Uni-I/O™ Modules

User Guide

UID-0808R, UID-0808T, UID-0808THS
UID-1600, UID-0016R, UID-0016T

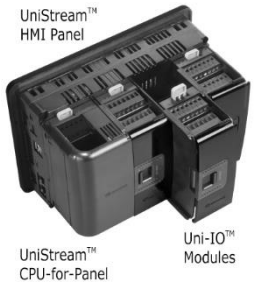
Uni-I/O™ is a family of Input/Output modules that are compatible with the UniStream™ control platform.

This guide provides basic installation information for UID-0808R, UID-0808T, UID-0808THS, UID-1600, UID-0016R, and UID-0016T modules.
Technical specifications may be downloaded from the Unitronics website.

The UniStream™ platform comprises CPU controllers, HMI panels, and local I/O modules that snap together to form an all-in-one Programmable Logic Controller (PLC).

Install Uni-I/O™ modules:

- Onto the back of any UniStream™ HMI Panel comprising a CPU-for-Panel.
- Onto a DIN-rail, using a Local Expansion Kit.



The maximum number of Uni-I/O™ modules that can be connected to a single CPU controller is limited. For details, please refer to the specification sheets of the UniStream™ CPU or any of the relevant Local Expansion Kits.

Before You Begin

Before installing the device, the installer must:

- Read and understand this document.
- Verify the Kit Contents.

Installation option requirements

If you are installing a Uni-I/O™ module onto:

- A UniStream™ HMI Panel; the Panel must comprise a CPU-for-Panel, installed according to the CPU-for-Panel installation guide.
- A DIN-rail; you must use a Local Expansion Kit, available by separate order, to integrate the Uni-I/O™ modules on the DIN-rail into a UniStream™ control system.

Alert Symbols and General Restrictions

When any of the following symbols appear, read the associated information carefully.

Symbol	Meaning	Description
⚠	Danger	The identified danger causes physical and property damage.
⚠	Warning	The identified danger could cause physical and property damage.
Caution	Caution	Use caution.

- All examples and diagrams are intended to aid understanding, and do not guarantee operation. Unitronics accepts no responsibility for actual use of this product based on these examples.
- Please dispose of this product according to local and national standards and regulations.
- This product should be installed only by qualified personnel.

⚠
- Failure to comply with appropriate safety guidelines can cause severe injury or property damage.
- Do not attempt to use this device with parameters that exceed permissible levels.
- Do not connect/disconnect the device when power is on.

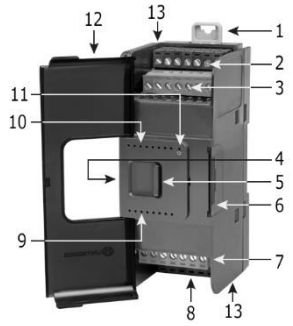
Environmental Considerations

⚠
- Ventilation: 10mm (0.4”) of space is required between the device top/bottom edges and the enclosure’s walls.
- Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive heat, regular impact shocks or excessive vibration, in accordance with the standards and limitations given in the product’s technical specification sheet.
- Do not place in water or let water leak onto the unit.
- Do not allow debris to fall inside the unit during installation.
- Install at maximum distance from high-voltage cables and power equipment.

Kit Contents

- 1 Uni-I/O™ module
- 4 I/O terminal blocks (2 black and 2 gray)

Uni-I/O™ Diagram



1	DIN-rail clips	Provide physical support for CPU and modules. There are two clips: one at the top (shown), one at the bottom (not shown).
2	I/Os	I/O connection points
3		
4	I/O Bus - Left	Left-side Connector
5	Bus Connector Lock	Slide the Bus Connector Lock to the left, to electrically connect the Uni-I/O™ module to the CPU or adjacent module.
6	I/O Bus - Right	Right-Side Connector, shipped covered. Leave covered when not in use.
	Bus Connector Cover	
7	I/Os	I/O connection points
8		
9	I/O LEDs	Green LEDs
10		
11	Status LED	Tricolor LED, Green/Red/Orange

NOTE ▪ Refer to the module's specification sheet for LED indications.

