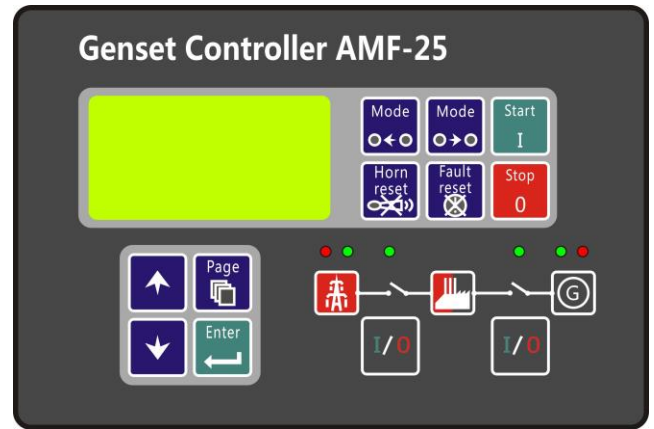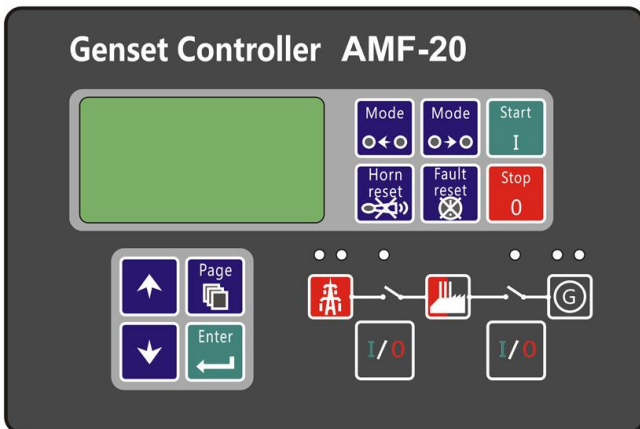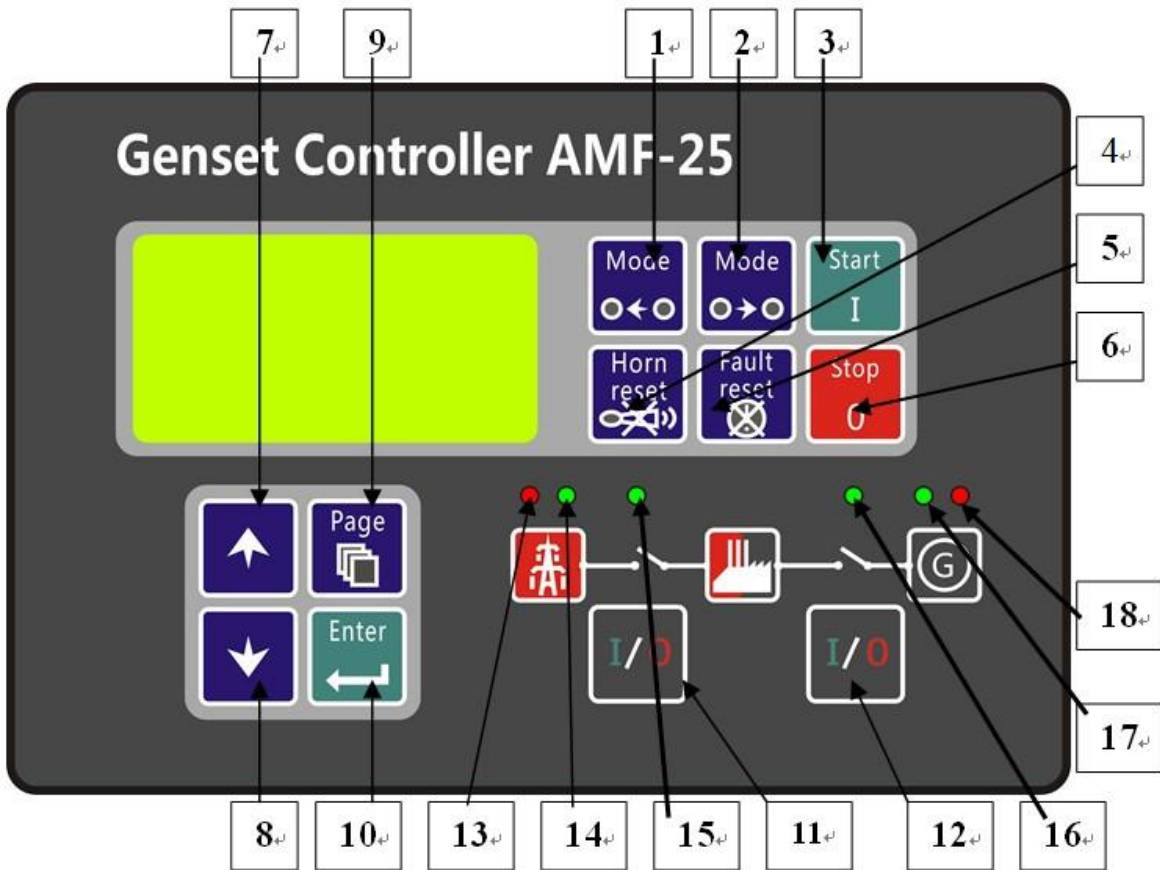# AMF-20 / AMF-25
Automatic Mains Failure Controller

