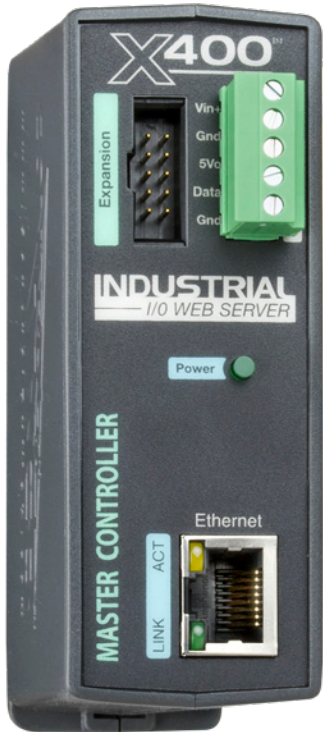


### PRODUCT OVERVIEW



The X-400™ is a powerful web-enabled industrial I/O controller with advanced logic and modular expansion capabilities.

The X-400 can be programmed either by using its web-page-based “Task Builder” or by writing a BASIC script. The X-400 can be expanded by simply attaching I/O expansion modules to its expansion bus, or it can seamlessly share I/O on other ControlByWeb devices over the Ethernet network.

#### Monitor Temperature & Humidity

Connector terminals provide communication with 1-Wire sensors to monitor temperature and humidity.

#### Directly Connected I/O

A ribbon cable expansion bus connector allows up to 32 expansion modules (X-11s, X-12s, X-13s, etc.) to be connected directly

to the X-400 without the need for an Ethernet switch. Various expansion modules are available with relays, digital inputs, thermocouples, analog inputs, etc. All expansion modules available for the X-600M can also be used with the X-400 controller.

#### Remote I/O

The X-400 can also seamlessly communicate and share I/O with any other X-400 series modules (X-410, X-418, etc.) through the TCP/IP network. This remote I/O can be used by the X-400 for any function and works the same as if the I/O was directly connected to the X-400 controller.

#### Built-in Web Server

Users can operate the X-400 using a web browser, the CBW Mobile app, or custom applications written for a computer, PLC, or other automation controller. No gateways, cloud servers, or external services are required.

#### Cloud Server (Optional)

The X-400 can, however, be used with our ControlByWeb.cloud cloud service if desired which simplifies network setup. The X-400 supports standard HTTP requests or encrypted HTTPS requests.

#### Control/Logic Task Builder

Easily program up to 50 Scheduled task, 50 Conditional tasks, 20 Automatic Reboot tasks, and 20 Override Schedules.

#### User Permissions

The X-400 supports three types of users that provide different levels of access to the device’s settings and Control Pages.

Visit our website to learn more about the X-400’s many exciting features:

<https://www.controlbyweb.com/x400/>

### Features:

- Expansion Bus - Control, monitor, and log 32 expansion and/or remote modules, or up to 100 I/O
- Secure Peer-to-Peer (P2P) Communication
- 1-Wire Bus: Monitor up to 16 temp/humidity sensors: -67°F to 257°F (-55°C to +125°C)
- Secure, built-in web server for configuration and remote monitoring
- User Permissions: Admin, Manager, User
- Task Builder (50 Scheduled Tasks, 50 Conditional Tasks, 20 Reboot Tasks, 20 Override Schedules)
- Send email alerts based on user-defined conditions (supports encrypted email servers, such as Gmail)
- Real-Time Clock with NTP server synchronization
- Automatic daylight savings and leap year adjustment
- Highly configurable - Almost any combination of input/relay control possible
- No software required
- Customizable, web-based Control Page
- BASIC script support for advanced flexibility
- Data Logging & Graphing (logged data)
- HTTPS/TLS encrypted
- Static or DHCP IP address configuration
- Modbus, SNMP, Remote Service, IP Filtering
- Field updatable
- Removable 14-Terminal connector for easy installation
- Rugged DIN-Rail/wall-mountable enclosure



Web-Based Control Page Example

### APPLICATIONS & SPECS

### Sports Web-Based Lighting Controller with Scheduling

#### Additional Features

- ✓ Expandable, up to 100 I/O points
- ✓ Task Builder for light scheduling
- ✓ Easy, configurable web pages
- ✓ Custom email/text notifications
- ✓ More...

#### Models:

- X-400-I

#### Power Requirements

- Voltage: 9-28VDC
- Max Current: See table below for typical values at 25°C, 10/100Mbps.