12	Module door	Shipped covered with protective tape to prevent the door from being scratched. Remove tape during installation.
13	Screw holes	Enable panel-mounting; hole diameter: 4mm (0.15”).

About the I/O Bus Connectors

The I/O Bus connectors provide the physical and electrical connection points between modules. The connector is shipped covered by a protective cover, protecting the connector from debris, damage, and ESD.

The I/O Bus - Left (#4 in diagram) can be connected to either a CPU-for-Panel, a Uni-COM™ Communication module, to another Uni-I/O™ module or to the End Unit of a Local Expansion Kit.

The I/O Bus - Right (#6 in diagram) can be connected to another I/O module, or to the Base Unit of the Local Expansion Kit.

Caution
- If the I/O module is located last in the configuration, and nothing is to be connected to it, do not remove its Bus Connector Cover.

Installation

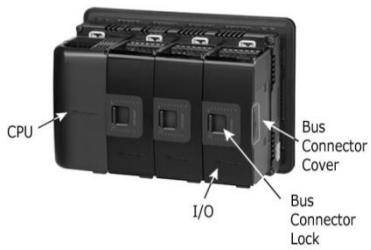
⚠
- Turn off system power before connecting or disconnecting any modules or devices.
- Use proper precautions to prevent Electro-Static Discharge (ESD).

Installing a Uni-I/O™ Module onto a UniStream™ HMI Panel

NOTE The DIN-rail type structure on the back of the panel provides the physical support for the Uni-I/O™ module.

1. Check the unit to which you will connect the Uni-I/O™ module to verify that its Bus Connector is not covered.
   If the Uni-I/O™ module is to be the last one in the configuration, do not remove the cover of its I/O Bus Connector - Right.
2. Open the door of the Uni-I/O™ module and hold it as shown in the accompanying figure.
3. Use the upper and lower guide-tunnels (tongue & groove) to slide the Uni-I/O™ module into place.
4. Verify that the DIN-rail clips located at the top and bottom of the Uni-I/O™ module have snapped onto the DIN-rail.

5. Slide the Bus Connector Lock all the way to the left as shown in the accompanying figure.
6. If there is already a module located to its right, complete the connection by sliding the Bus Connector lock of the adjacent unit to the left.
7. If the module is the last in the configuration, leave the I/O bus connector covered.



Removing a Module

1. Turn off the system power.
2. Disconnect the I/O terminals (#2,3,7,8 in the diagram).
3. Disconnect the Uni-I/O™ module from the adjacent units: slide its Bus Connector Lock to the right. If there is a unit located on its right, slide the lock of this module to the right as well.
4. On the Uni-I/O™ module, pull the top DIN-rail clip up and the bottom clip down.
5. Open the door of the Uni-I/O™ module and hold it with two fingers as shown in the figure on page 3; then pull it carefully from its place.

Installing Uni-I/O™ modules onto a DIN-rail

To mount modules onto a DIN-rail, follow steps 1-7 in Installing a Uni-I/O™ Module onto a UniStream™ HMI Panel on page 3.

In order to connect the modules to a UniStream™ controller, you must use a Local Expansion Kit.

These kits are available with and without power supplies, and with cables of varying lengths. For complete information, please refer to the installation guide of the relevant Local Expansion Kit.

Numbering Modules

You can number modules for reference purposes. A set of 20 stickers is provided with every CPU-for-Panel; use these stickers to number the modules.

- The set contains numbered and blank stickers as shown in the figure to the left.
- Place them on the modules as shown in the figure to the right.

UL Compliance

The following section is relevant to Unitronics' products that are listed with the UL.

The following models: UIA-0006, UID-0808R, UID-W1616R, UIS-WCB1 are UL listed for Hazardous Locations.

