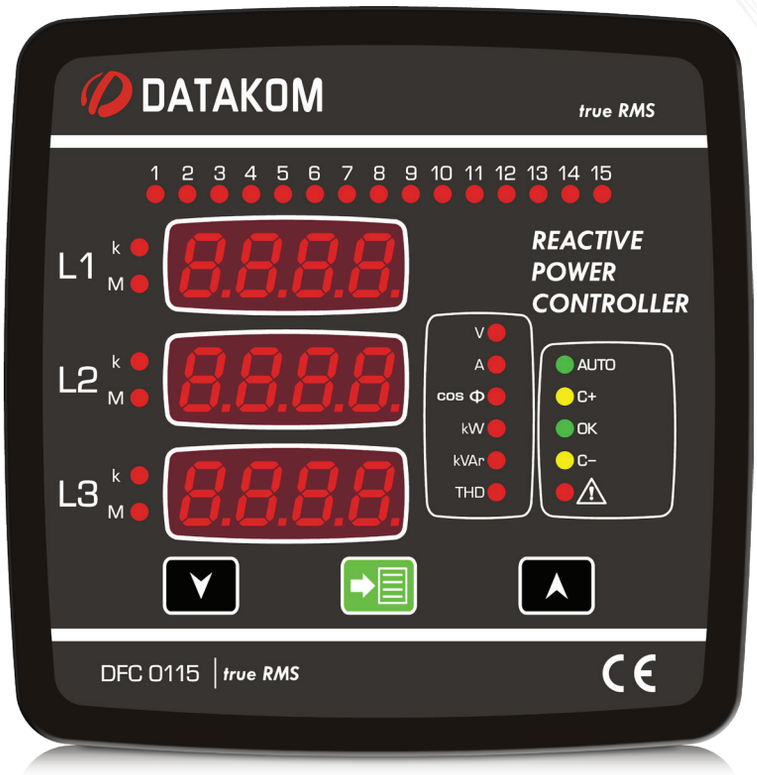
COMMUNICATION PORTS
- RS-485 isolated (Modbus RTU)
- RS-232 for external GPRS modem (optional)l

SVC OUTPUTS
SVC stands for “Static Var Compensation”.
The unit has 3 SVC outputs which are duty cycle controlled PWMs that control 3 reactors with a precision of 1000 steps.

Thus the controller is able to supply almost any required reactive power on each phase, enabling matching the exact required PF, independently from capacitor bank selection.

MEASUREMENTS
Phase to phase voltages : U12-U23-U31-Uavg
Phase to neutral voltages : V1-V2-V3-Vavg
Phase currents : I1-I2-I3-In-Iavg-Itot
Active power : P1-P2-P3
Reactive power : Q1-Q2-Q3
Power factor : cos1-cos2-cos3-tg1-tg2-tg3
Harmonic Distortion : THDI1-THDI2-THDI3

COMMUNICATIONS
- Modbus RTU RS-485, 2400-115200 baud
- TCP/IP client
- SMTP
- GSM-SMS sending
- e-mail sending
- Central Monitoring through IP
- Free configuration & monitoring software



DFC-0115

Reactive Power Controller
- 12 / 15 STEP OUTPUTS
- HARMONIC DISTORTION DISPLAY
- RS-485 Modbus RTU

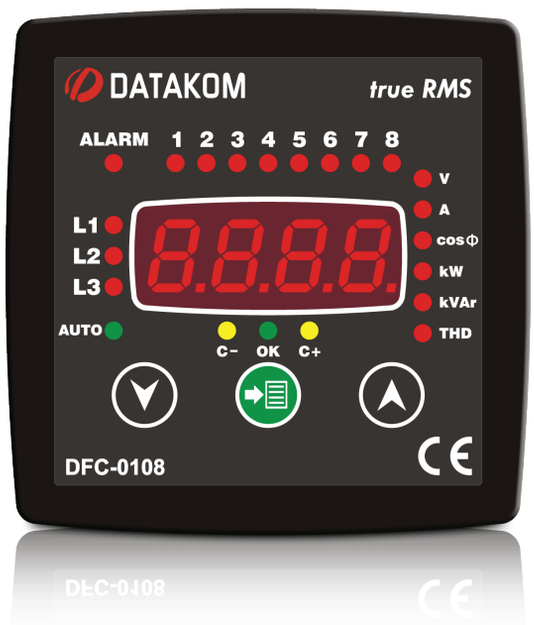
DFC-0115 is a high technology controller allowing the power factor of the installation to be stabilized to the requested value by switching capacitor and reactor banks through contactors. The unit allows also the visualization of various AC parameters like a network analyzer.
The unit makes harmonic analysis up to the 31th component. The THD values of all voltages and currents are available.
Stepping algorithms are selectable between various types. Thanks to the automatic setup function, the commissioning and programming are made easy.
Each step can be capacitors or reactors following requirements.
The unit fits into a standard 140x140mm panel opening.

FEATURES

- 12-15 step output options
- Cost effective and high performance
- All outputs can drive 1-2-3 phase capacitors or reactors
- True RMS AC measurements, high accuracy
- Easy commissioning through automatic setup
- Automatic CT reverse polarity correction
- Electronic/mechanical power counter selection
- Per-phase regulation capability
- Connection/disconnection of all banks at once
- Equal aging of contactors
- Per phase and total V-A-kW-kVAr-cos display
- THD display of all V-I parameters (31 harmonic)
- Genset voltage input (optional)
- Alarm relay output (optional)
- Isolated RS-485 Modbus RTU (optional)
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Reduced panel depth
- Wide temperature range
- Sealed front panel (IP54)
- Plug-in connection system, easy replacement

MEASUREMENTS

- Phase to phase voltages: L12-L23-L31
- Phase to neutral voltages: L1-L2-L3
- Phase currents: I1-I2-I3
- Network frequency: Fr
- Phase active power: P1-P2-P3
- Phase reactive power: Q1-Q2-Q3
- Phase apparent power: S1-S2-S3
- Phase power factor: cos1-cos2-cos3
- Total active power: ∑P
- Total reactive power: ∑Q
- Total apparent power: ∑S
- Total power factor: ∑cos
- Total Harmonics of any voltage or current
- Step bank ratings: CAP1...CAP15



