

AMF PANEL WIRING DIAGRAM PDF

The AMF controller governs the system and transfers the load to the generator or mains smoothly and with short downtime. This AMF panel wiring diagram illustrates the connections of the AMF controller that monitors the parameters of the mains and automatically starts the engine via relays. This happens after a mains failure programmed delay (seconds, minutes or hours). When the engine is cold, the AMF controller waits for a warm-up. The engine will run offload. Once the generator provides the correct frequency and voltage, the controller transfers the load from the mains to the generator. When the mains has been restored, the AMF controller will connect the load back to the mains automatically. After a time delay, the engine is then stopped.



YO CAN FIND VIDEO TUTORIALS ON THE FOLLOWING LINKS

[What Is An AMF Panel?](#)

[What Are The Differences Between AMF PAnel and ATS panels?](#)

HOW DOES THE AMF PANEL TRANSFER THE LOAD?

There are two basic solutions: BY CONTACTS or by TRANSFER SWITCH. The choice requires a deep analysis of many factors, mainly the power rating, the characteristics of the load and other relevant factor. You can find a tutorial on this web page.

<https://ats-panels.com/>

In this AMF Panel Wiring Diagram, we illustrate the example of a contactors changeover.



The contactors changeover (left image) is the most common choice for standby generator up to 80kVA. Over this power it is better to ATS equipments (right image).