Power Supply	Input Current (no expansion modules)	Input Current (X-400 + 1.7A for expansion modules)
9 VDC	134 mA	1.834 A
12 VDC	101 mA	1.801 A
24 VDC	55 mA	1.755 A

#### Voltage Outputs

- Expansion Bus (X-400-I): 1.7A max

#### Temperature Sensors

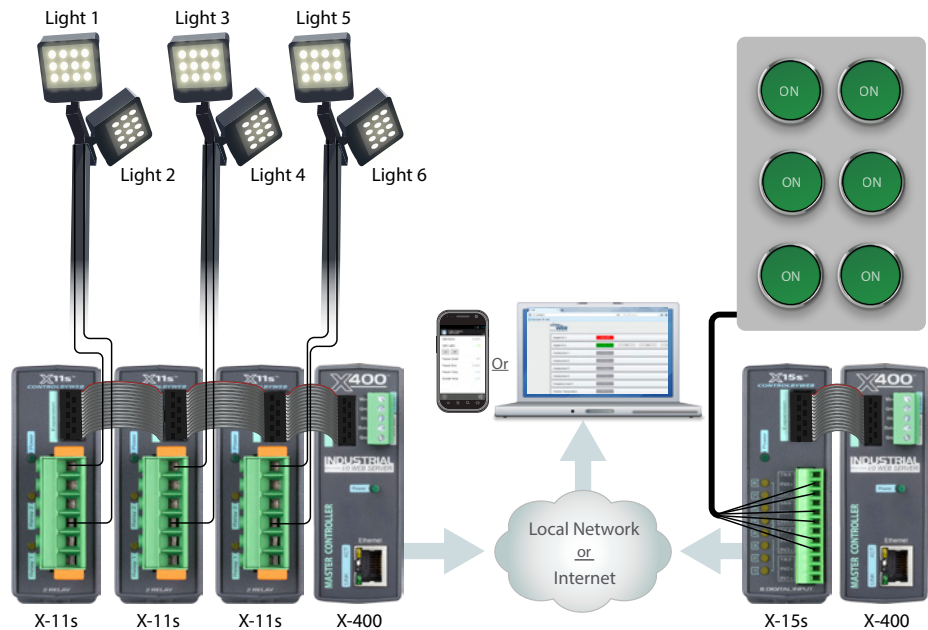
- Maximum Number of Sensors: 16
- Type: Dallas Semiconductor DS18B20 digital 1-Wire thermometer
- Temperature Range: -67°F to 257°F (-55°C to +125°C)
- Accuracy: ±0.5°C (from -10°C to +85°C)
- Sensor Functions: Monitor Temperature, Log Temperature, Email Alerts, SNMP Traps
- Humidity Type: Xytronix Model X-DTHS-P sensor
- Humidity Range: 0-100% RH
- Accuracy: ±2%
- Max Cable Length: 600 feet (180m) maximum combined cable length

#### Real-Time Clock

- Manual or NTP(Network Time Protocol) setup
- NTP Sync Period: Once, Daily, Weekly, On Power-up
- Auto Daylight Savings Adjustment
- Battery (capacitor) Power Backup

#### Capacitor Power Backup

- Backup Functions: Retain Real-Time Clock, 1 Register, 2 Counters, 64 Relay States (local and expansion relays only)
- Backup Duration: 2 week minimum



#### Nonvolatile Memory

- Industrial grade eMMC NANDDrive, single level cell (SLC)
- All user settings are stored in nonvolatile memory. Settings will not be lost when power is disconnected.

#### Network

- Type: 10/100 Base-T Ethernet Port
- Setup: Static or DHCP IP address configuration

#### Connectors

- Power and 1-Wire Bus: 5-Position, 3.81mm, Removable
- Expansion Bus: Ribbon cable, 10-conductor, polarized, 2x5-position, 0.100" pitch Provides power and communications for expansion modules (Communications: RS-485)
- Network: 8-pin RJ-45

#### LED Indicators

- Number of LEDs: 5
  - Power on
  - Network linked
  - Network activity

#### Physical

- Operating Temperature: -40°F to 150°F (-40°C to 65.5°C)
- Size:
  - 1.41in (35.7mm) wide
  - 3.88in (98.5mm) tall
  - 3.1in (78mm) deep (not including connector)
- Weight: 4.8 oz (136 g)
- Enclosure Material: Lexan 940 Polycarbonate Plastic
- Enclosure Flame Rating: UL94 V0

#### Protocols

- HTTP, HTTPS, SSL, XML, Modbus TCP/IP, SNMP V1,2C,V3, SMTP

#### Logging

- Log File Size: 3,072-Kbyte (up to 50,688 logs)
- Storage: Nonvolatile Flash
- Buffer Architecture: Circular Buffer (Log data can be periodically read and stored on a computer)

#### Advanced Features

- Task Builder
- BASIC interpreter (up to 4-Kbytes script file size)
- Remote services

#### Password Settings

- Password protection on setup page: Yes
- Password protection on control page: Optional
- Password Encoding: Base 64
- Max Password Length: 20 Characters

#### Electromagnetic Compliance

- IEC CISPR 22, CISPR 24
- FCC 47CFR15 (Class B)
- EN55024 ITE Immunity (2010)
- EN55022 Emissions (2010)

#### Product Safety Compliance

- UL 61010-1 (Electrical Equipment for Measurement, Control, and Laboratory Use)