DFC-0108

Reactive Power Controller

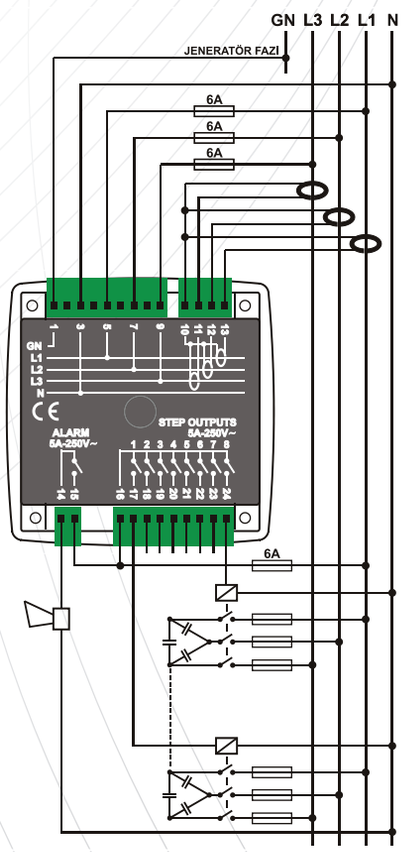
DFC-0108 is a high technology controller allowing the power factor of the installation to be stabilized to the requested value by switching capacitor banks through contactors. The unit allows also the visualization of various AC parameters like a network analyzer. The unit makes harmonic analysis up to the 31th component.
The THD values of all voltages and currents are available.
Stepping algorithms are selectable between various types. Thanks to the automatic setup function, the commissioning and programming are made easy.
The optimal stepping program provides longest contactor and capacitor life cycles.
The unit fits into a standard 96x96mm panel opening.

FEATURES

- Small size
- Cost effective and high performance
- True RMS AC measurements, high accuracy
- Easy commissioning through automatic setup
- Automatic CT reverse polarity correction
- Automatic detection of faulty banks
- Electronic/mechanical power counter selection
- Supports single-phase and tri-phase banks
- Per-phase regulation capability
- Connection/disconnection of all banks at once
- Dynamic update of capacitor ratings
- Adjustable delay timers
- Equal aging of contactors
- Per phase and total V-A-kW-kVAr-cos display
- THD display of all V-I parameters (31 harmonic)
- VT ratio for MV applications
- kW and kVAr tick output possibility
- Front panel programmable
- Low panel depth, easy installation
- Wide temperature range
- Sealed front panel (IP54)
- Plug-in connection system, easy replacement

MEASUREMENTS

- Phase to phase voltages: L12-L23-L31
- Phase to neutral voltages: L1-L2-L3
- Phase currents: I1-I2-I3
- Network frequency: Fr
- Phase active power: P1-P2-P3
- Phase reactive power: Q1-Q2-Q3
- Phase apparent power: S1-S2-S3
- Phase power factor: cos1-cos2-cos3
- Total active power: ∑P
- Total reactive power: ∑Q
- Total apparent power: ∑S
- Total power factor: ∑cos
- Total Harmonics of any voltage or current
- Step bank ratings: CAP1...CAP8



	Relay Output	Thyristor Output	SVC Output	Character LCD	Graphic LCD	RS-485	RS-232	USB Device	USB Host	Ethernet	GPRS Modem	Remote Monitor	E-mail	SMS
DFC-0112	12		■	■										
DFC 0112 - 485	12		■	■		■								
DFC 0112 - 485 - MODEM	12		■	■		■					■	■	■	■
DFC 0124 - 12R	12		■		■	■								
DFC 0124 - 12R - C	12		■		■	■	■	■	■	■		■	■	
DFC 0124 - 12R - M	12		■		■	■					■	■	■	■
DFC 0124 - 12R - C - M	12		■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 18R	18		■		■	■								
DFC 0124 - 18R - C	18		■		■	■	■	■	■	■		■	■	
DFC-0124-18R-M	18		■		■	■					■	■	■	■
DFC 0124 - 18R - C - M	18		■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 24R	24		■		■	■								
DFC 0124 - 24R - C	24		■		■	■	■	■	■	■		■	■	
DFC 0124 - 24R - M	24		■		■	■					■	■	■	■
DFC 0124 - 24R - C - M	24		■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 12T		12	■		■	■								
DFC 0124 - 12T - C		12	■		■	■	■	■	■	■		■	■	
DFC 0124 - 12T - M		12	■		■	■					■	■	■	■
DFC 0124 - 12T - C - M		12	■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 24T		24	■		■	■								
DFC 0124 - 24T - C		24	■		■	■	■	■	■	■		■	■	
DFC 0124 - 24T - M		24	■		■	■					■	■	■	■
DFC 0124 - 24T - C - M		24	■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 12R - 12T	12	12	■		■	■								
DFC 0124 - 12R - 12T - C	12	12	■		■	■	■	■	■	■		■	■	
DFC 0124 - 12R - 12T - M	12	12	■		■	■					■	■	■	■
DFC 0124 - 12R - 12T - C - M	12	12	■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - 18R - 6T	18	6	■		■	■								
DFC 0124 - 18R - 6T - C	18	6	■		■	■	■	■	■	■		■	■	
DFC 0124 - 18R - 6T - M	18	6	■		■	■					■	■	■	■
DFC 0124 - 18R - 6T - C - M	18	6	■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - OG - 24R - C	24		■		■	■	■	■	■	■		■	■	
DFC 0124 - OG - 24R - C - M	24		■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - OG - 24T - C		24	■		■	■	■	■	■	■		■	■	
DFC 0124 - OG - 24T - C - M		24	■		■	■	■	■	■	■	■	■	■	■
DFC 0124 - OG - 12R - 12T - C	12	12	■		■	■	■	■	■	■		■	■	
DFC 0124 - OG - 12R - 12T - C - M	12	12	■		■	■	■	■	■	■	■	■	■	■

SVC Inductive Reactor Driver/ SVC- 05 / SVC- 10 / SVC- 20 / SVC- 30

FEATURES

- Compact design
- Up to 30kVAr continuous power
- Up to 3x50A continuous current
- Reactor driving between 0-100% rating
- Immediate turn-on
- Zero current turn-off
- Electrically noiseless operation
- High I^2T, A^2S, di/dt resistance
- Overvoltage rating: 1600 V peak
- Overload capacity: 1.5 In during 1 minute
- Reactor thermostat input
- Led indicators
- Sınırsız anahtarlama ömrü
- Silent operation
- Maintenance free

The SVC-30 is a thyristor based switch designed for reactive power compensation panels.

It has 3 switching elements of 50A current carrying capacity and drives 3 single-phase inductive reactors.

The driver is designed to be connected to SVC outputs of DFC-0112 and DFC-0124 series reactive power control relays.

Thanks to the SVC system, inductive reactors can be driven between 0% and 100% duty cycle providing the exact amount of reactive energy to the grid.

With its 3 x single-phase structure, the unit helps to improve phase unbalances of the reactive power.

Main advantages of inductive load drivers are silent operation, fast switching, unlimited switching life and electrically noiseless operation.

The fan turns on only when necessary, providing longer life and energy efficiency.