The following models: UIA-0006, UIA-0402N, UIA-0402NL, UIA-0800N,UID-0016R,UID-0016RL,UID-0016T,UID-0808R,UID-0808RL,UID-0808T,UID-0808THS,UID-0808THSL, UID-0808TL, UID-1600, UID-1600L, UID-W1616R, UID-W1616T, UIS-04PTKN, UIS-04PTN, UIS-08TC, UIS-WCB1, UIS-WCB2 are UL listed for Ordinary Location.

UL Ratings, Programmable Controllers for Use in Hazardous Locations, Class I, Division 2, Groups A, B, C and D

These Release Notes relate to all Unitronics products that bear the UL symbols used to mark products that have been approved for use in hazardous locations, Class I, Division 2, Groups A, B, C and D.

Caution

- This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D, or Non-hazardous locations only.
- Input and output wiring must be in accordance with Class I, Division 2 wiring methods and in accordance with the authority having jurisdiction.
- WARNING—Explosion Hazard—substitution of components may impair suitability for Class I, Division 2.
- WARNING – EXPLOSION HAZARD – Do not connect or disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- WARNING – Exposure to some chemicals may degrade the sealing properties of material used in Relays.
- This equipment must be installed using wiring methods as required for Class I, Division 2 as per the NEC and/or CEC.

Certification UL des automates programmables, pour une utilisation en environnement à risques, Class I, Division 2, Groups A, B, C et D.

Cette note fait référence à tous les produits Unitronics portant le symbole UL - produits qui ont été certifiés pour une utilisation dans des endroits dangereux, Classe I, Division 2, Groupes A, B, C et D.

Attention

- Cet équipement est adapté pour une utilisation en Classe I, Division 2, Groupes A, B, C et D, ou dans Non-dangereux endroits seulement.
- Le câblage des entrées/sorties doit être en accord avec les méthodes de câblage selon la Classe I, Division 2 et en accord avec l'autorité compétente.
- AVERTISSEMENT: Risque d'Explosion – Le remplacement de certains composants rend caduque la certification du produit selon la Classe I, Division 2.
- AVERTISSEMENT - DANGER D'EXPLOSION - Ne connecter pas ou ne débranche pas l'équipement sans avoir préalablement coupé l'alimentation électrique ou la zone est reconnue pour être non dangereuse.
- AVERTISSEMENT - L'exposition à certains produits chimiques peut dégrader les propriétés des matériaux utilisés pour l'étanchéité dans les relais.
- Cet équipement doit être installé utilisant des méthodes de câblage suivant la norme Class I, Division 2 NEC et /ou CEC.

Wiring

- This equipment is designed to operate only at SELV/PELV/Class 2/Limited Power environments.
- All power supplies in the system must include double insulation. Power supply outputs must be rated as SELV/PELV/Class 2/Limited Power.
- Do not connect either the 'Neutral' or 'Line' signal of the 110/220VAC to device's 0V point.
- Do not touch live wires.

- All wiring activities should be performed while power is OFF.
- Use over-current protection, such as a fuse or circuit breaker, to avoid excessive currents into the Uni-I/O™ module supply port.
- Unused points should not be connected (unless otherwise specified). Ignoring this directive may damage the device.
- Double-check all wiring before turning on the power supply.

Caution

- To avoid damaging the wire, use a maximum torque of 0.5 N·m (5 kgf·cm).
- Do not use tin, solder, or any substance on stripped wire that might cause the wire strand to break.
- Install at maximum distance from high-voltage cables and power equipment.

Wiring Procedure

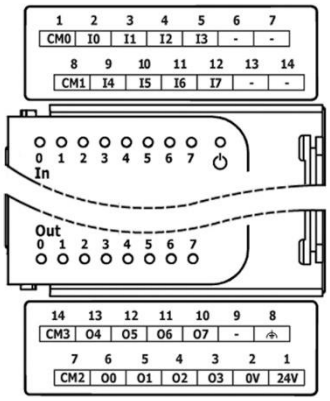
Use crimp terminals for wiring; use 26-12 AWG wire (0.13 mm^2 –3.31 mm^2).

