PRODUCT OVERVIEW



The X-17s™ expansion module is used in conjunction with the X-600M controller. The X-17s is a multi-function module with four relays and four optically-isolated digital inputs. One or more X-17s expansion modules can be connected to a X-600M control module with a ribbon cable which provides both power and communications.

The four relays have Form-A contacts (SPST) and can be used to control moderate loads such as solenoid valves, alarms, and indicator lights.

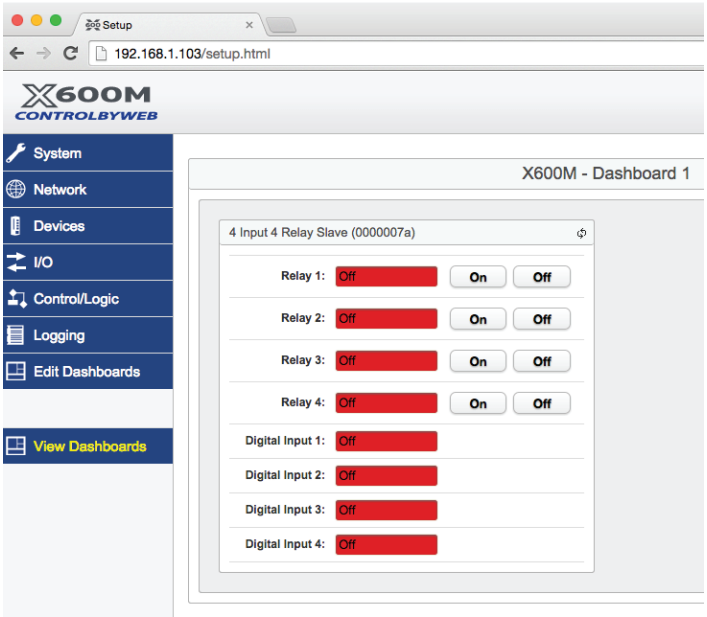
The isolated inputs are suitable for use in industrial environments and allow the grounding system of the monitored equipment and the low voltage circuits of the X-17s to be electrically separate. Internally the X-17s has a co-processor which provides enhanced features including: pulse counting, pulse duration, accumulated pulse time, and frequency measurements. All four inputs have separate measurements. Programmable de-bounce timers allow glitches and short pulses to be filtered out.

The X-600M is a multifunction web-enabled industrial I/O controller. It performs control, logic, and monitoring functions similar to that of a Programmable Logic Controller (PLC). However, unlike a PLC, the X-600M is designed for web-based applications from the ground up. No add-on software or hardware is required. The X-600M can be fully configured, programmed, and tested using its built-in web server. The web setup pages are intuitive and easy to use and do not require special programming skills.

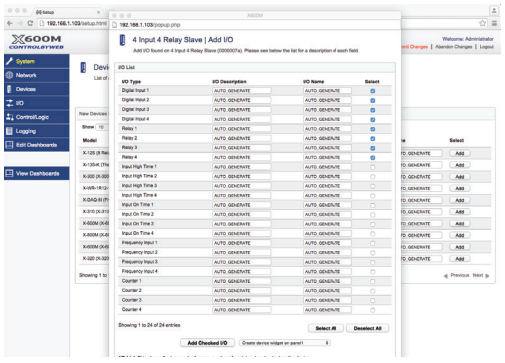
The X-600M together with the X-17s provides an easy, flexible, and reliable way to monitor sensors and control devices over a network. The X-17s is suitable for use with security systems, freezer doors, light switches, and water meters, as well as with moderate loads such as solenoid valves, alarms, and indicator lights.

Features:

- Four isolated relays (SPST)
- Relay Functions:
  - On
  - Off
  - Pulse
- Four optically-isolated digital inputs (common negative)
- Input Functions:
  - On/Off Status
  - Pulse Count
  - Pulse Duration
- Accumulated Pulse Time
- Frequency
- Powered through expansion bus - no separate power supply connections are required
- Eight LEDs for inputs and outputs
- Removable terminal connector

