

16X Professional HVAC Controller

With over 24 years in the industry, Computrols has established a solid reputation as a leader in automation systems from hardware to software. When it comes to controlling large heating, ventilation, and air-conditioning systems, our Professional line of controllers are the best in the business. Our 16X provides a nice fit for air handler and similar applications that require up to 16 points.

Product Highlights

4-in-1 Points

Any point can be configured through software to be Analog In, Analog Out, Binary In, or Binary Out – no jumpers.

Large Screw Terminals

No special screwdrivers – simple secure terminations.

Status Indicators

Bright on-board LEDs assist in troubleshooting.

On-Board Web Server

Directly connect a normal web browser for simple management.

10 Mbps Ethernet Port

High speed communications allow the ultimate in flexibility and snappy response.

Easily Addressable

3 decimal rotary switches (0-9) allow simple addressing – no hex, no binary.

UL Listed

Mature product which meets industry standard requirements.

Two-Board Design

All of the electronics are on one easily replaceable brain board for quick repairs.

Lifetime Warranty

Our quality speaks for itself.

Model 16X
Internet Ready
Direct Digital Control
Technical Support: 504-529-1413

100's 10's 1's
Serial Communication

Run (blinking=normal)
10Mbps Activity
Port 2 Receive
Port 2 Transmit
Port 2 Activity

Power
10Mbps Link
Port 1 Receive
Port 1 Transmit
Port 1 Activity

Communication
RS485 Communication
18AWG, Twisted, Stranded, Shielded Wire
Port 1 used for host channel.
Port 2 used for secondary channel.

Binary Output
24 VDC Output
50 mA Maximum Current
Used for pilot relays for general two position control.

Binary Input
Normally Open or Normally Closed dry contact
Used for differential pressure switches, auxiliary contact, etc.

Analog Output
0-10 VDC Output (Software scalable)
Used for control dampers, valves, VFD's, actuators, etc.

Analog In Temperature
10K Type III Thermistor
Used for measuring temperature - duct space, etc.

Resistance
1K, 10K, 20K, or 100K variable resistance
Used for measuring resistance - potentiometers, RTD's, etc.

Voltage
0-10 VDC (software scalable)
Used for transducers, etc.

Current
4-20 mA (software scalable)
Used for transducers, etc.
* 240 Ω 1% resistor produces 1-5 VDC input
* 499 Ω 1% resistor produces 2-10 VDC input

Power
You must supply a 24VAC Class II transformer to power the controller.
The transformer size must be at least 75 VA, plus the requirements of all connected devices.
! WARNING: Use 24 VDC for transducers only, and use 24 VAC to power all actuators

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Specifications	
Software Compatibility	Works with all versions of CBAS: Professional, Commercial, and Utility.
Power Requirements	50VA @ 24 Vac 50/60 Hz Class 2 transformer
Point Configuration	All points software configurable as analog inputs, binary inputs, analog outputs, or binary outputs.
Analog Output Specifications	0-10 Vdc voltage type
Binary Output Specifications	24 Vdc @ 50 mA
Analog Input Specifications	10K Ohm TYPE III thermistor 0-10 Vdc 4-20 mA 0-32K Ohm resistive (scalable)
Binary Input Specifications	Dry contact - switch closure Pulse dry contact 5Hz max repetition rate, 100 msec (min) pulse width
Voltage Protection	250 Vac on each point terminal
Electrical Connections	Barrier terminal block 18 -24 AWG 24 Vdc loop source terminals (320 mA maximum)
Internet Capability	IP addressable on-board web server
Communication Ports	10 Mbps RJ-45 Ethernet TCP/IP, 100 meter maximum distance One RS485 CBAS communication 9600 Baud One RS485 interface port 9600 Baud Local hand held terminal
Microprocessor	Intel 386 25 MHz, 3 MB Flash, 1MB SRAM 2K NVRAM Real time clock with 10 year data retention
Dimensions	6.5" W x 10.375" L x 1.25" H
Mounting	Mount in NEMA rated enclosure
Shipping Weight	5 lbs.
Environmental	32 - 158 Deg. F, 10 - 90 %RH non-condensing
Agency Compliance	E195258 UL 916 (PAZX) Energy Management Equipment Canadian Standard C22.2 No. 205-M1983 E231285 UL 61010C-1 (QUYZ) Electrical Process Control Equipment Canadian Standard C22.2 No. 1010 CE IEC 61010-1 (1990) with Amendments 1 (1992) and 2 (1995)

Parts and Accessories	
Part Number	Description
16X	16 binary or analog points. Controller only - enclosure and transformer required.
16X-NEMA1	16X controller mounted in NEMA 1 indoor enclosure with transformer.
16X-NEMA4X	16X controller mounted in NEMA 4X outdoor enclosure with transformer.
HHT	Hand Held Terminal
ST-D3-XH	10K type duct temperature sensor
ST-S3E	10K type space temperature sensor
ST-S3E-XA	10K type space temperature sensor with setpoint adjustment.
MN-S3-700	LCD room temperature sensor (200 feet maximum distance from controller). <i>Note: requires stat interface board STAT-IFC.</i>
MN-S3HT	Space temperature and humidity sensor. <i>Note: requires stat interface board STAT-IFC.</i>
STAT-IFC	Stat interface board
T-PB202-0	4.0 amp power supply with 120 Vac outlet.
VMD2B-F24D	VMD series 24Vdc relay switch with override switch.
DCM24-44, DM24-53, DM24-280	Direct coupled actuators. Part numbers indicate torque ratings.
VP1	VTP voltage pressure transducer (3-15 PSI)
PV3	Differential pressure transmitter (Specify 0-1", 0-2" or 0-5" W.C.)
H-922	Analog current sensor
H8035/8036 Series	3 phase networked (MODBUS RTU) KW/KWH power meter