1. Strip the wire to a length of 7±0.5mm (0.250–0.300 inches).
2. Unscrew the terminal to its widest position before inserting a wire.
3. Insert the wire completely into the terminal to ensure a proper connection.
4. Tighten enough to keep the wire from pulling free.

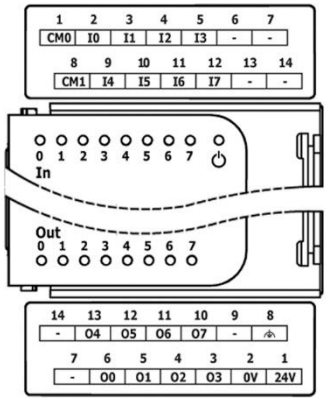
Uni-I/O™ Module Connection Points

All wiring diagrams and instructions in this document refer to the I/O connection points of the different modules. These are arranged in four groups of seven points each, as shown in the figures below.

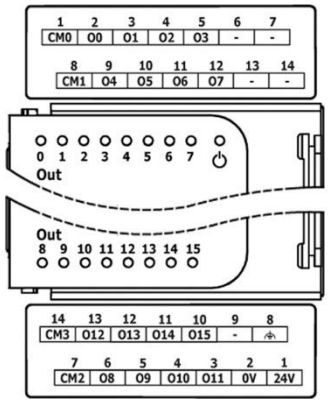
UID-0808R



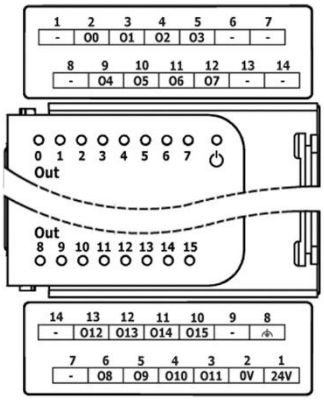
UID-0808T



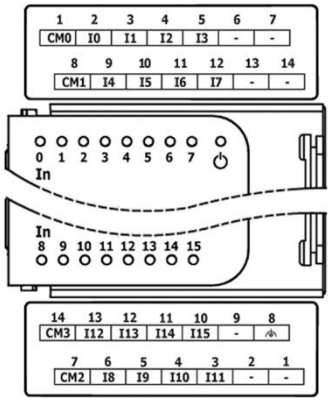
UID-0016R



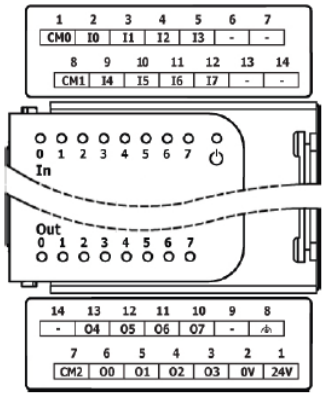
UID-0016T



UID-1600



UID-0808THS



Wiring Guidelines

In order to ensure that the device will operate properly and to avoid electromagnetic interference:

- Use a metal cabinet. Make sure the cabinet and its doors are properly earthed.
- Use wires that are properly sized for the load.
- Route each I/O signal with its own dedicated common wire. Connect common wires at their respective common (CM) points at the I/O module.
- Individually connect each 0V point in the system to the power supply 0V terminal.
- Individually connect each functional earth point (⏚) to the earth of the system (preferably to the metal cabinet chassis). Use the shortest and thickest wires possible: less than 1m (3.3') in length, minimum thickness 14 AWG (2 mm^2).
- Connect the power supply 0V to the earth of the system.

NOTE For detailed information, refer to the document System Wiring Guidelines, located in the Technical Library in the Unitronics' website.