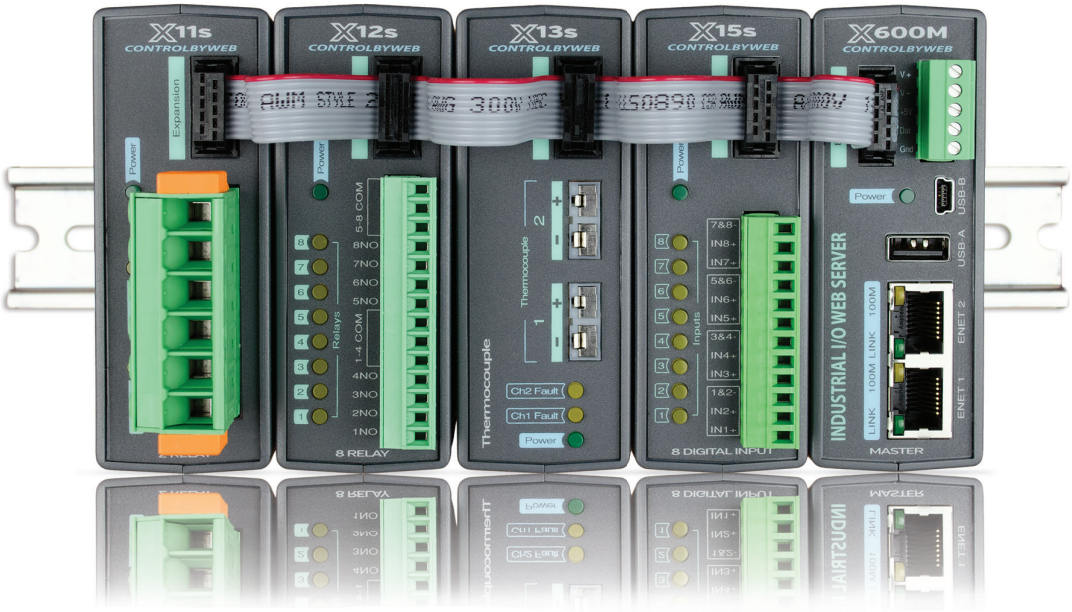


View X-17s components on the X-600M's Dashboard



Adding the X-17s on the X-600M

Expansion Modules With The X-600M Controller



Applications

- ✓ **Security Systems**
- ✓ **Freezer Doors**
- ✓ **Light Switches**
- ✓ **Water meters**
- ✓ **More**

Models:

- X-17s

Power Requirements

- Voltage: 9-28 VDC (supplied via the X-600M controller, 24V recommended)
- Max Current: See table below for typical values at 25°C.

Power	All Opto-couplers & Relays OFF	All Opto-couplers & Relays OFF
9 VDC	18 mA	224 mA
12 VDC	14 mA	165 mA
24 VDC	8 mA	86 mA

Relay Contacts

- Number of Relays: 4
- Max Voltage: 125VAC, 30VDC
- Max Current: 2.5A
- Contact Type: SPST (Form 1A)
- Load Type: General purpose
- Contact Resistance: < 100 milliohms initial
- Contact Material: AgSnO2
- Electrical Life: 100K operations (Min)
- Mechanical Life: 5M cycles (Min)
- Environmental Rating: Over voltage Category II, Pollution Degree 2
- Relay Modes: On/Off or Pulsed
- Pulse Timer Duration: 0.1 to 86,400 Seconds (1-day)

Digital Inputs

- Number of Inputs: 4
- Type: Optically-Isolated
- Voltage Range: 3-26VDC
- Current: 0.6mA @ 3V, 8.2mA @ 26V
- Minimum Hold Time: 2.5mS
- Input Isolation: 1500V
- Input Functions: Monitor State, Control Relays, Control Remote Relays, Count, Frequency, High Time, ON Time
- Maximum Count: 32-bit
- Max Count Rate: 200Hz
- Edge Trigger: Rising, Falling or Both
- High Time: Pulse width (4,194,304 seconds max)
- On Time: Accumulated time an input is asserted (4,194,304 seconds max)
- Frequency: 1 Hz min, 200 Hz max

Connectors

- Relays & Inputs: 14-Position, 3.81mm, Removable
- Expansion Connector: Ribbon cable, 10-conductor, polarized, 2x5-position, 0.100" pitch Provides power and communications for expansion modules (Communications: RS-485)

LED Indicators

- Number of LEDs: 9
  - Power on
  - Relay coil energized 1-4
  - Digital Inputs 1-4

Physical

- 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

Environmental

- Operating Temperature: -40°F to 150°F (-40°C to 65.5°C)
- Storage Temperature: -40°F to 185°F (-40°C to 85°C)
- Humidity: 5-95%, non-condensing
- Altitude: Up to 2,000m
- Indoor use or NEMA-4 protected location

Electromagnetic Compliance

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

CE