

UCU12

The **UCU12** is a low-cost unitary controller, with 6 inputs and 6 outputs, ideally suited to controlling single items of equipment.



- **3 Universal Inputs**
can be used to monitor passive, analog, or digital sensors

- **2 Active Inputs**
can be used to monitor analog or digital sensors

- **1 Fixed Digital Input**
24 Vac or Voltage-free Digital Inputs only

- **2 Universal Outputs**
can be used as analog or digital outputs

- **4 Triac Digital Outputs**
can switch up to 24 Vac

- Up to 63 controllers per fieldbus

- 190 strategy blocks

- 4 Datalogs with up to 102 entries per Datalog

- **Data Security**
Strategy and setpoints backed up in EEPROM

The **UCU12** controller is part of the **UnitronUC32** range of products, which offers the following benefits:

Unique Flexibility with UniPuts™

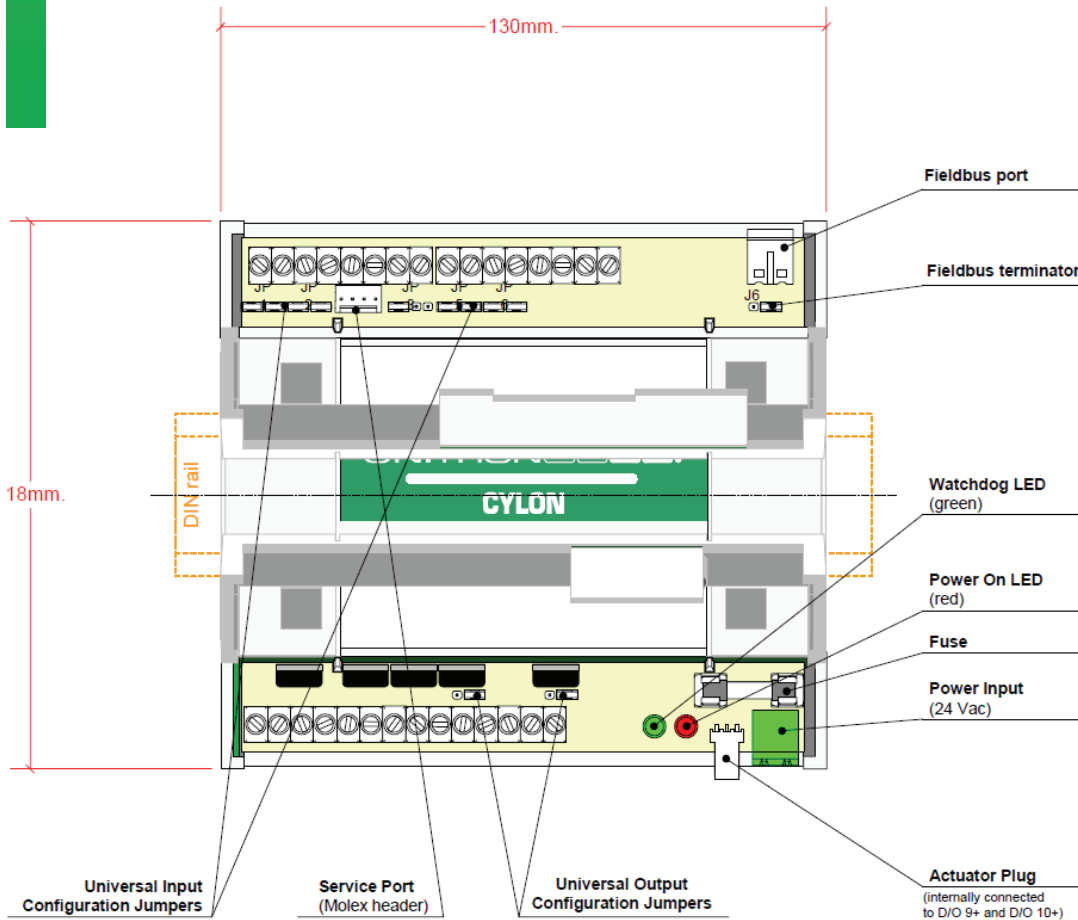
The **UnitronUC32** range uniquely presents **UniPuts™** - a revolutionary answer to flexible point configuration, offering maximized utilization of controller capacity along with flexibility in strategy changes. Built on a modern web-based architecture, the **UnitronUC32** range has a wide application scope with the flexibility of being stand-alone or network enabled.

Cost Effective, low entry point for building control

The **UnitronUC32** range offers reduced costs in terms of training, implementation, rollout and maintenance. Modular, extendible packages along with low installation costs mean a low entry point for building control. The future-proof **UnitronUC32** range provides forward & backward compatibility, meaning an effortless upgrade path for existing **Unitron** Systems.