Wiring the Inputs: UID-0808R, UID-0808T, UID-1600

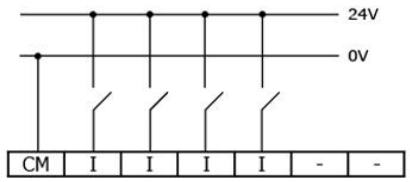
UID-0808R The inputs are arranged in two isolated groups:

UID-0808T
- I0-I3 share common CM0
- I4-I7 share common CM1

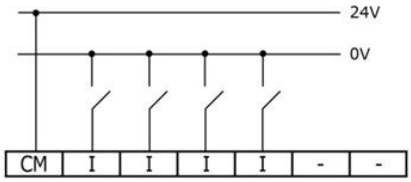
UID-1600 The inputs are arranged in four isolated groups:
- I0-I3 share common CM0
- I4-I7 share common CM1
- I8-I11 share common CM2
- I12-I15 share common CM3

Each input group may be wired as sink or source. Wire each group according to the figures below.

Input wiring, sink



Input wiring, source



NOTE
- Use sink input wiring to connect a sourcing (pnp) device.
- Use source input wiring to connect a sinking (npn) device.

Wiring the Inputs UID-0808THS

The inputs are arranged in two isolated groups:

- I0-I3 share common CM0
- I4-I7 share common CM1

Each group may be wired as sink or source.

Inputs I0, I1, I4, and I5 can be configured as either normal digital inputs or as high speed inputs that can receive high speed pulse signals from sensors or shaft encoders.

- Inputs I2, I3, I6 and I7 can function only as normal digital inputs.

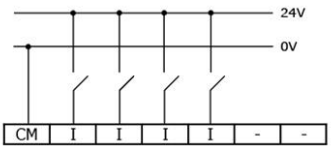
High Speed Input Modes

Following are the different pin assignments for the high speed channels:

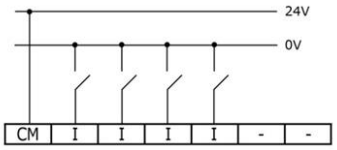
	Channel 1			Channel 2	
	I0	I1		I4	I5
Quadrature	Phase A	Phase B		Phase A	Phase B
Pulse/Direction	Pulse	Direction		Pulse	Direction

NOTE
- Input modes are set both by wiring and software.
- When connecting pulse sources without a direction signal, leave the direction pin unconnecte Note that in this configuration, the direction pin cannot be used as normal input.

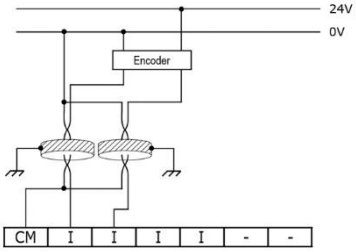
Input wiring, sink



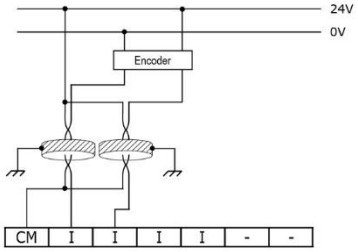
Input wiring, source



High Speed Input wiring, sink



High Speed Input wiring, source



NOTE
- Use sink input wiring to connect a sourcing (pnp) device.
- Use source input wiring to connect a sinking (npn) device.

Wiring Relay Outputs: UID-0808R, UID-0016R

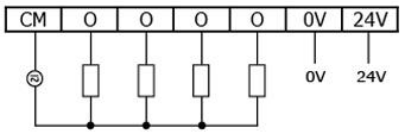
Output's power supply

The relay outputs require an external 24VDC power supply. Connect the 24V and 0V terminals as shown in the figure below.

⚠
- To avoid risk of fire or property damage, always use a limited current source or connect a current limiting device in series with the relay contacts.
- The 0V of the module must be connected to the HMI Panel's 0V. Ignoring this directive may damage the device.
- In the event of voltage fluctuations or non-conformity to voltage power supply specifications, connect the module to a regulated power supply.

