• LXC701 Series

• Performance and characteristics

The Module LXC701 is an small Automatic Engine Control Module. It selects 3 kinds of working state(Manual, Auto, Stop), can pass panel light touch buttons artificially start/stop genset, also can through remote start signal input automatic starting generator, and can detect fault (low oil pressure, high water temperature, emergency stop alarm, over speed) automatically disconnect fuel relays and stop electromagnet to electric suction close. Panel LED indicator fault state, provide real and effective fault alarm signal.

Features:

- The power supply a wide range (8~35) VDC, can adapt different starting battery voltage environment.
- With low oil pressure, high water temperature, over speed, and emergency stop, start failures and so on protection and instructions.
- Can provide charging generator excitation function.
- With idle speed control and ETS solenoid function.
- Speed signal depend on frequency of generator.
- Panel LED display various operation and alarm state.
- 2 relay fixed output port (fuel output, starting output).
- 3 aprogrammable output port, can set common alarm output, preheat output, idle control, stop output, and other functions.Provide PC programming port, genset work necessary various delay, output port definition, power threshold can via PC settings, PC only need a USB port.
- Built-in watch dog can never be dead halt, ensuring smooth program execution.
- Standard holes 67 * 67 ,inserted type connection terminals,flame retardant ABS plastic shell 32-bit ARM MCU,Stable performance,easy installation.

• Display symbol and operation

• PUSH BUTTON

SYMBOL	DEFINE	DESCRIPTION
	Manual start button	Push this button, generator will start, and the module comes into manual state.
	Auto state button	Push this button, the module comes into auto state.
	Stop button	Push this button, generator will stop, and the module comes into stop state. In the standby mode, if long pressing the button for 3 seconds all LED lights.

• LED

SYMBOL	DEFINE	DESCRIPTION
Running	Running led	Before module crank successful,,if there is no speed frequency,Light off .Otherwise, Flashing. After module crank successful,Lighten.
Emergency	Emergency stop alarm led	Lighten when emergent stop input is active.
High Water Temp.	High Water Temp alarm led	Lighten when high water temperature alarm is appearing.
Low Oil Press.	Low Oil pressure alarm led	Lighten when the module detects that the engine oil pressure has fallen below the low oil pressure pre-alarm setting level.
Over Speed	Over speed alarm led	Lighten when the engine speed has risen above the over speed pre alarm setting.

• Man Start

When push Man start button, preheat will first output, and start preheat delay, when preheat delay is end, fuel output 1 second, preheat output will stop, and crank output is start.Here engine will start, when crank successfully, crank output stop. Then engine comes into the safe time. When the safe time is end, then engine comes into the idle time. When the safe time is end, then idle output is out and engine will run at full tilt.

Auto State

When pushbutton, the module will enter automatic state. Here if remote start input is active (connect to B-), the engine will start after the delay of start engine. Preheat will first output, and start preheat delay, when preheat delay is end, fuel output 1 second, preheat output will stop, and crank output is start. Here engine will start, when crank successfully, crank output stop. Then engine enter the safe delay. When the safe delay is end, then engine enter the idle delay. When the safe delay is end, then idle relay is close and genset raise high speed.
When remote start input is inactive, the engine enter the idle process after the delay of engine stop, idle relay disconnect, fuel relays output after the idle delay, ETS solenoid output, genset will automatically stop, ETS solenoid disconnect when genset stop steady.

Stop State

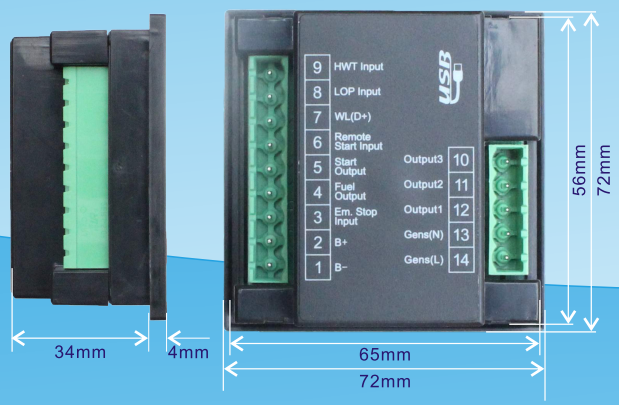
Push thebutton when engine is running, the button beside led will lighten, enter idle process, idle relay disconnect, idle delay ended, fuel disconnect, ETS solenoid output, genset stop, ETS solenoid disconnect when genset stop steady.
When engine is waiting state, push button 1 second above, ETS solenoid will output and all led will be Lighten. Loosen the stop buttons, ETS solenoid output disconnect instantly, and test lamps function is over.
When engine is waiting state, only emergent stop alarm can be check.

