BAS-2520

20-channel Softlogic Digital Controller

Features

- Stand-alone programmable controller
- Pre-built BA Control Function Blocks
- Supports IEC61131-3 control languages
- Supports Modbus/RTU and BACnet protocols
- Up to 115.2 kbps communication speed
- Max. I/O expansion up to 80 points for unique controller
- Built-in Watchdog Timer
- Wall mounting panel case

$C \epsilon$ **FCC**

Introduction

BAS-2520 is a 20-channel stand-alone controller for for building automation control applications. Designed as a typical DDC (Direct Digital Controller), but customized for use in buildings, it is designed with universal I/O, a thin wall mountable case, and comes with embedded control algorithms for HVAC, lighting, security and other algorithms that are used in building automation applications.

SoftLogic Programming

This powerful, stand-alone controller is intuitive and easy to use. All controllers in the BAS-2000 series use KW SoftLogic for their programming, which is fully compatible with the IEC61131-3 standard. You can use multiple languages such as: Function Block Diagram (FBD), Sequential Flow Chart (SFC), Ladder Diagram (LD), Structure Text (ST) and Instruction List (IL) for control function configuration. This reduces engineering efforts, as there is no need to learn proprietary programming languages, and development time can be drastically reduced.

Open Modbus/RTU Protocol

The controllers of the BAS-2000 series use the Modbus/RTU protocol, which is the most popular and cost effective solution for field data communication, with transmission speeds up to 115.2 kbps. By using the Modbus/RTU protocol, it is much easier to integrate control data between a BAS-2000 series controller and field machinery such as compressors, chillers, inverters and power panels. The BACnet MS/TP protocol will be an optional protocol in the near future.

Specifications

General

- **Certifications** — CE, FCC class A
- **Channels** — Analog Inputs: 4
  Analog Outputs: 4
  Digital Inputs: 8
  Digital Outputs: 4
  (Local bus for expansion up to 80 channels)
- **Dimensions (WxLxH)** — 171 x 242 x 35 mm
- **LED Indicators** — Battery, power, communication (for RS-485), DO
- **Mounting** — Wall
- **Power Consumption** — 15 W
- **Power Input** — 24 V_{AC} or 18 ~ 36 V_{DC}
- **Watchdog Timer** — Yes (Programmable)

Communications

- **Analog Input Signals** — 4 ~ 20 mA, 0 ~ 20 mA, 0 ~ 10 V_{DC},
  RTD (PT100/PT1000), Thermistor (3k)
  (Software configurable)
- **Analog Output Signals** — 4 ~ 20 mA, 0 ~ 20 mA, 0 ~ 10 V_{DC}

- **Digital Input Signals** — Dry Contact — Logic level 1 : close
  Logic level 0 : open
  Wet Contact — Logic level 1 : 10 ~ 30 V_{DC}
  Logic level 0 : 3 V_{DC} max.
- **Digital Output Signals** — Relay Output (Rating : 240 V_{AC}, 3 A), LED indicator, manual switch for ON/AUTO/OFF selection
- **Interface** — Port 1 : RS-232 for programming,
  Port 2 : RS-485 for network
  Plug-in screw terminal (#14~22 AWG)
  1 x expansion bus connector
- **Network Nodes** — Up to 64
- **Transmission Distance** — 1.2 km (4000 feet)
- **Transmission Protocol** — Modbus/RTU, Bacnet MS/TP
- **Transmission Speed** — 1200, 2400, 9600, 19200, 38.4 k, 57.6 k, 115.2 kbps

Environment

- **Humidity** — 5 ~ 95% non-condensing
- **Operating Temperature** — -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** — -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **BAS-2520-A** — 20-Channel Softlogic Digital Controller