	Rating	Voltage	Phase	Reactor Rating	Nominal Current	Operating Temp.	Automatic Fan	Temp. Input	Dimensions (mm)	Weight (kg)
SVC - 05	5kVAr	230 / 400V	3	3x1.7kVAr	8A	55°C		■	95x112x115	1.0
SVC - 10	10kVAr	230 / 400V	3	3x3.4kVAr	16A	55°C	■	■	95x164x112	1.7
SVC - 20	20kVAr	230 / 400V	3	3x6.7kVAr	30A	55°C	■	■	115x170x140	1.7
SVC - 30	30kVAr	230 / 400V	3	3x10kVAr	50A	55°C	■	■	115x250x160	2.9

Solid State Contactors / SSC-05 / SSC - 10 / SSC - 15 / SSC - 30 / SSC - 50 / SSC - 100

FEATURES

- Compact design
- Up to 100kVAr continuous power
- Up to 160A continuous current
- Fast switching: 20ms max.
- Capacitor and inductive reactor driving
- Zero Voltage Turn-on
- Zero current turn off
- Zero Voltage Turn-on
- Zero current turn off
- Electrically noiseless operation
- Silent operation
- Protects capacitor life
- Air cooling
- High I^2T / A^2S
- High di/dt
- Over voltage rating : 1600 V peak
- Overload capacity 1.5 In during 1 min
- Led switching indicators
- Designed for 230/400V networks
- Unlimited switching life
- Maintenance free n

The Datakom SSC series are solid state switches for capacitor banks and inductive reactors used in power factor compensation systems.

These devices turn-on at zero voltage difference and turn-off at zero current without any disturbing inrush currents.

They are the most convenient solutions for the compensation of electrical noise sensitive or fast varying reactive loads, in the range of 0.05 to 10 seconds.

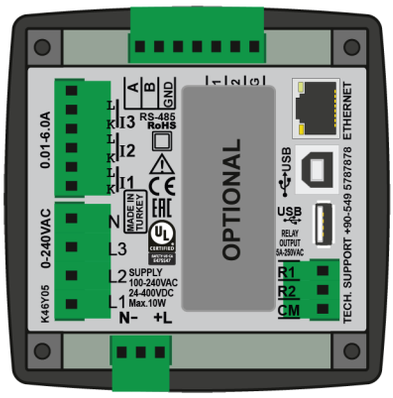
Static switches offer important advantages compared to electromechanic contactors. These are silent operation, fast switching,
unlimited switching life and electrically noiseless operation.

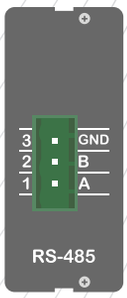
Thanks to integrated protection functions, devices are protected against overload and high temperature failures.

The fan turns on only when necessary, providing longer life and energy efficiency.

	Rating	Voltage	Switching Element	Current	Operating Temp.	Trigger Signal	Automatic Fan	Temp. Input	Dimensions (mm)	Weight (kg)
SSC-05	5kVAr	230 / 400V	3	3x8A	55°C	DC 10 - 28V		■	120x100x115	1.0
SSC-10	10kVAr	230 / 400V	3	3x16A	55°C	DC 10 - 28V	■	■	115x170x140	1.7
SSC-15	16kVAr	230 / 400V	3	3x24A	55°C	DC 10 - 28V	■	■	115x170x140	1.7
SSC-30/3	30kVAr	230 / 400V	3	3x50A	55°C	DC 10 - 28V	■	■	115x250x160	2.9
SSC-30/2	30kVAr	400V	2	2x50A	55°C	DC 10 - 28V	■	■	115x170x140	2.2
SSC-50/2	50kVAr	400V	2	2x80A	55°C	DC 10 - 28V	■	■	115x250x160	2.9
SSC-100/2	100kVAr	400V	2	2x160A	55°C	DC 10 - 28V	■	■	125x250x220	7.5

> Network Analysers / DKM-411 MK3





DKM-411 MK3

Network Analyser

The DKM-411 MK3 is an advanced precision metering device offering a 3.5" size, 320x240 pixel color TFT, together with unrivalled remote monitoring capabilities over internet in a compact and low-cost package.

The unit itself is a web server and can be opened through any browser for remote monitoring. The central monitoring feature allows monitoring of thousands meters from one central PC.

- COLOUR TFT SCREEN
- IP COMMUNICATIONS
- FLEXIBLE WITH PLUG-IN MODULES
- HARMONIC ANALYSIS
- SCOPEMETER

FEATURES

- True RMS measurements, 0.2% accuracy
- 3.5" TFT LCD, 320x240 pixels
- Harmonic distortion display (63 harmonics)
- Oscilloscope, waveform display
- Phasor diagram display
- Internal battery backed-up real time clock
- Max demand display
- User configurable display screen
- 2 configurable relay outputs
- Energy pulse output capability
- 2 opto-isolated, configurable digital inputs
- Dual active-reactive power counters
- Both mains/generator energy metering
- 4 quadrant energy counters
- Configurable user counters
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Universal supply input (both AC & DC)
- Reduced panel depth
- Sealed front panel (IP54)

COMMUNICATION PORTS

- Ethernet 10/100Mb
- RS-485 isolated (Modbus RTU)
- USB Host for data recording on flash memory
- USB Device for PC connection

PLUG-IN MODULES

- GSM Modem (2G-4G)
- Wi-Fi (802.11 b/g/n)
- RS-485 (2400-57600baud)

COMMUNICATIONS

- Modbus RTU RS-485 and Modbus TCP/IP
- SNMP
- TCP/IP server / client
- Embedded web server
- Web monitoring and programming
- GSM-SMS sending
- e-mail sending
- Central Monitoring through IP
- Free configuration & monitoring software

TOPOLOGIES

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

Network Analysers

DKM-409 Series

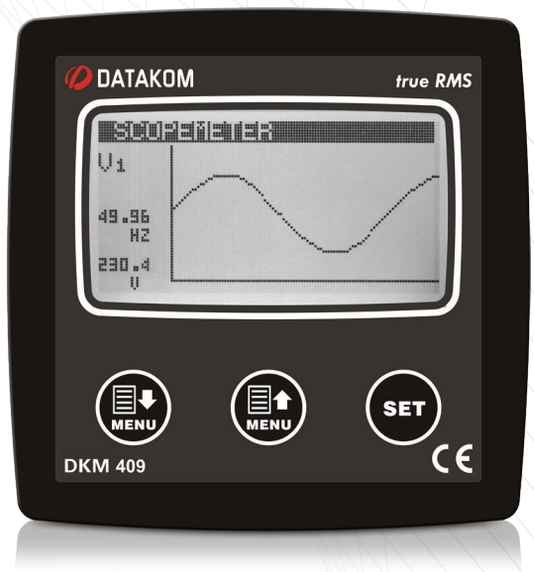
Network Analyser

The DKM-409 is a precision instrument designed for displaying various AC parameters in 3-phase distribution panels.