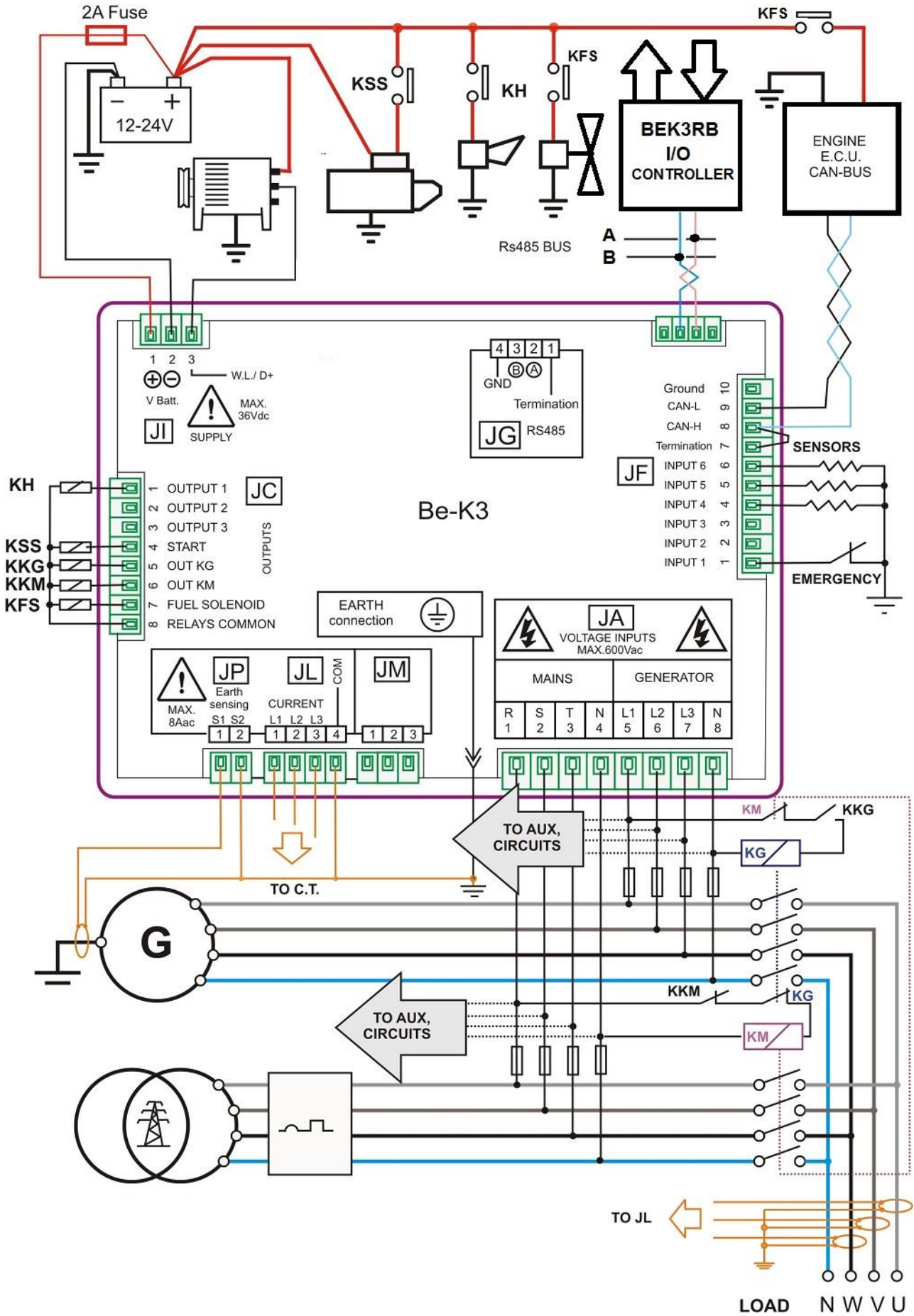
HOW DOES IT WORK IN DETAILS THE AMF CONTROLLER

The AMF controller closes the **KM-AUX** and **KG-PILOT** contacts to activate the KG (contactor of the generator). In this way, the LOAD is connected to the generator. The KM-AUX are the auxiliary contacts fitted on the body of the utility power contactor (so-called KM). When the KM is open, the **KM-AUX** contacts enable the KG. The AMF controller activates the KG via the **KG-PILOT relay**. The N and L3 of the generator supply the coil of the KG. When switching the generator to the mains, the user observes a short 'power outage'. Normally it is about 2 seconds. This is the typical behaviour of the automatic transfer switch: BREAK-BEFORE-MAKE.

AMF CONTROLLER MAINS-LOAD

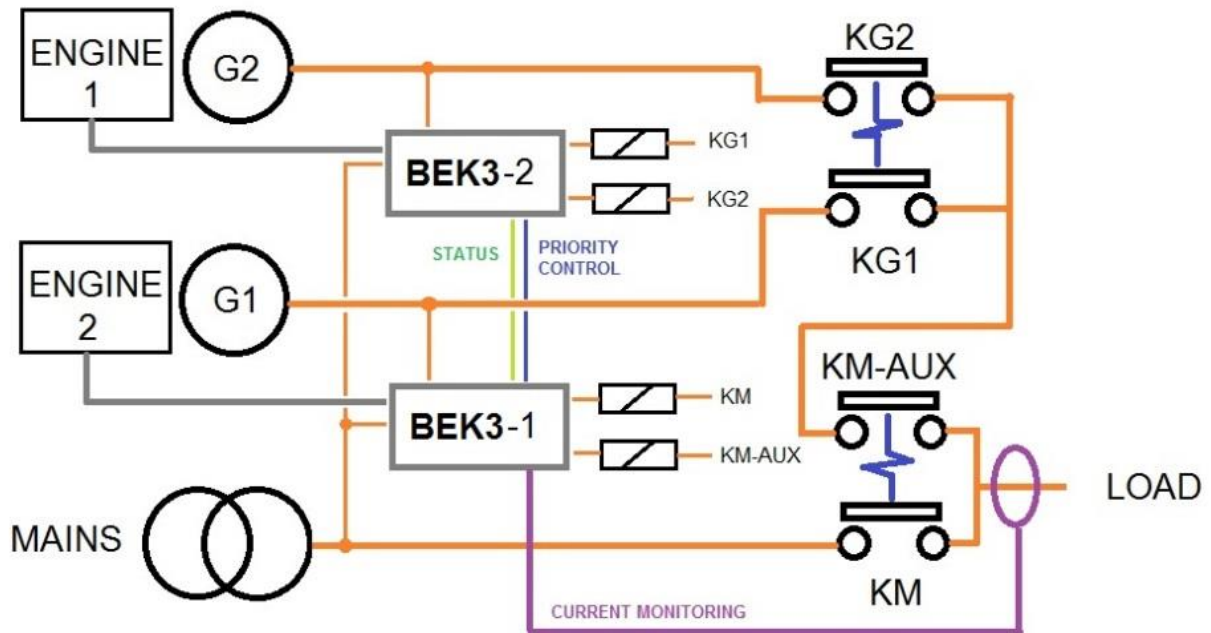
The KM contactor connects the LOAD to the MAINS. The coil of the KM energizes using the **KG-AUX** and **KM-PILOT** contacts. The **KG-AUX** auxiliary contacts have a mechanical connection with KG. The contacts close when the KG opens. The **KM-PILOT** is the utility power control relay. This relay is OFF when the mains is within the settings. In this case, the COIL of the KM is supplied via the N and L3 of the MAINS. By using the normally closed contacts, we give priority to the mains in case the AMF controller is damaged or without supply. In case of mains failure, the AMF controller energizes the **KM-PILOT**. The **KM-PILOT** contacts will open the KM. Once the KM is open, the auxiliary contacts **KM-AUX** will close. This is one of the mandatory conditions to close the KG (the KM must be open in the first place)