Highly programmable and extendable through web-enabled HVAC technology

The **UnitronUC32** range offers an advanced web-based 32-bit architecture, with advanced programmability through **the Unitron Engineering Center**. Inbuilt diagnostics, along with expanded data logging and strategy storage, is further enhanced by **UniPuts™**, offering up to 8 Universal inputs, up to 8 **UniPuts™** (AI/DI/AO/DO) and up to 8 **UniPuts™** with relays.



Jumper settings

Pins covered by jumper Pins open

Universal Output Configuration Jumpers

- 0-10 V Output
- Triac Output

Universal Input Selection Jumpers

- Volt free contacts
- Passive input
- 0-20mA input
- 0-10v input

Fieldbus (RS485 sub-network) Terminator

- J6 Terminator IN
- J6 Terminator OUT
- J6 Terminator OUT

Specifications:

MECHANICAL

Size (excluding terminal plugs)	5.7 x 5.12 x 1.78" (145 x 130 x 45 mm)
Enclosure	Injection molded ABS
Mounting	DIN rail

ENVIRONMENT

Note: *This equipment is intended for field installation within another enclosure.*

Ambient Temperature	32°-122°F (0°-50°C) ambient.
Ambient Humidity	0% - 90% RH non-condensing
EMC Immunity	EN 50082-1
EMC Emission	EN55011 Class B

WIRING

Note: *Use Copper or Copper Clad Aluminium conductors only.*

Termination	I/O: PCB mounted screw terminal connections. Power and Fieldbus : PCB mounted plug terminal connections.
Conductor Area	Max: AWG 12 (3.09 mm ²) Min: AWG 22 (0.355 mm ²)

ELECTRICAL

Supply Requirements	24 V AC +/-20% 50/60 Hz
Transformer Rating	up to 55 VA (up to 10 VA internal power plus up to 45 VA supplied to Triac loads)
Fuse Rating	2 A 250 V anti-surge(250 Vac - 2 AT)

PROCESSOR

Type	Motorola 68HC11
Clock Speed	8 MHz
Operating System Memory	128K
User Programmable Memory	32k x 8 RAM. 8k x 8 EEPROM backup for program. Maintenance Free

INPUTS/OUTPUTS

Note: *Screened cable is recommended for all input connections.*

3 Universal Inputs (Points 1, 2, & 3)	Active voltage input 0-10 V @ 134 K. Passive Input for a large range of temperature sensors, 10K3A1 sensors are recommended. Temperature input range: 32°F to 122°F (0°C to 50°C). Active current input 0-20 mA @ 120Ω (screened cable). Digital Volt Free Contact. Note: <i>UC Universal inputs do not support pulse counting.</i>
2 Active Inputs (Points 5 & 6)	Active voltage input 0-10 V @ 134 K. Active current input 0-20 mA @ 120 Ω (screened cable). As digital, both are rated @ 400 mA maximum, switch neutral only. Digital Volt Free Contact. Note: <i>Does NOT support passive temperature sensor or pots</i>
1 Fixed Digital Input (Point 4)	24VAC or Digital Volt Free Contact only
2 Universal Outputs	Each Universal output is either one Analog 0-10 V, or one Digital. As analog, both Universal Outputs are 0-10 V, 10 mA, 3 second response. As digital, U/O 13 is rated at 500 mA maximum and U/O 14 is rated at 200 mA maximum
4 Digital Outputs	24 V AC Triac @ 500 mA maximum. Switch neutral only. Outputs D/O 9+ and D/O 10+ connected internally to actuator plug (beside power connector).
24 V AC output terminals	Total current drawn from 24 V AC terminals is limited to 1.8 A.

COMMUNICATIONS

Note: The default Fieldbus baud rate is 38400. The baud rate may be changed using the Unitron Palmtop program (DOS)

Local RS232 TTL port	Ⓜ 9600 Baud Max cable length 4m
Fieldbus port	RS485 Ⓜ 1200, 9600, 19200, or 38400 Baud

INTERFACE

Software	Unitron Command Center Unitron Engineering Center Weblink
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SOFTWARE FEATURES

Note: The controller's Fieldbus address is set by Unitron Command Center's CCView software module (Windows), or Unitron Palmtop program (DOS)

Maximum Controller Address	63
Maximum number of Strategy Blocks	255
Maximum number of Datalog Modules	4
Maximum Datalog capacity (standard)	102
Data Security	Strategy and Point numbers 200-255 analog and digital backed up in EEPROM

