BAS-3512
BAS-3520

12-ch Web-enabled DDC Controller

20-ch Web-enabled DDC Controller

Features

- Standalone programmable controller
- BASPro programming software provides BA domain function (scheduler, HVAC calculation, sequence…)
- Auto-tuning PID control
- Calendar schedule control
- Alarm and event notifications
- Provides RS-485 to connect with remote I/O devices
- Up to 3 local I/O expansion modules
- Remote programming and maintenance through Ethernet
- LCM display (optional)

BAS-3512   BAS-3520

RoHS COMPLIANT 2002/95/EC   CE

Introduction

BAS-3512/3520 is a standalone programmable controller specially designed for building automation (BA) applications. Designed as a typical DDC (Direct Digital Controller), BAS-3512/3520 delivers various of onboard I/O including universal input, analog output, digital input and digital output, providing flexible options to satisfy versatile application requirements. It also features powerful BASPro programming tool for engineers to quickly develop their application. BASPro delivers many function blocks suitable for BA application, such as scheduler, HVAC calculation, sequential control, PID control, alarm, and event. Its compact size makes it an ideal solution to fulfill BA installation environment. The I/O expansion modules (BAS-3018, BAS-3024, BAS-3050, BAS-3051 and BAS-3060) provide more I/O points and make the system a scalable solution.

Specifications

General

- **Dimension (W x H x D)** 176 x 120 x 44 mm (6.93" x 4.72" x 1.73")
- **Enclosure** ABS + PC
- **Power Input** 24 V_{DC}/24 V_{AC}
- **Power Consumption** 10 W @ 24 V_{DC}
- **Real-time Clock** Yes
- **Watchdog Timer** Yes
- **I/O Isolation Protection** 3,000 V_{DC}

Hardware

- **CPU** 32-bit CPU 312 MHz
- **Flash Memory** 32 MB
- **RAM** 64 MB SDRAM
- **Battery Backup SRAM** 512 KB

Communication

- **LAN** 1 x 10/100Base-T (RJ-45)
- **RS-485** 1 (isolated)
- **Communication Protocol** Modbus/TCP, Modbus/RTU

Universal Input (BAS-3520 only)

- **Channels** 4
- **Resolution** 16-bit
- **Sample Rate** 10 Hz (Total)
- **Accuracy** ±0.1% of FSR (Voltage, Current)
- **Type and Range**
  Analog Input   0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA, Pt-100 RTD, Pt-1000 RTD, Thermistor (3 k, 10 k)
  Digital Input   Logic High: Close
  (Dry Contact)   Logic Low: Open
- **Over Voltage Protection** ±35 V
- **Span Drift** ±25 ppm/° C
- **Zero Drift** ±6 µV/° C

Analog Output (BAS-3520 only)

- **Channels** 4
- **Resolution** 12-bit
- **Accuracy** ±0.1% of FSR
- **Range** 0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA

Digital Input

- **Channels** 8
- **Dry Contact** Logic High: Close
  Logic Low: Open
- **Supports 1 kHz Counter Input (2 channels)**
- **Supports 1 kHz Frequency Input (2 channels)**

Digital Output

- **Channels** 4 (Source Type)
- **Vcc: 10 ~ 35 V_{DC}, Current: 1 A (per channel)**
- **PWM output (2 channels)**
  Minimum Period   1 second (for PWM output)
  Minimum Pulse Width   0.1 second (for PWM output)

LCM Operation Unit (Optional)

- 2 line x 8 char, backlit LCD
- 5 button keypad
- Hot swap capable

Environment

- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F) (with airflow)
- **Storage Temperature** -20 ~ 80° C (-4 ~ 176° F)
- **Operating Humidity** 20 ~ 95% (Non-condensing)
- **Storage Humidity** 0 ~ 95% (Non-condensing)

Ordering Information

- **BAS-3512-AE** 12-ch Web-enabled DDC Controller
- **BAS-3520-AE** 20-ch Web-enabled DDC Controller
- **BAS-3595-AE** LCM operation unit (Optional)