Thanks to its isolated RS-485 Modbus RTU communication port, the device is free from ground potential difference issues and measured parameters are safely transferred to factory and building automation systems.

The graphic screen allows display of waveforms and harmonic analysis graphs. Various display screens can be scrolled automatically.

The user configurable screen where any measured parameter set can be displayed, transforms the unit to a custom designed measurement panel. The unit fits into a standard 92x92mm panel opening



	LED Screen	B&W Screen (2.9")	Color Screen (3.5")	RS-485 Modbus	Digital Inputs	Digital Outputs	Analog Outputs	USB Port	Isolated Current Input	Ground Current Input	DC Supply	AC Supply	1 mA Measurement	Record Memory	Real Time Clock	Accuracy %	True RMS	Harmonics	Micro-SD Card	Ethernet	USB Host	GPRS Modem	Wi-Fi
DKM-409M	■			■	2	2					□	■				0,5	■	31					
DKM-409 - S		■									□	■				0,5	■	31					
DKM-409 - S4		■		■							□	■				0,5	■	31					
DKM-409		■		■	2	2					□	■				0,5	■	31					
DKM-409-T-S		■							■		■	■	■	4MB	■	0,5	■	49					
DKM-409-T-S4		■		■					■		■	■	■	4MB	■	0,5	■	49					
DKM-409-T		■		■	4	2			■		■	■	■	4MB	■	0,5	■	49					
DKM-409 - Pro		■		■	4	2	2	■		■	□	■		1MB	■	0,5	■	31	■				
DKM-409 - Pro - At - AC		■		■	4	2	3		■		□	■	■	4MB	■	0,5	■	49					
DKM-411 MK3			■	■	2	2		■			■	■			■	0,2	■	63		■	■	□	□

Network Analysers

DKM-401

Multimeter

The DKM-401 is a low cost precision instrument designed to display various AC parameters in a 3-phase distribution panel.

The standard unit is designed for 230/400V network. A different version is available for 120/208V systems.
The unit fits into a standard 92x92mm panel opening.

FEATURES

- True RMS measurements
- Class 0,5
- Flush mount
- Front panel programming
- Reduced panel depth
- Wide operating temperature range
- Sealed front panel (IP54)
- Plug-in connection system
- Low cost

DKM-405

Network Analyser

The DKM-405 is a low cost precision instrument designed to display various AC parameters in a 3-phase distribution panel.

The standard unit is designed for 230/400V network. A different version is available for 120/208V systems.

FEATURES

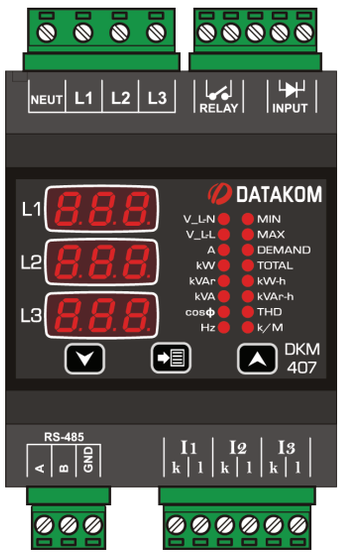
- True RMS measurements
- Total harmonic distortion display
- Max demand display
- Configurable relay output
- Energy pulse output capability
- Optically isolated, configurable digital input
- Active-reactive power counters
- Hour counter
- Voltage transformer ratio for MV applications
- Front panel programming
- Reduced panel depth
- Wide operating temperature range
- Sealed front panel (IP54)
- Plug-in connection system

MEASUREMENTS

Phase to phase voltages: U12-U23-U31
Phase to neutral voltages: V1-V2-V3
Phase currents: I1-I2-I3
Phase active power: P1-P2-P3
Phase reactive power: Q1-Q2-Q3
Phase apparent power: S1-S2-S3
Phase power factor: cos1-cos2-cos3
Total active power: ∑P

Energy Quality

Network Analysers



DKM-407

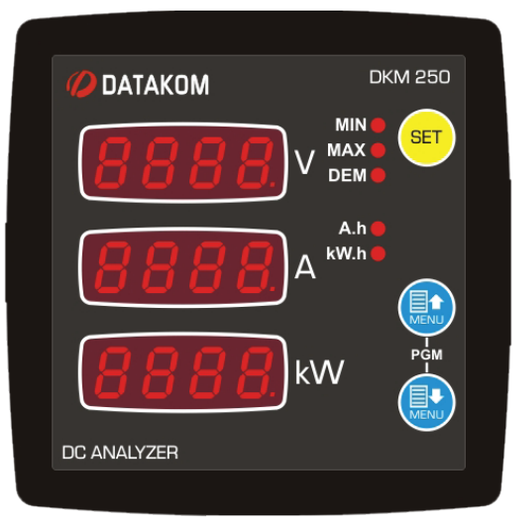
DIN RAIL TYPE NETWORK ANALYSER

The DKM-407 is a DIN rail mounted precision and low cost unit allowing measurement and remote monitoring of AC parameters of a distribution panel.
Main applications are remote monitoring and energy management.
The unit is supplied between L1 and Neutral terminals. Thanks to the supply range of 85- 305V, it is not affected by voltage fluctuations and is capable of operating in any network.

FEATURES

- True RMS measurements
- 0.5 % measurement precision
- Total harmonic distortion display
- Demand, Min and Max records
- Fully isolated RS-485 serial port
- MODBUS-RTU communications
- Programmable relay output
- Energy pulse output capability
- Isolated, programmable digital input
- kW and kVAr energy counters
- Hours run counter
- VT ratio for medium voltage applications
- Front panel programming
- Wide operating temperature range
- 2 part connectors

DC Enegy Analyser



DKM-250

DC ENERGY ANALYZER & EARTH LEAKAGE DETECTOR

The DKM-250 is a precision instrument designed for measuring, displaying and remote monitoring earth leakage and various DC parameters in a DC distribution box.

FEATURES

- Displays earth leakage in %
- Various current input options
- 2 programmable relay outputs
- 2 programmable digital inputs
- Programmable 4-20mA analog output
- Demand, Min & Max records
- Fully isolated RS-485 serial port
- MODBUS-RTU communications
- Bidirectional current & power measurement
- Bidirectional kW-h energy counter
- Bidirectional A-h counter
- Hours run counter
- Front panel programming
- Wide operating temperature range
- Sealed front panel (IP65 with gasket)
- Two part connection system

Multiple Network Analyser / DKM-430

DKM-430

Multiple Network Analyser

- EQUIVALENT TO 10 ANALYSERS
- 30 x CT INPUTS
- 1MB RECORD MEMORY
- HARMONIC ANALYSIS
- INTERNAL GPRS MODEM

DATAKOM DKM-430 is a precision instrument allowing the measurement, recording and remote monitoring of 10 3-phased or 30 single-phased feeders (or any combination of these two) in AC distribution panels. The number and flexibility of current inputs allow the unit to be used in a variety of applications like power distribution network monitoring, ISO50001 energy efficiency or home and factory automation. The unit can be mounted on a DIN rail or backpanel. It can be easily adapted to existing panels.