1. Features

- Support of engines equipped with Electronic Control Unit (J1939 interface)
- Comprehensive diagnostic messages; SPN/FMI codes; KWP2000 support
- Automatic or manual start/stop of the gen-set
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display 128x64 pixels
- 6 LED indicators
- Parameters adjustable via keyboard or PC
- Mains measurements (50/60 Hz): U1-U3, Hz
- Generator measurements (50/60 Hz): U1-U3, I1-I3, Hz, kW, kVAr, kWh
- Selectable protections alarm/shutdown
- 3 phase Generator protections:
  - Over-/under voltage
  - Over-/under frequency
  - Current/voltage asymmetry
  - Overcurrent/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface (AT-LINK CONV cable is necessary for IL-AMF 20)
- Modem communication support (IL-AMF 25 only)
- Dimensions 180x120 mm (front panel)
- Sealed to IP65

2. Structure and Wiring
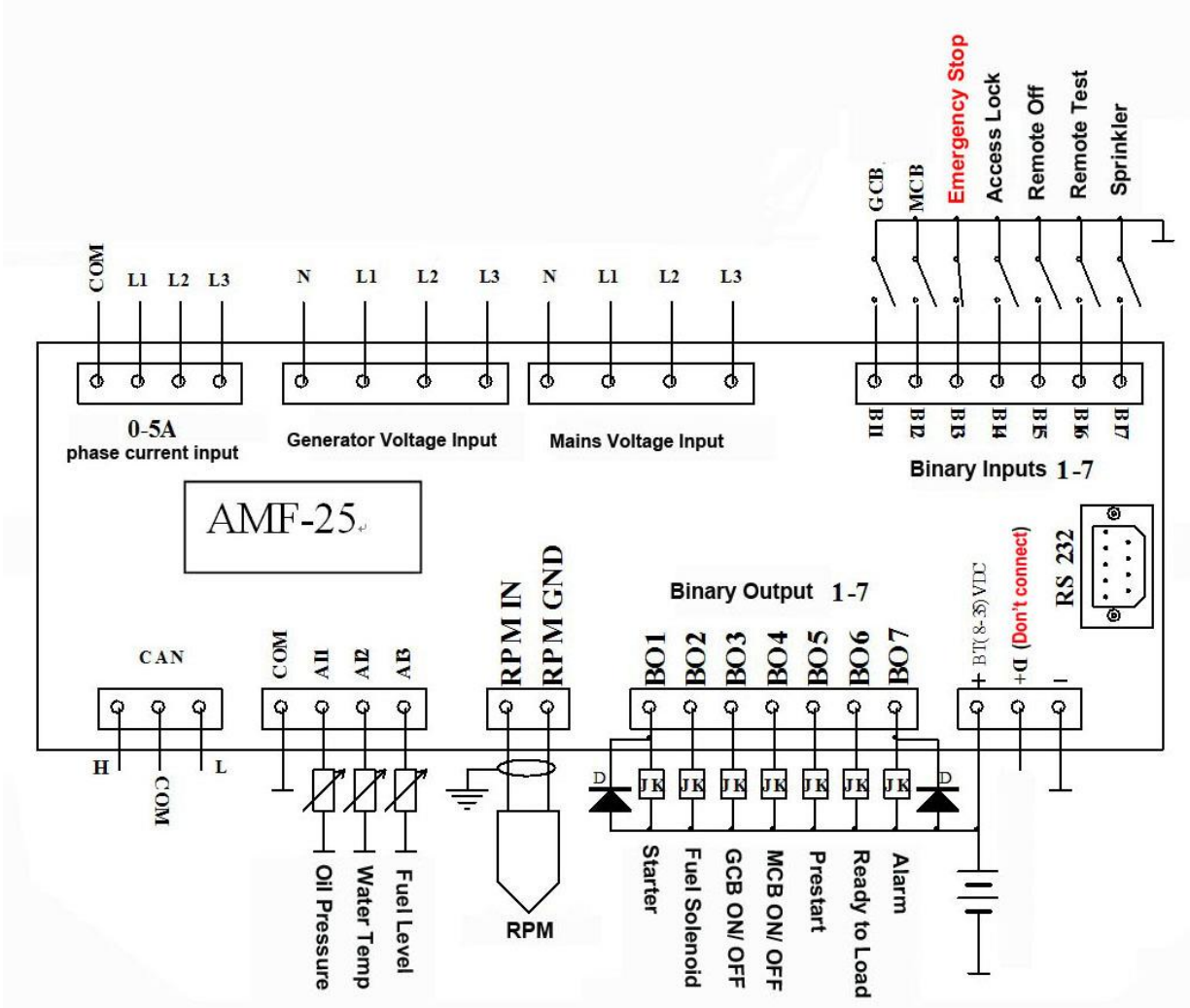### 2.1 AMF-25 Panel and LED Lamps:

- ●1—Mode(Choose Left)
- ●2—Mode(Choose Right)
- ●3—Choose Manual Start Mode
- ●4—Loudspeaker Mute
- ●5—Alarm Reset
- ●6—Manual Stop
- ●7—Change-over Screen(Up)
- ●8—Change-over Screen(Down)
- ●9—Home Page(Set Parameters)
- ●10—Confirm（click this after setting parameter
- ●11—MCB Manual Switch ON/OFF
- ●12—GCB Manual Switch ON/OFF
- ●13—Mains Failure Lamp
- ●14—Mains on Lamp
- ●15—MCB Switch On Lamp
- ●16—GCB Switch On Lamp
- ●17—Generator Voltage Lamp
