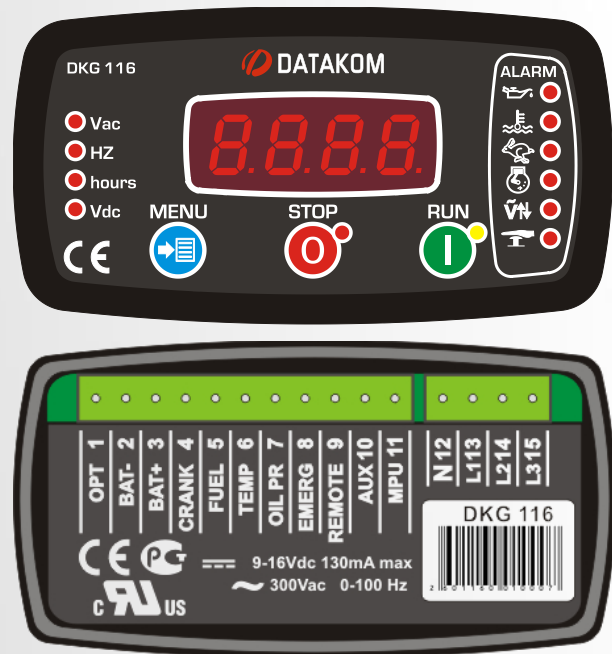


# DKG-116

## MANUAL AND REMOTE START UNIT



### DESCRIPTION

The DKG-116 is a low cost, comprehensive unit designed to start and stop a generating set both manually and remotely.

The unit is suitable for both gasoline and diesel gensets. The standard unit controls gasoline engines. Diesel engine control is selected with a wire jumper connection.

The manual control is made using **RUN** and **STOP** pushbuttons on the front panel. The remote control is made via **REMOTE START** input signal.

When the engine is running, the unit monitors fault conditions and shuts-down the engine automatically in the occurrence of an alarm. The alarms are identified by a group of LEDs displaying only the first occurring one.

The **MENU** button select the display parameter scroll and allows program mode entry and lamp test functions.

The unit provides a set of digitally adjustable program parameters. All parameters are modified through front panel pushbuttons.

The **FUEL** output is programmable for 'Activate to start' or 'Activate to stop' solenoids.

The optional auxiliary output may be programmed for alarm, choke, preheat or stop functions.

The total engine run hours is kept in a tamper-proof non-erasable memory which is not affected by power failures.

An optional MPU input is provided for fast crank cutting.

The unit is designed for front panel mounting. Connections are made with 2 part plug and socket connectors.

The unit is only available in 12V version.

### MEASUREMENTS

Generator Volts: L1-N, L2-N, L3-N  
Generator Volts: L1-L2, L2-L3, L3-L1  
Generator Frequency  
Battery Voltage

