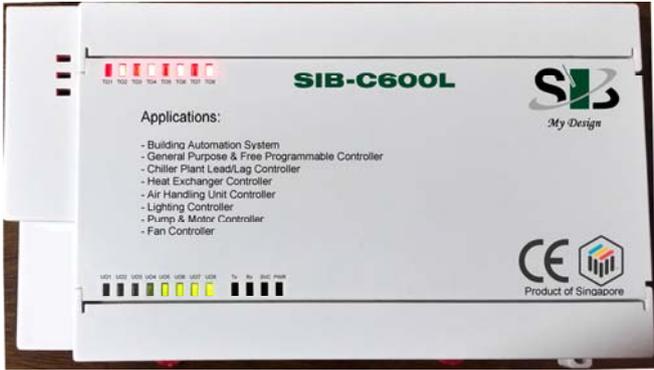


Free Programmable Logic Controller

<p>Application</p> <ul style="list-style-type: none"> SIBC-600L designed to general purpose to control any type of HVAC and lighting equipment in BAS, like chiller plant, AHU, FCU, lighting, roof top units, heat exchanger, variable static pressure control, air flow control systems in critical area, etc. 	 <p>The SIBC-600L Series use FT5000 Neuron chip and free programmable controller designed to control various building automation applications. Designed to control equipment such as rooftop units, air handing units, chiller, boilers, pumps and cooling towers, heat exchanger, lighting control systems.</p> <p>It uses LonTalk communication protocol and LonMark standard profile.</p> <p>Free programming features make it meet any requirements in BMS.</p> <p>Provide customized program for special project requirement service.</p>
<p>Features</p> <ul style="list-style-type: none"> Communication Standards: ISO/IEC 14908.1 and 14908.2, ANSI 709.1 and 709.3, Free Topology, FT-10, Peer to peer communication between controllers <p>Hardware</p> <ul style="list-style-type: none"> 10 Universal Input (jump-less selection). Input type include: Resistance, 0-10Vdc, 0-5Vdc, 4-20mA, Digital, NTC thermistor, RTD1K, RTD100 temperature sensor 2 high frequency pulse inputs 4 digital inputs 8 Triac outputs 8 Universal Outputs. Output types include: Digital(0-12VDC), 0-10VDC, 0-20mA DIN-rail & wall mounting enclosure Transmit, receive and power LED indicators Battery backed-up clock <p>Software</p> <ul style="list-style-type: none"> Can be free programmed on site using LNS plug-in program More than 100 network variables Many programming features available NVIs & NVOs of changeable type and length Support fan-in binding for zoning application Internal 16 weekday schedule entries 	

Program name: SIB-C600LV1

DDC Platform: SIB-C600L

Features:

- Internal schedule table with 16 entries
- Holiday table with 10 entries
- Changeable NTC 10K thermistor curve table, range from -15°C ~ 100°C
- Platinum 1K RTD, Platinum 100 RTD
- Support Wall-Mount thermostat SAV12HD input
- 10 Universal Inputs (16-bit ADC, 0~10V DC), each channel can be configured as either analog input, or digital input, or NTC 10K thermistor input. Platinum 1K RTD, Platinum 100 RTD thermistor type is supported by 10 input channels
- 4 Digital Inputs, 2 of them can be configured as accumulative pulse counting channels.
- 8 Triac outputs (24V AC)
- 8 Universal Output, Digital output(OFF(0V), ON(12Vdc)), Analog outputs (0~10V DC, or 0~20mA DC)
- 16 control output channels (8 for triac outputs, 8 for universal outputs)
- 60 pseudo variables
- 20 constant values
- Additional 16 input network variables and 16 output network variables for communicate with other DDCs in network.
- 10 PID calculation loops
- 8 Run hour timer
- 4 timer/counter channels
- Low-pass filter for analog input is applied to 10 UI channels
- Type of network variables are changeable
- Control logic programmable.

Functions and Control Logic

Analog Input

- 0~10V DC sensor
- 0~5V DC sensor
- 4-20mA DC sensor
- Customer defined NTC 10K thermistor sensor (temperature curve table changeable)
- Platinum 1K RTD sensor
- Platinum 100 RTD sensor
- Table transition input
- Low-pass filter
- Thermostat SAV12HD
- High/low alarm
- Alarm be interlocked with specified state and time delay

Digital Input

- Multiple alarm types: **ON**, **OFF** alarms.
- 2 channel pulse counting input, dry contact input

Schedule

- 10 sets of holiday settings, higher priority than 7-day schedule
- 16 sets of 7-day schedule entries
- Each schedule can be one of four states: **OCCUPIED**, **STANDBY**, **BYPASS**, **UNOCCUPIED**

Triac Output Control Logic

- Schedule control
- Control command has **OR** or **AND** logic with schedule
- ON/OFF output type, ONE-Short output type
- PWM, PDM,
- 2 or 3-stage control
- **ON_FAIL**, **OFF_FAIL**, **TRIP** alarms

Analog Output Control Logic

- Schedule control
- Control command has **OR** or **AND** logic with schedule
- 0~10Vdc output
- 0~20mA output

Programmable Logic Control

- 60 pseudo variables and 20 constant values can be used to analog or logic calculation.
- Analog calculation functions: **MAX, MIN, SUM, AVG, LINEAR, BTU, PID, ADD, SUB, MUL, DIV, SQUARE ROOT, HALF, SETPOINTSEL, THERMOSTATIC**
- Digital logic calculation functions: **AND, OR, XOR, NOR, NAND, NXOR, NOT, LT, LE, GT, GE, NE, EQ, IF, ELSEIF, ELSE**
- Maximum 10 PID loops

Timer/Counter

- Maximum 4 pseudo variables can be configure as countdown timer or counter
- 8 run hour timers.

Technical Specification	
Inputs	10 Universal inputs supporting 0-10VDC, 0-5VDC, 4-20mA, resistance and dry contact, NCT 10K Ω Type 2, 3 thermistor, RTD1K and RTD100 temperature sensor. Potentiometer with table configurable. 16-bit resolution ADC, Jump-less configuration 4 Digital inputs, 2 Pulse inputs
Outputs	8 Triac outputs: 1.0A@24VAC 8 Universal outputs: Digital 0-12VDC(ON/OFF), 60mA max, Analog : 0-10VDC, 4-20mA, 10-bit resolution DAC, auto-reset fuse protect
Input Power	24 V AC/DC, +/-15%, 50-60HZ, fuse protection
Power Consumption	15W (Max)
Communication	LonTalk FT-10 channel
LonMark [®] version	3.4,
Processor	Neuron [®] FT-5000 smart transceiver, 80MHZ
Dimension	180x108x48.5mm
Installation	DIN-rail mounting or wall mounting through mounting holes
Operating Environment	0 - 70 °C , 10-90%RH (Non-condensing)
Cable Type	16-22AWG un-shielded / Belden 8471 un-shielded twisted pair (recommended) for Lon communication run in earthed metal conduit; Multi pair 20AWG shielded for analog inputs, analog output, digital inputs; 1.2mm ² - 1.5mm ² PVC cable for power input, and triac output.
Electromagnetic Compatibility (EMC)	CE Standards EN50081-1, EN50082-1
Interoperability	Compliant with LonMark [®] interoperability
Real Time Clock	Provide leap year compensation up to year 2100.

JSControls Technology and SIB Technology are specialist in DDC development in BMS for HVAC control system. Provide low cost and high quality, performance, reliable, and energy efficient control systems.

Specifications subject to change without notice.