Current inputs of the unit are designed for 0.1A output current transformers (CTs). CTs are shipped together with the unit and can be installed on cables in order to minimize space occupation in distribution cabinets.

Each CT can be assigned to any phase voltage and any virtual analyser. Inputs can be moved between analysers without modifying connections. Independently adjustable current limits for each phase provide pre-alarms and help to reduce energy failures. All measurement values and program parameters may be displayed on the graphic LCD screen.

The unit logs all fault conditions together with date and time information. The internal real time clock is capable of running 10 years without energy.

The astronomical relay function calculates sunrise and sunset times precisely for daylight based applications.

Any fault or warning signal can be connected to digital inputs of the unit. Input functions are selected from list.

Any function can be assigned to relay outputs of the unit. Relays may be remotely operated through the central monitoring program.

The isolated RS-485 MODBUS RTU data port is unaffected by ground potential differences and allows safe transmission of information to monitoring and automation systems.

The optional internal GPRS modem allows remote monitoring and control of the distribution panel without the use of any additional module. Parameter setting of the unit is made either manually or through the USB port using the free PC program. The unit records electrical parameters in its 1MB internal memory with programmed period. Records are read through Modbus.

FEATURES

- Equivalent to 10 3-phase analysers
- True RMS measurements
- 0.5% measurement precision
- Internal record memory: 1MB
- Internal battery backed-up real time clock
- Astronomical relay function
- Isolated RS-485 serial port
- MODBUS-RTU communication
- Internal GPRS modem (optional)
- 2 programmable relay outputs
- 2 optically isolated programmable inputs
- Active-reactive energy counters
- USB port for programming
- Free programming software
- Graphic LCD, 128x64 pixels
- Wide supply range: 85-305VAC / 88-450VDC
- DC supply version available
- Wide operating temperature range

Ammeter, Frequencymeter, Voltmeter

	V(Phase)	I(Phase)	Hz	kW	PF	Display Number	96x96mm	96x48mm	72x72mm
DM-0301	1	1	■	■	■	3			■
DA-0303		3				3			■
DVF-0303	3		■			3			■
DM-0101	1	1	■	■	■	1	■	■	■
DA-0103		3				1		■	■
DA 0101		1				1	■	■	■
DV 0101	1		■			1	■	■	■
DF 0101			■			1	■	■	■
DVF 0101	1		■			1		■	■
DVF 0103	3		■			1		■	■

Energy Quality / Single-Phase Digital Multimeter

DM-0301-72

DM-0101-72

DM-0101-48

DM-0101-96

FEATURES

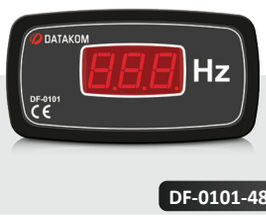
- True RMS measurements
- Accuracy: V-A-Hz: 0.5% kW: 1.0%- pf: 0.5%
- 5A current transformer input
- Programmable current transformer ratio
- kW-meter or pf-meter feature
- Operation Temperature -40 / +70 °C
- Flush mount
- Sealed front panel (IP54)
- Reduced panel depth
- Low cost

DATAKOM

Energy Quality/ Digital Frequencymeter

DF-0101-96

DF-0101-72

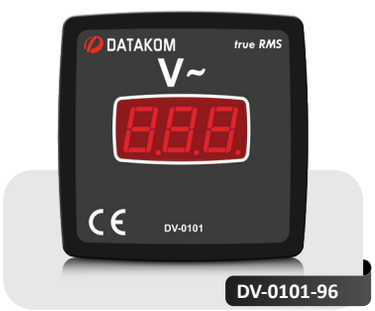


DF-0101-48

FEATURES

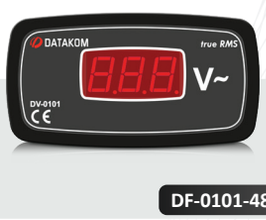
- 0.5% accuracy
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Sealed front panel (IP54)
- Low cost

Energy Quality / Single-Phase Digital Voltmeter



DV-0101-96

DV-0101-72



DF-0101-48

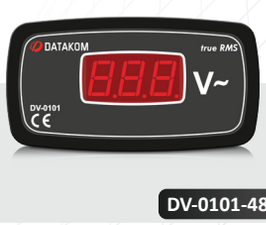
FEATURES

- 0.5% accuracy
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Sealed front panel (IP54)
- Low cost

Energy Quality / Single-Phase Digital Voltmeter (Isolated supply)

DV-0101-96-I

DV-0101-72-I



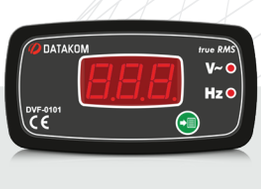
DV-0101-48-I

FEATURES

- 0.5% accuracy
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Sealed front panel (IP54)
- Isolation voltage:1000VAC/1dk
- Mesurement range: 0-600VAC
- Low cost

Energy Quality / Single-Phase Volt / Frequencymeter

DVF-0101-72



DVF-0101-48

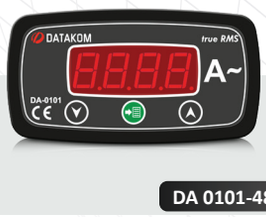
FEATURES

- 0.5% accuracy
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Reduced panel depth
- Sealed front panel (IP54)
- Low cost

Energy Quality / Single-Phase Digital Voltmeter

DA 0101-96

DA 0101-72



DA 0101-48

FEATURES

- True RMS
- 0.5% accuracy
- 5A current transformer input
- Programmable current transformer ratio
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Reduced panel depth
- Sealed front panel (IP54)
- Low cost

Energy Quality / 3 Phase Digital Ammeter

DA 0303-72

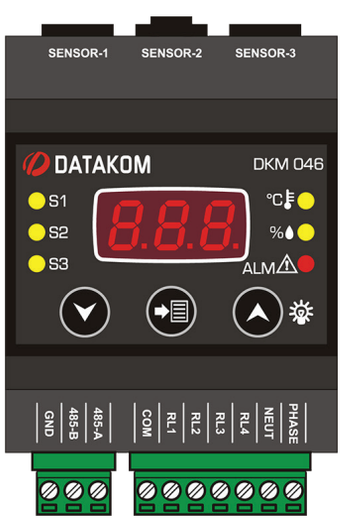
DA 0103-72

DA 0103-48

FEATURES

- True RMS
- 0.5% accuracy
- Operation Temperature -40 / +70 °C
- Plug-in connection system
- Reduced panel depth
- Sealed front panel (IP54)
- Low cost

Energy Quality / Temperature & Humidity Controller



DKM-046

TEMPERATURE & HUMIDITY CONTROLLER

DKM-046 is a DIN Rail mounted precision unit capable of measuring temperature and humidity in three different locations, provide protection with 4 relay outputs and serve data to remote monitoring and control systems.