Alarm

Low Oil Pressure: check after the safe delay, the duration of 2 seconds above, the module will alarm and stop engine.
High Temperature: check after the safe delay, the duration of 3 seconds above, the module will alarm and stop engine.
Over speed: check after the preheat delay, the duration of 1.5 seconds above, the module will alarm and stop engine.
Under speed: check when engine run at full tilt, the duration of 15 seconds above, the module will alarm and stop engine.
Charge Failure: check when engine run at full tilt, the duration of 3 seconds above, and the module will warn but don't stop engine.
Over Crank: when engine crank fail over the times of configure, the module will alarm and stop engine.
Stop Failure: when engine is stop fail, the module will warn.
No generator: check after the idle delay, when generator frequency for zero and the duration of 5 seconds above, the module will alarm and stop engine.
Battery over voltage: The DC supply has risen above the high volts setting level for the duration of the high battery volts 20 seconds.
Battery under voltage: The DC supply has low above the under volts setting level for the duration of the low battery volts 20 seconds.
Emergency Stop: When emergency stop input, ETS solenoid stop immediately output, and then fuel disconnect, preheat and start signal emit emergency stop alarm signal.
Common Alarm: when any alarm or warn is appear, this alarm will active. When the over speed, under speed, high temperature, low oil pressure, emergency stop, no generator, crank failure, stop failure alarm, battery over voltage, battery under voltage, common alarm LED illuminate, and common alarm output.

• Technical Parameters

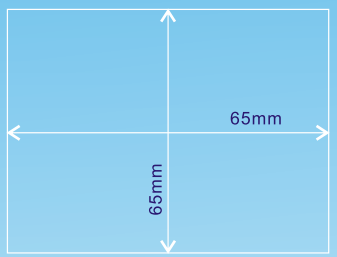
Project	Content
DC Supply	8~35V
Single-phase AC input	AC (15~300) V (+ 20%) 50Hz~60Hz
Five relay output (B+, 5A)	Crank output Fuel output Configurable output1 Configurable output2 Configurable output3
3 Digit input port	Connect to (B-) is active
Power Consumption	Standby mode(12V: 0.3W, 24V: 0.4W) working (12V: 1W, 24V: 1.1W)
Operating Temperature Range	-30~+70℃
Dimensions	72mm×72mm×52mm
Panel cutout	67mm×67mm
Weight	0.2kg



