# Vision™ OPLC™

## V350-35-B1/V350-J-B1 Technical Specifications

The Unitronics V350-35-B1/V350-J-B1 offers the following features:

I/O configurations can include up to 512 I/Os via Expansion Modules.
Available by separate order: Ethernet, additional RS232/RS485, CANbus, Profibus Slave.

You can find additional information, such as wiring diagrams, in the product's installation guide located on the Unitronics' Setup CD and in the Technical Library at www.unitronics.com.

## Technical Specifications

### Power Supply

| | |
|---|---|
| Input voltage | 12VDC or 24VDC |
| Permissible range | 10.2VDC to 28.8VDC with less than 10% ripple |
| Max. current consumption | See Note 1 |
| | 220mA@12VDC |
| | 110mA@24VDC |

### Notes:

1. To calculate the actual power consumption, subtract the current for each unused element from the maximum current consumption value according to the values below:

| | Backlight | Ethernet card |
|---|---|---|
| 12V | 40mA | 70mA |
| 24V | 20mA | 35mA |

### Graphic Display Screen

| | |
|---|---|
| LCD Type | TFT, LCD display |
| Illumination backlight | White LED, software-controlled |
| Display resolution | 320x240 pixels |
| Viewing area | 3.5" |
| Colors | 65,536 (16-bit) |
| Touchscreen | Resistive, analog |
| 'Touch' indication | Via buzzer |
| Screen brightness control | Via software (Store value to SI 9) |
| Virtual Keypad | Displays virtual keyboard when the application requires data entry |

### Keypad

| | |
|---|---|
| Number of keys | 5 programmable function keys |
| Key type | Metal dome, sealed membrane switch |
| Slides | Slides may be installed in the operating panel faceplate to custom-label the keys. Refer to *V350 Keypad Slides.pdf* Two sets of slides are supplied with the controller: one set of arrow keys, and one blank set |

## Program

| | | | |
|---|---|---|---|
| Memory size | Application Logic – 1Mb, Images – 6Mb, Fonts – 512 Kb | | |
| Operand type | Quantity | Symbol | Value |
| Memory Bits | 8192 | MB | Bit (coil) |
| Memory Integers | 4096 | MI | 16-bit signed/unsigned |
| Long Integers | 512 | ML | 32-bit signed/unsigned |
| Double Word | 256 | DW | 32-bit unsigned |
| Memory Floats | 64 | MF | 32-bit signed/unsigned |
| Fast Bits | 1023 | XB | Fast Bits (coil)-not retained |
| Fast Integers | 512 | XI | 16 bit signed/unsigned (fast, not retained) |
| Fast Long Integers | 256 | XL | 32 bit signed/unsigned (fast, not retained) |
| Fast Double Word | 64 | XDW | 32 bit unsigned (fast, not retained) |
| Timers | 384 | T | Res. 10 ms; max 99h, 59 min, 59.99 s |
| Counters | 32 | C | 32 bit |

| | |
|---|---|
| Data Tables | 120K dynamic data (recipe parameters, datalogs, etc.) |
| | 192K fixed data (read-only data, ingredient names, etc) |
| | Expandable via SD card. See Removable Memory below |
| HMI displays | Up to 1024 |
| Program scan time | 15µS per 1kb of typical application |

## Removable Memory

| | |
|---|---|
| Micro SD card | Compatible with standard SD and SDHC; up to 32GB store datalogs, Alarms, Trends, Data Tables, backup Ladder, HMI, and OS. |
| | See Note 2 |

**Notes:**

 2. User must format via Unitronics SD tools utility.

## Communication Ports

| | |
|---|---|
| Port 1 | 1 channel, RS232/RS485. See Note 3 |
| Galvanic isolation | No |
| Baud rate | 300 to 115200 bps |
| RS232 | |
| Input voltage | ±20VDC |
| Cable length | 15m maximum (50') |
| RS485 | |
| Input voltage | -7 to +12VDC |
| Cable type | Shielded twisted pair, in compliance with EIA 485 |
| Cable length | 1200m maximum (4000') |
| Nodes | Up to 32 |
| Port 2 (optional) | See Note 4 |
| CANbus (optional) | See Note 4 |

**Notes:**

 3. This model is supplied with a serial port: RS232/RS485 (Port 1). The standard is set to either RS232 or RS485 according to jumper settings. Refer to the product's Installation Guide.

 4. The user may order and install one or both of the following modules:
  - An additional port (Port 2). Available port types: RS232/RS485 isolated/non-isolated, Ethernet
  - A CANbus port
  Port module documentation is available on the Unitronics website.

### I/O Expansion

|  | I/Os may be added. Configurations vary according to module. Supports digital, high-speed, analog, weight and temperature measurement I/Os. |
|---|---|
| Local | Via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os. Adapter required (P.N. EX-A2X). |
| Remote | Via CANbus port. Connect up to 60 adapters to a distance of 1000 meters from controller; and up to 8 I/O expansion modules to each adapter (up to a total of 512 I/Os). Adapter required (P.N. EX-RC1). |

### Miscellaneous

| Clock (RTC) | Real-time clock functions (date and time) |
|---|---|
| Battery back-up | 7 years typical at 25°C, battery back-up for RTC and system data, including variable data |
| Battery replacement | Yes. Coin-type 3V, lithium battery, CR2450 |

### Dimensions

| Size | V350 | 109x114.1x68mm (4.29x4.49x2.67"). See Note 5 |
|---|---|---|
|  | V350-J | 109x114.1x66mm (4.92x4.49x2.59"). See Note 5 |
| Weight |  | 261.2 (9.21oz) |

### Notes:

5. For exact dimensions, refer to the product's Installation Guide.

### Environment

| Operational temperature | 0 to 50ºC (32 to 122ºF) |
|---|---|
| Storage temperature | -20 to 60ºC (-4 to 140ºF) |
| Relative Humidity (RH) | 10% to 95% (non-condensing) |
| Mounting method | Panel mounted (IP65/66/NEMA4X) |
|  | DIN-rail mounted (IP20/NEMA1) |

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