Sensing modules are separated from the base unit, connecting with cables. One sensor comes together with the base unit. Additional sensors may be purchased separately.

FEATURES

- Supports 3 temperature & humidity sensors
- AC and DC auxiliary supply versions
- Programmable relay outputs: 4
- Temperature and relative humidity control
- Independent cooling / heating / humidification / dehumidification functions for each sensor
- Temperature measuring range:-40...+80°C
- Humidity measuring range: 0% ... 100%
- Humidity accuracy: ±3.5% , 20 ... +80%
- Temperature accuracy: ± 1°C, 0 ... +60 °C
- Factory calibrated sensors
- Front panel programming
- Supports Modbus programming
- DIN rail mounted, easy installation
- Operating temp range:-20°C ... +70 °C
- Two part connection system

DPR-400

Protection Relay

DPR-400 is a directional protection relay in standard panel dimensions. Thanks to its low depth, it provides space economy in panels.

The relay is available with the 4.3" color graphic screen and 128x64 monochrome screen options.

The DPR-400 features dual current measurement circuits. It is both a precise analyzer and a 50xIn protection relay.

Through RS-485 and ethernet comports, the unit is easily connected to Scada and automation systems. Parameter adjustment is done through the USB or ethernet ports.

The basic unit offers 4 digital inputs and 4 relay outputs. Additional 16 inputs and 16 relay outputs are optionally available.

FEATURES

- 4.3" color graphic screen, 480x272 pixels
- 128x64 graphical LCD display
- Accurate power analyzer (Class 0.5%)
- 4 quadrant energy counters
- Multiple protection curves
- Self test, internal failure monitoring
- Cold reclosure
- Configurable digital inputs
- Configurable relay outputs
- Load detecting relay outputs
- 3 independent adjustment sets
- Multiple languages
- All parameters front panel adjustable
- 3 level password protection
- Setup through USB, ethernet and RS-485
- Free PC program for setup
- 16 x configurable front panel leds
- Manual & Scada driven closing and opening
- Firmware upgrade through USB
- IP65 protection (with optional gasket)
- Low panel depth, only 55mm

STANDARDS

- EN60255 Electrical Relays
- EN61010 Safety Requirements
- EN61326 Electromagnetic Compatibility
- EN60068 Environmental Conditions
- EN60529 Protection Levels

PROTECTION CURVES

- IEC Standard / Very / Extreme Inverse
- UK Long Term Inverse
- IEEE Medium / Very / Extreme Inverse
- US Normal Inverse, Short Time Inverse

ANSI CODE	DESCRIPTION
27/27S	Under Voltage (Ph-Ph / Ph-N)
46	Negative Sequence Overcurrent
46BC	Broken Conductor
47	Negative Sequence Over Voltage
49RMS	Thermal Overload
50,51	Overcurrent
50N,51N	Ground Overcurrent
50BF	Interrupter Failure
59	Over Voltage (Ph-Ph / Ph-N)
67	Directional Overcurrent
74	Circuit Connection Monitoring
79	Reclosure
81O	High Frequency
81U	Under Frequency
CLP	Cold Load Pickup

DPR-350

NETWORK ANALYZER & PROTECTION RELAY

DPR-350 is a state of the art network analyzer and directional protection relay in 96x96mm standard panel dimensions. Thanks to its low depth, it provides space economy in panels. The large graphic screen allows simultaneous display of multiple measurements.

The DPR-350 features dual current measurement circuits. It is both a precise analyzer and a 25Amp protection relay. Protection curves are selected between various IEC, ANSI, UK and US types. Multiple curves may be enabled simultaneously.

Through RS-485 comport, the unit is easily connected to Scada and automation systems.Parameter adjustment is done through USB port.

The unit records all electrical parameters with adjustable period in its 1MB record memory (optional 16MB). Records are read through Modbus.

The unit offers 4 digital inputs, 3 analog outputs and 2 relay outputs. Analog outputs can give any measured parameter in 4-20mA format.

FEATURES

- 128x64 pixel graphic screen
- Accurate MV power analyzer (Class 0.5%)
- 4 quadrant energy counters
- Multiple protection curves
- 1MB record memory
- Self test, internal failure monitoring
- Cold reclosure
- Configurable digital inputs
- Configurable relay outputs
- Configurable analog outputs
- 2 independent adjustment sets
- Multiple languages
- All parameters front panel adjustable
- 3 level password protection
- Setup through USB and RS-485
- Free PC program for setup
- Manual & Scada closing and opening
- Firmware upgrade through USB
- Wide supply voltage range: 19-150VDC
- IP65 protection (with optional gasket)
- Low panel depth, only 53mm

PROTECTION CURVES

- IEC Standard / Very / Extreme Inverse
- UK Long Term Inverse
- IEEE Medium / Very / Extreme Inverse
- US Normal Inverse, Short Time Inverse

COMMUNICATIONS

- USB 2.0 PC connection
- RS-485 (isolated) 2400-115200 baud
- Modbus RTU
- IEC60870-5-103

RECORD MEMORY

- 35 x event records with time stamp
- 15.000 x periodic records with time stamp
- Adjustable record period
- Total 1MB record memory

ANALYZER MEASUREMENTS

- Phase voltages: V1-V2-V3-U12-U23-U31
- Phase currents: I1-I2-I3-Inötr-Ignd
- Active power: P1-P2-P3-∑P
- Reactive power: Q1-Q2-Q3-∑Q
- Apparent power: S1-S2-S3-∑S
- Power factor: cos1-cos2-cos3-∑cos
- Frequency: F
- Negative sequence currents and voltages
- Zero sequence currents and voltages
- T32Q value

STANDARDS

- EN60255 Electrical Relays
- EN61010 Safety Requirements
- EN61326 Electromagnetic Compatibility
- EN60068 Environmental Conditions
- EN60529 Protection Levels

Protection Relays / DPR 02 / DPR 03 / DPR 05 / DPR 06

Protection Relays

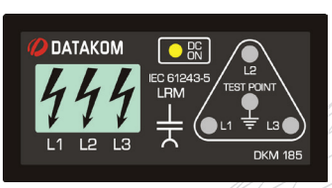
DPR-02/03/05/06 relays are three-phase voltage protection relays designed to be used for voltage protection in distribution substations, generators, motors,transformers and capacitors in compensation systems.