- ●18—General Alarm Lamp

MCB: Mains Circuit Breaker
GCB: Generator Circuit Breaker

2.2 Diagram on the back of Controller:

Binary Input:
1. Emergency Stop: Must connect, connect to "-" of power supply;
2. Don't need to connect other binary inputs if user do not need related functions.

Oil Pressure/ Water Temperature:
1. Factory set is VDO brand Oil Pressure/ Water Temperature sensors;
2. If the user's sensors are not VDO brand, need to set the parameters curve of sensors when connect the AMF-20/25 to the computer; Or you can forbid this function when it's connected to computer and don't connect Oil Pressure/ Water Temperature.

Fuel Level: If without fuel level sensor/gauge, use a 100Ω resistance to replace;

Binary Output:
It's Negative Output, current must be lower than 0.5A, if over 0.5A, **Must connect an external relay and protection diode**.
Recommended Relay: Omron LY2N-J, Recommended Diode: 1N4007

Factory Set:
1. The above Binary Input and Binary Output are set in factory;
2. User can connect the controller to PC via RS232 Interface, and set the parameters/ mode from the PC;
3. Factory can preset the parameters based on user's require in production.

IMPORTANT NOTICE:
Emergency stop might not work when the Controller failure or software failure. It's highly recommended to use **separate emergency stop switch for the Fuel Solenoid and Start Motor.**