

AECM103FBSL

3 POS. IGNITION KEY SWITCH REPLACEMENT

DESCRIPTION

The Model AECM103FBS lite is an Automatic Engine Control Module designed to work as a replacement of standard 3 position ignition key switch for diesel and petrol generating sets such as Kipor, Honda, etc. It will indicate the start engine failure with blinking "START FAIL" LED on the front panel. "Low Fuel" shutdown condition is indicated with steady LED.

Local operation of the module is via rocker switch mounted on the front panel with AUTO/STOP and RUN positions. Remote control of the module is via terminal 1.

Optional control: wireless (key fob), BVS (Battery Voltage Sensor).

OPTIONS TO START

- Turn the rocker switch into RUN position (i.e local start request)
- Make the link between terminal 1 and 8 to operate the generator in remote wired mode.
- Press button "A" on the key fob to activate the remote wireless start mode)
- BVS detected the Low Battery Voltage threshold.

Start sequence: the stop relay will energize breaking connection between terminals #6 and #10, the fuel relay will energize connecting terminals #3 & #4 to terminal #5, then the start relay will energize for 5 sec connecting terminals #3 & #4 to terminal #2. If the engine has not fired by the end of 1st attempt, the starter is turned off for a resting period. The sequence will then repeat up to a maximum number of start attempts. Following a successful start (100~240V generator power sensed on terminals 11 and 12), the start relay is de-energized and latched out to prevent reengagement of the starter with the engine running.

These connections are compulsory, otherwise the module will crank the running engine 3 times!

OPTIONS TO STOP

- Turn the rocker switch into STOP/AUTO position if the rocker switch was initially in RUN position (i.e remove local start request)
- Remove the link between terminal 1 and 8 if the module was initially operating the generator in remote wired mode.
- Press button "B" on the key fob (if the module was initially operating the generator in remote wireless mode)
- BVS detected the High Battery Voltage threshold (or BVS disabled).

Stop relay sequence: the fuel relay will de-energize, the stop relay will de-energize and reinstates the link between terminals #6 and #10 making generator to stop.

IMPORTANT NOTES

The starter relay can only energize for 2nd and 3rd crank cycle if 100~240VAC is NOT sensed, to confirm that the engine is stationary. The loss of AC signal on terminals #11 and #12 during normal generator run will cause a fault condition (LOW FUEL) and generator stops.

Should the engine still fail to start after the maximum number of attempts, "START FAIL" is displayed and the starter is latched out until reset via "STOP/AUTO" position of rocker switch or remotely via terminal 1 if the engine start was initially made via remote start signal.

Relay outputs are provided for:

- Fuel Solenoid Output
- Starter Motor Output
- Stop Relay Output

All relay's inputs/outputs are volt free.

Inputs/outputs are available for:

- Remote Start (terminal 1)
- Start output (terminal 2)
- Fuel output (terminal 5)
- Stop relay outputs (terminal 6, 10)
- Common terminals: 3 and 4
- AC generator output sensing (terminals 11 and 12)
- Battery positive (terminal 7)
- Battery negative (terminal 8)
- BVS inputs (15 & 16) optional

Multiple alarm channels are provided to monitor the following:

- AC alternator output
- Fail to Start

The AECM 103FBS lite series modules have been designed for front panel mounting.

The module is fitted into the 68X68mm cut-out with the fixing clips removed.

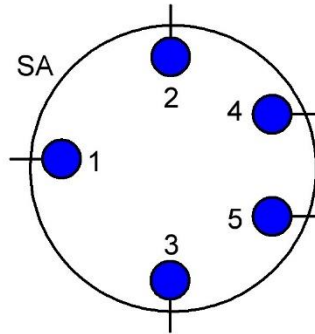
These are then fitted from the rear.

SPECIFICATION

DC Supply: 12/24Vdc (6...40Vdc)
Max. Standby Current: 9.8 mA @ 12 V
Number of attempts: 3
Crank duration: 5 sec
Pause between each attempt: 10 sec
Hold-off timer set for: 7 sec
Starter relay output: 3A Max
Fuel solenoid output: 3A Max
Stop relay outputs: 3A Max
Dimensions: 72 X 72 X 60 mm
Operating Temperature Range: -30 to +70°C

Wiring Diagram

	● 1	● 2	● 3	● 4	● 5
OFF				○ — ○	
ON	○ — ○				
START	○ — ○ — ○				



STANDARD IGNITION
KEY SWITCH
REPLACEMENT