TECHNICAL SPECIFICATIONS

Supply Voltage	: Capacitive 3 phase
Frequency Range	: 47-63Hz
Power Consumption	: 30VA / 2W (max)
Ölçüm Metodu	: True RMS
Trip Delay Setup:	: 0.5 – 20 sec. adjustable
Reset Delay Setup	: 0.5 – 20 sec. adjustable
Relay Output	: 6A @ 277V-AC, 1800VA, 300W
Terminal wire range	: maks 2.5mm² (12AWG)
Screw-on Force	: 0.4 Nm (3.6 lb.in)
Operating temp	:-30oC ile +70 oC arası
Maximum humidity	: % 95 (non-condensing)
Dimensions	: 36,0x90,6x58,4mm
Weight	: 100 gr (approx))

	Phases	Topology	Low Voltage Protection	High Voltage Protection	Phase Order Protection	Phase Loss Protection	Adjustable Trip Delay	Adjustable Reclose Delay	DIN Rail Mount	Adjustable Voltage Low Limit	Adjustable Voltage High Limit	Asymmetry Protection	6A/277V AC Relay Output	Output Type
DPR-02 Phase Protection	3	Ph-N	■	■	■	■	■	■	■	■	■		■	NC-NO
DPR-03 Phase Protection	3	Ph-Ph	■	■	■	■	■	■	■	■	■		■	NC-NO
DPR-05 Engine Protection	3	Ph-N	■	■	■	■	■	■	■			■	■	NC-NO
DPR-06 Engine Protection	3	Ph-Ph	■	■	■	■	■	■	■			■	■	NC-NO

Capacitive Voltage Indicator (LRM)



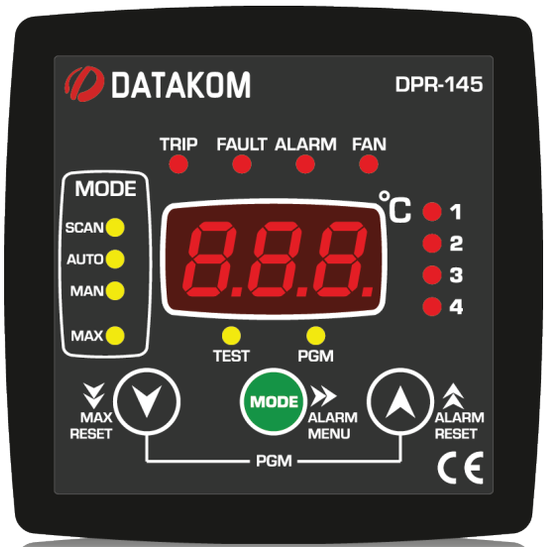
The DKM-185 is a passive voltage detector designed for medium voltage systems.

It indicates visually the existence of high voltage on the 3-phase busbar without the need of an external supply.

It conforms to IEC 62271-213 (LRM) standard.

FEATURES

- Wide operating voltage range (1kV-52kV)
- EN 62271-213 LRM conformal detection
- Independent indicators for each phase
- Test terminals (3 phase + ground)
- 1 relay output (5Amp)
- DC-ON led indicator
- Wide DC supply range (19-150VDC)
- Isolated power supply
- Wide operating temperature range (-20...+70°C)



DPR-145
TEMPERATURE PROTECTION RELAY

PT100 INPUTS: 4
RELAY OUTPUTS: 4
RS-485 MODBUS PORT
19-150VDC SUPPLY

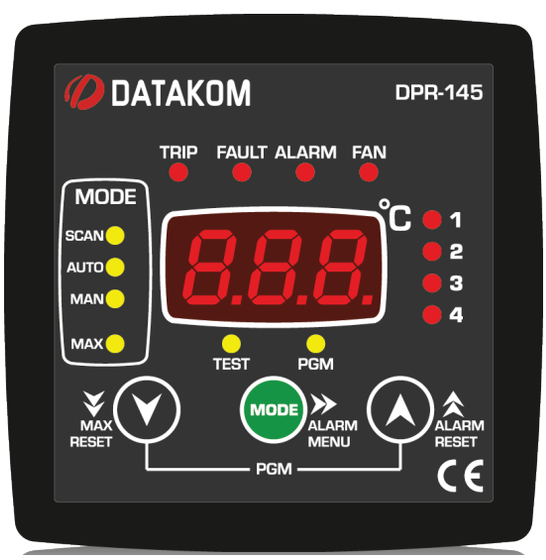
DPR-145 is a precision unit designed for the temperature protection of dry type or resin filled MV transformers. The unit offers a high degree of protection against electromagnetic disturbances.

The unit has 4 temperature inputs of PT100 type.
Three of them are used for the transformer protection.

The fourth input may be used as core temperature protection or ambient temperature monitoring. Alarm and trip levels of the unit are independently adjustable for first 3 sensors and the fourth sensor input.

FEATURES

- 1 degrees C measurement precision
- 4 x PT100 analog inputs
- Allows cable length compensation
- Automatic detection of sensor failures
- Automatic and manual self test
- 4 x relay outputs, 5A/250Vac
- Fully isolated RS-485 serial port
- MODBUS-RTU communication
- Recording of maximum temperatures
- Front panel programmable
- 2 alarm thresholds for channels 1-2-3
- 2 alarm thresholds for channel 4
- Easy to read, 3 digit 14mm led display
- Wide supply voltage range: 19-150VDC
- AC supply version available (85-305VAC)
- Reduced panel depth, easy to install
- Wide operating temperature range,-20 to +70°C
- Sealed front panel (IP65 with gasket)
- 2 part connection system



DPR-165
TRANSFORMER STEP & TEMPERATURE INDICATOR

DPR-165 is a microprocessor controlled precision instrument displaying steps and temperatures of MV/HV transformers. The unit has a high degree of protection against electromagnetic noises.

The unit determines the step by measuring the resistive converter of the transformer.