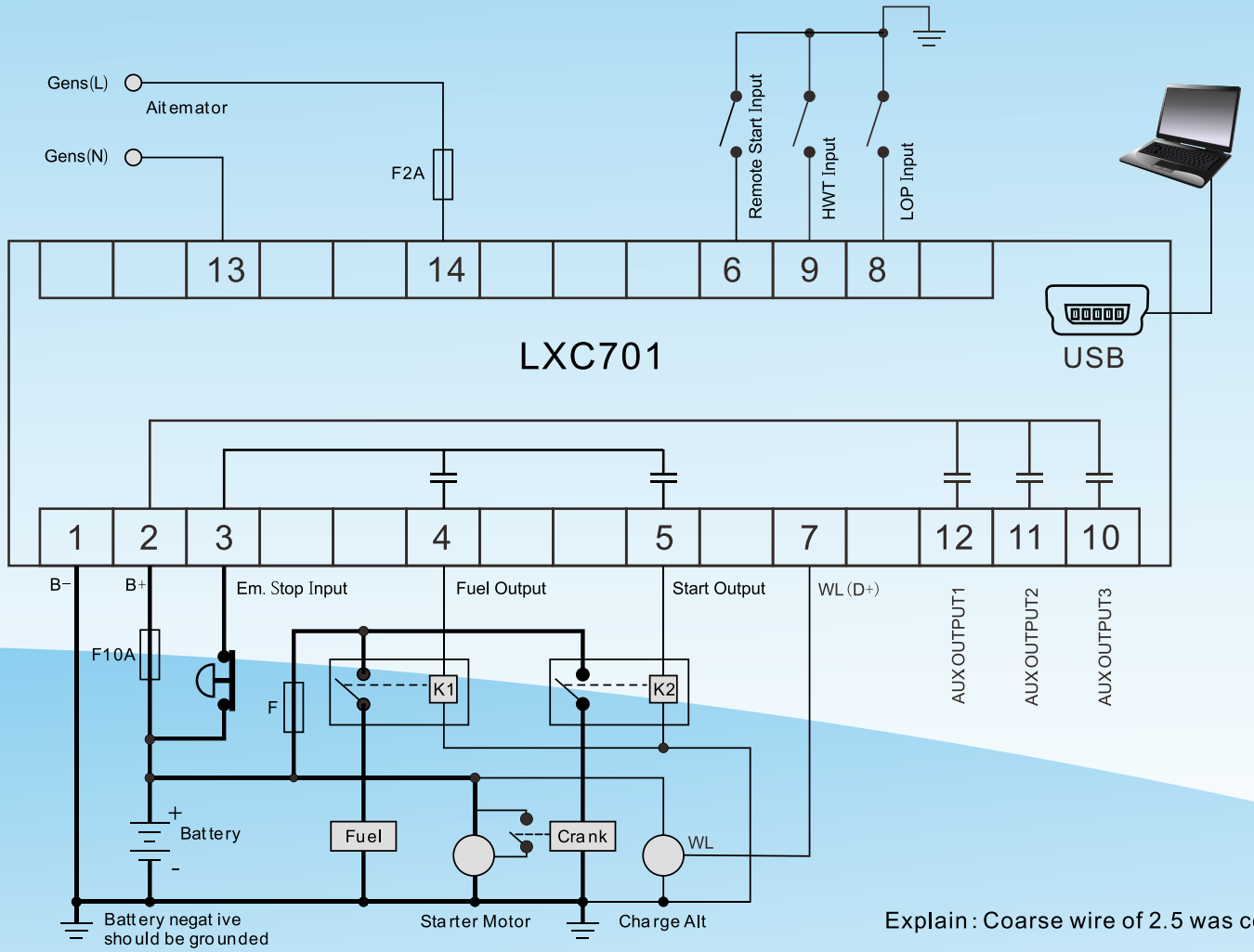
• Dimensions

Operation Panel	W254mmxH180mm
Installation open orifice	W218mmxH160mm
Thickness	44mm

• Panel cutout dimensions



· LXC701 Typical application diagram ·



Explain: Coarse wire of 2.5 was copper core

· Terminal

- Terminal 1（B-）： connect to the cathode of battery.
- Terminal 2(B+)： connect to the anode of battery.
- Terminal 3(Em. stop input)：emergent stop input, connect to (B+) is active.
- Terminal 4(Fuel Output)：Fuel Output, (B+, 5A).
- Terminal 5(Start Output)： Start Output, (B+, 5A).
- Terminal 6(Remote Start Input)： Remote Start Input, connect to (B-) is active.
- Terminal 7(D+): Connect to the terminal WL (or D+) of charger.
- Terminal 8(LOP Input)： Low oil pressure input, connect to (B-) is active.
- Terminal 9(HWT. Input)： High temperature input, connect to (B-) is active.
- Terminal 10（Configurable Output3）： Configurable output, (B+, 5A).
- Terminal 11（Configurable Output2）： Configurable output, (B+, 5A).
- Terminal 12（Configurable Output1）： Configurable output, (B+, 5A).
- Terminal 13（N）、14（L）：Alternator Input.
- USB Interface：Controller directly through the USB line connected to the computer for parametric programming.

DONGGUAN TUANCHENG AUTOMATION EQUIPMENT CO., LTD
Tel:86-0769-23836636
Email:sales@lixise.com
http://www.lixise.com.cn
BBS:www.smartgenset.cn
Addr: #18,Chashang Industrial Zone,Wentang Management Area, Dongcheng District,Dongguan City,Guangdong Province,China