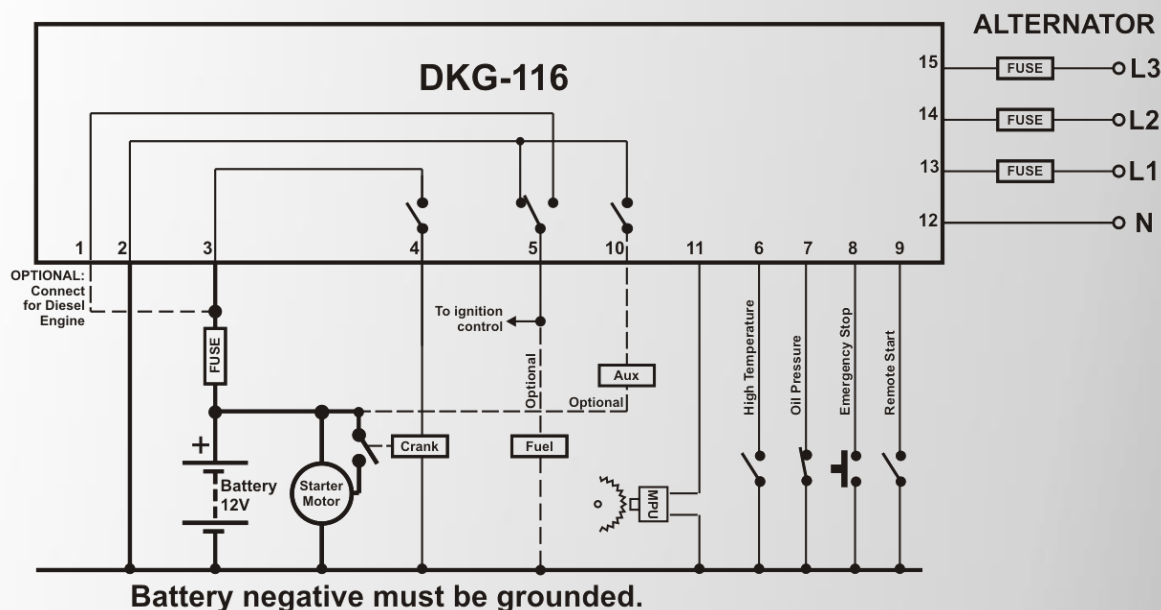
### OPTIONS

Auxiliary output (negative pulling).  
Magnetic pickup input

### FEATURES

- Both Manual and remote control**
- Generator protection**
- Built in alarms and warnings**
- Remote Start operation available**
- True RMS measurements**
- Tamper proof engine hours display**
- Field adjustable parameters**
- High current Fuel and Crank outputs**
- Optional auxiliary output**
- Optional magnetic pickup input**
- Digital inputs: 4**
- Survives cranking dropouts**
- Sealed front panel**
- Standard panel dimensions: 96x48mm**
- Plug-in connection system**

## TYPICAL CONNECTION DIAGRAM



## TECHNICAL SPECIFICATIONS

**Alternator voltage:** 15 to 300 V-AC (Ph-N)  
**Alternator frequency:** 50 or 60 Hz nominal.  
**Measurement Accuracy:** 0.5% + 1 digit  
**Overspeed:** nominal frequency + 14% (+24% overshoot)  
**Underspeed:** 30 Hz  
**Crank time:** 10 sec.  
**Crank rest:** 10 sec.  
**Crank attempts:** 3  
**Stop timer:** 10 sec.  
**Cooldown timer:** 30 sec.  
**Holdoff timer:** 10 sec.  
**DC Supply Range:** 9.0 to 16.0 V-DC  
**Cranking dropouts:** survives 0 V for 100ms.  
**Typical Standby Current:** 12 mA-DC (display off)  
**Maximum Operating Current:** 130 mA-DC  
**Fuel and Crank outputs:** 10A @ 12V-DC  
**Auxiliary Output:** 1A @ 12V-DC (negative pulling protected semiconductor output)  
**Magnetic pickup Input:** 1.5 to 30Vpp  
**Operating temp.:** -40°C (-40°F) to 80 °C (176°F).  
**Maximum humidity:** 95% non-condensing.  
**Dimensions:** 102 x 55 x 40 mm (WxHxD)  
**Panel Cut-out Dimensions:** 92x44 mm minimum.  
**Packed weight:** 140 g  
**Case Material:** High Temp. ABS/PC (UL94-V0)  
**IP Protection:** IP65 (front panel), IP30 (rear)  
**Installation:** Flat surface mounting on a Type 1 enclosure.  
**Conformity (EU directives)**  
 -2006/95/EC (low voltage)  
 -2004/108/EC (EMC)  
**Norms of reference:**  
 EN 61010 (safety requirements)  
 EN 61326 (EMC requirements)

## PROGRAMMING

Both **High Temperature** and **Emergency Stop** inputs must be connected to **Battery negative** prior to enter the programming mode.

The program mode is entered by long-pressing the MENU button. Each depression of the MENU button will switch to the next parameter.

Another long press will enable lamp test mode. Another press on MENU button will return the display to normal mode.

Below parameters can be set as required:

**AC voltage low limit:** 70 to 500 VAC (Ph-N)

**AC voltage high limit:** 70 to 500 VAC (Ph-N)

**MPU crank-cut frequency / 4:** 0-1000Hz

**Nominal frequency:** 0=50Hz 1=60Hz

**Oil switch type:** 0=oil pressure 1=oil level

**Fuel relay function:** 0=Activate to start 1=activate to stop.

**Auxiliary relay function:** 0=Alarm, 1=choke, 2=stop, 3=preheat.

**Choke timer:** 0 to 15 sec.

**Number of phases:** 0=1ph 1=2ph 2=3ph 3=3ph

## PACKAGING INFORMATION

**Pieces per Package:** 24

**Package Size:** 280 x 170 x 215mm (LxWxH)

**Package Weight:** 3.6 kg

