**PRODUCT OVERVIEW** 





The X-16s<sup>™</sup> expansion module is used in conjunction with the X-600M<sup>™</sup> controller. The X-16s has eight, 0-5V, analog inputs. The X-16s employs a 24-bit A/D converter and can make both single or differential voltage measurements. A 5.0V reference output can be used to power potentiometers or other resistance sensing sensors.

The X-16s is ideal for measuring precision analog voltages in industrial environments. One or more X-16s expansion modules can be connected to a X-600M control module with a ribbon cable. The ribbon cable provides both power and communications.

The X-600M is a multifunction webenabled 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-16s provide an easy, flexible and reliable way to monitor sensors and devices over a network. The X-16s is suitable for use with pressure sensors, flow meters, current transducers and position sensors – anywhere where precision analog voltage sensing is required.

The X-16s' inputs can be used to trigger email alerts based on a voltage level and can be used to control the relay contacts of other ControlByWeb<sup>™</sup> products (such as WebRelay<sup>™</sup>) that are located at a remote location.

C 192.168	1	0 0 0 0 192.168.1.2/popup.php	XQQQAA			-	Watcoma: Administrati Material Changes   Leger
* Bysten ) Network	Add LO found on Analog Stave (0000056). Please see below the list for a description of each field.						
Devices		VO List					
	New	NO Type	NO Description	VO Name	Select		
ControlLogic		Analog Input 1	AUTO, GENERATE	AUTO, CONTRATO	*		
Logging	- 25	Amailing Injust 2	AUTO GENERATE	AUTO CININATI	ef.		
		Analog Input 3	AUTO, GENERATE	AUTO_CININATI			Entert
Edit Dashboards		Anellag Input 4	AUTO, GENERATE	AUTO, CINIBATI	wi l	-	
	ж	Analog Input 5	AUTO, GENERATE	AUTO CENTRATE	8		_AH
	х	Analog Input 6	AUTO, GENERATE	AUTO_CININATI	×	×.	AM
View Dashboards	x.	Analog input ?	AUTO, GENERATE	AUTO, CENERATE	M	1	AM
		Analog Input 8	AUTO_GENERATE	AUTO_CININATI		TX .	AM
	5ve	Showing 1 to 1 of 8 untree Select All Deselect All			Deselect All		-g Previous Next (p
		AD Case 11 where the given of advectors that the set has a set of the se					
tus: Ready	Badar. Ready.					Xyte	rix Research & Design, Inc.

Adding the X-16s on the X-600M

# Features:

- Eight, 0-5V precision analog inputs
- Removable terminal connector
- Powered through expansion bus
- Great for monitoring applications including:
  - Temperature
  - Electrical Current
  - Pressure
  - Fluid Levels
  - o and much more...

⊖ ⊖ ⊖ ﷺ Setup	×	
$\leftarrow \rightarrow \mathbf{C}$ $\square$ 192.168.1.2	/setup.html	
🗲 System		X600M - Dashboard
Network		X000W - Dashboard
Devices	Analog Slave (0000006e)	φ
t vo	Analog Input 1: xx V	
Control/Logic	Analog Input 2: xx V	
	Analog Input 3: xx V	
Edit Dashboards	Analog Input 4: xx V	
	Analog Input 5: xx V	
View Dashboards	Analog Input 6: xx V	
	Analog Input 7: xx V	
	Analog Input 8: xx V	
Status: Ready	For produc	t support go to www.ControlByWeb.com

View X-16s components on the X-600M's Dashboard





# APPLICATIONS & SPECS

# Expansion Modules With The X-600M Controller



# **Applications**

✓ Temperature
✓ Electrical Current
✓ Pressure
✓ Fluid Levels
✓ More...

## Models:

• X-16s

#### **Power Requirements**

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

	Power	Current
	9 VDC	40 mA
	12 VDC	30 mA
	24 VDC	18 mA

### Analog Inputs

- Number of Inputs: 8
- Type: 8 single-ended, 4-differential, or a combination
- Input Range: -0.1V (min), 5.1V (max), all channels
- \*\*Note that inputs have high impedance so input range can easily be adjusted using external resistors. Example: 0 to 10 Volt or 4-20mA
- Resolution: 10µV (24 bit  $\Sigma\Delta$  ADC)
- Reference: 5.00V, 0.04%, 3ppm/C, 50mA Max

### Connectors

- 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: 1
- Power on

#### **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)

#### Product Safety Compliance

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