FEATURES

- Up to 50 steps
- Installation without energy interruption
- Accurate step measurement input, 10 bit
- 16 bit analog output accuracy
- 10 bit analog input accuracy
- PT100 temperature input, 1°C accuracy
- Cable length compensation
- Automatic sensor failure detection
- 2 relay outputs, 6A/250Vac
- Fully isolated RS-485 serial port
- MODBUS-RTU communications
- Logging of maximum temperature
- Front panel adjustable parameters
- Temperature alarm threshold level
- Easy to read, 4 digits 14mm led display
- Minimum 20 years data retension
- Wide supply range: 88-400 VDC (85-270VAC)
- Low panel depth, easy installation
- Wide operating temp. range,-20...+70°C
- Sealed front panel (IP65 with gasket)
- Two part connection system

DKM-208 / DKM-224

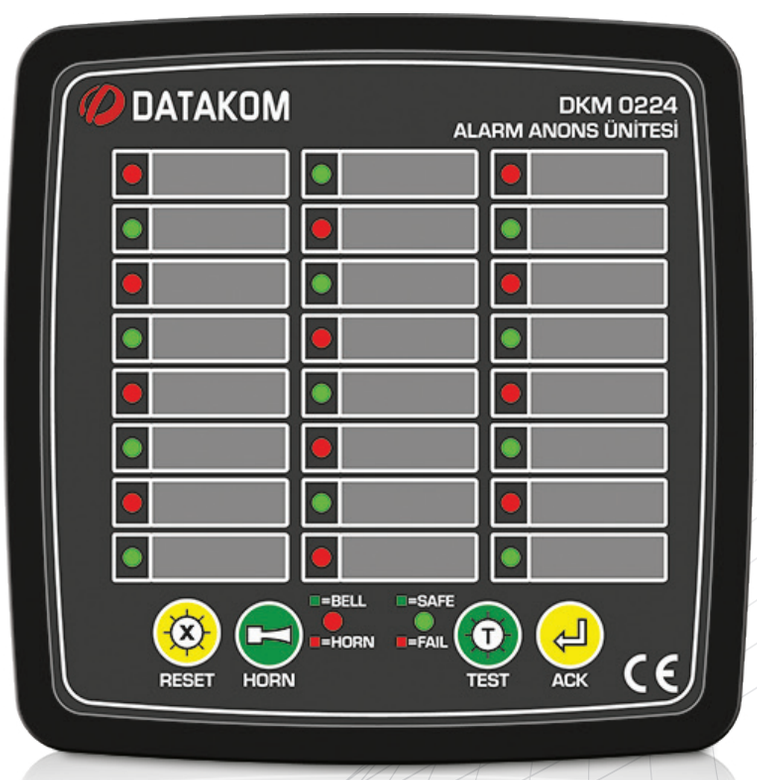
ALARM ANNUNCIATORS

The DKM-0224 is a 24 channel, 144x144mm alarm annunciator, designed to be used in energy and automation systems. Optically isolated digital inputs are equipped with noise suppressing filters and are capable of operating smoothly in high electrical noise environments.

The detection delay of inputs are adjustable between 2 and 500ms.
The module features 3 relay outputs rated at 5Amp. Relays provide Horn, Bell and Internal Failure functions. An additional buzzer is provided inside the unit for audible alarms.

The unit features ultra-bright, bicolor (red-green) led indicators. Alarms may be assigned to different priority levels in order to reduce confusion. Using front panel pushbuttons, alarms may be acknowledged and reset, the unit tested.

The configuration of the module is performed with DIP Switches placed on the back panel.



ALARM LEDS

FAST FLASH: at the first detection of the fault or if fault is detected at LED steady on condition.
SLOW FLASH: activated when the ACK (alarm acknowledge) pushbutton is pressed and if the fault signal is still active.
STEADY ON: activated if the fault signal disappears at SLOW FLASH condition. Alarm led will fast flash fast if fault signal reoccurs.
LED OFF: the alarm led turns off when RESET pushbutton is pressed and fault signal is not present

RELAY OUTPUTS

HORN RELAY: If any “red” alarm led turns on, then the horn relay will also turn on. The relay turns off when ACK pushbutton is pressed. The HORN RELAY can be made active/passive by holding pressed the HORN button for 3 seconds.
BELL RELAY: If any “green” alarm led turns on, then the bell relay will turn on. The relay turns off when ACK pushbutton is pressed.
WATCHDOG RELAY: At startup the relay turns on. If the board fails, then the wathcdog relay turns off.

ТАМОЖЕННЫЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ТС RU C-TR.HA10.B.01761

Серия RU № 0758070

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КОД ТН ВЭД ТС 8537 10 910 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза ТР ТС 004/2011 "О безопасности низковольтного оборудования"; Технического регламента Таможенного союза ТР ТС 020/2011 "Электромагнитная совместимость технических средств"

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ протокола испытаний № 2769-2989-18 от 08.11.2018 года, выданного испытательной лабораторией «ИЛ БТ» Общество с ограниченной ответственностью «Испытательная лаборатория электротехнической продукции ЭМС», аттестат аккредитации регистрационный № RA.RU.21МЛ31; акта анализа состояния производства от 01.11.2018 года органа по сертификации продукции машиностроения Общество с ограниченной ответственностью «Эксперт-Сертификация»; руководства по эксплуатации; паспорта.

Схема сертификации: 1с

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СРОК ДЕЙСТВИЯ С 08.11.2018 **ПО** 07.11.2023 **ВКЛЮЧИТЕЛЬНО**

М.П.

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Certificate of Registration

This is to certify that the Quality Management System of

Datakom Elektronik Mühendislik Sanayi ve Ticaret Anonim Şirketi

Şerifali Mahallesi Bayraktar Bulvarı Kutup Sokak No:26 34775 Ümraniye, İstanbul, Türkiye

applicable to

Design, Manufacture, Marketing, Repair and Service of electronic equipment

has been assessed and registered by NQA against the provisions of

ISO 9001:2015

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA

Certificate No:	22547
ISO Approval Date:	10 April 2007
Reissued:	20 March 2024
Valid Until:	29 March 2027
EAC Code:	19

Managing Director

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Certificate Number	20140725-E314374
Report Reference	E314374-20101224
Issue Date	2014-JULY-25

Issued to: DATAKOM ELEKTRONIK MUHENDISLIK LTD STI
SERIFALI MAHALLESI, BAYRAKTAR BULVAR
KUTUP SOKAK NO:26
UMRANIYE
34775 TURKEY

This is to certify that representative samples of COMPONENT - ENGINE GENERATOR CONTROLS
SEE ADDENDUM PAGE

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 6200, Controls for Stationary Engine Driven Assemblies
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William R. Carney, Director, North American Certification Programs
UL LLC

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Certificate of Registration

This is to certify that the Environmental Management System of

Datakom Elektronik Mühendislik Sanayi ve Ticaret Anonim Şirketi

Şerifali Mahallesi Bayraktar Bulvarı Kutup Sokak No:26 34775 Ümraniye, İstanbul, Türkiye

applicable to

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ISO14001 : 2015

This registration is subject to the company maintaining an environmental management system, to the above standard, which will be monitored by NQA

Certificate No:	91755
ISO Approval Date:	29 March 2018
Reissued:	20 March 2024
Valid Until:	29 March 2027
EAC Code:	19

Managing Director

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