AMF PANEL WIRING DIAGRAM EXAMPLE



AMF CONTROLLER DUAL GENERATOR SINGLE LOAD CONFIGURATION

With this AMF panel wiring diagram, you can connect two generators as an emergency standby to one load. This is not a parallel configuration. It is a basic BREAK-BEFORE-MAKE configuration. In a prolonged power outage, you can setup one generator as a master. In case of failure, the second one will supply the load.



You can set up a timer to supply the load. For example, you can set up 6 hours for each generator.

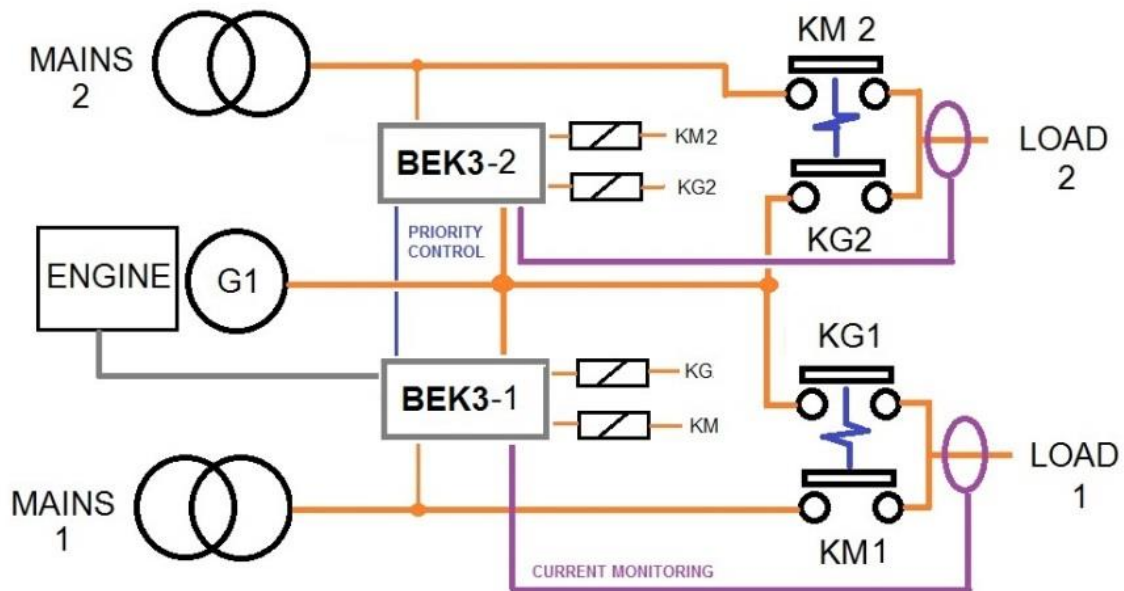
READ MORE ABOUT PANEL MANUFACTURING

[How To Make ATS Panels?](#)

[Save Money And Time In Making ATS AMF Panels](#)

DUAL LOAD WITH A SINGLE GENERATOR

By using this AMF panel wiring diagram, you can connect one generator as an emergency standby to serve both loads. This is not a parallel configuration. The generator will supply the only load that suffers a utility power condition.



Could be only one load or both. The generator will start in case of one utility power failure and stop when the utility power can supply the loads.

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