UID-0808R The outputs are arranged in two isolated groups:

- O0-O3 share common CM2
- O4-O7 share common CM3



UID-0016R The outputs are arranged in four isolated groups:

- O0-O3 share common CM0
- O4-O7 share common CM1
- O8-O11 share common CM2
- O12-O15 share common CM3

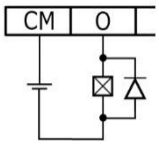
Wire each group according to the accompanying figure.

Increasing contact life span

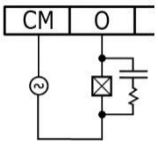
To increase the life span of the relay contacts and protect the module from potential damage by reverse EMF, connect:

- a clamping diode in parallel with each inductive DC load.
- an RC snubber circuit in parallel with each inductive AC load.

DC Load



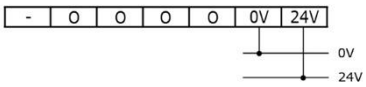
AC Load



Wiring Transistor Outputs: UID-0808T, UID-0016T

Output's power supply

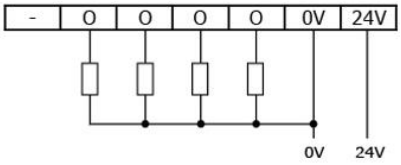
The use of any of the outputs requires an external 24VDC power supply as shown in the accompanying figure.



⚠ ▪ In the event of voltage fluctuations or non-conformity to voltage power supply specifications, connect the device to a regulated power supply.

Outputs

Connect the 24V and 0V terminals as shown in the accompanying figure.



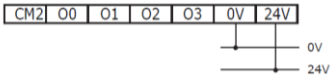
UID-0808T O0-O7 share common return 0V

UID-0016T O0-O15 share common return 0V

Wiring the Outputs UID-0808THS

Output's power supply

- The use of any of the outputs requires an external 24VDC power supply as in the accompanying figure.



⚠ ▪ In the event of voltage fluctuations or non-conformity to voltage power supply specifications, connect the device to a regulated power supply.

Outputs

⚠ ▪ Connect a current limiting device in series with outputs O0 and O1. Outputs O2 to O7 are short-circuit protected.

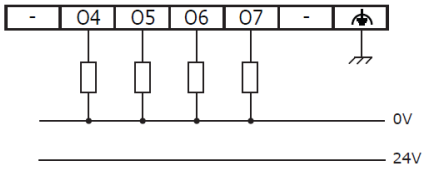
- Outputs O0 and O1 can be configured as either normal digital outputs or as high speed PWM outputs.
- Outputs O4 and O5 can be configured as either normal digital outputs or as normal PWM outputs.

Refer to the specification sheet for detailed information about PWM output types.

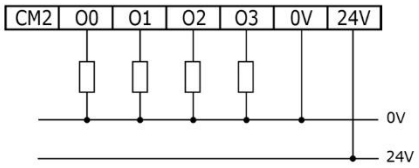
- Outputs O2, O3, O6 and O7 can function only as normal digital outputs.
- Following are the different pin assignments for the PWM channels:

	Channel 1			**Channel 2**	
	O0	O1		O4	O5
PWM, one output	PWM	Normal Digital		PWM	Normal Digital
PWM, two outputs	PWM	PWM		PWM	PWM

Normal digital/Normal PWM output



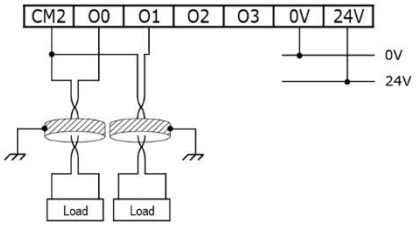
Normal digital output



High Speed PWM Outputs

Use shielded cable for wiring O0 or O1 when they are set to operate as High Speed PWM outputs.

Caution ▪ If Outputs O0 and O1 are to function as high-speed outputs, connect them using CM2. Do not connect CM2 to the system 0V.



UniStream™ Uni-I/O™ Modules

Technical Specifications

UID-0808R, UID-0808T, UID-0808THS
UID-0016R, UID-0016T, UID-1600

This guide provides specifications for Unitronics' Uni-I/O™ Modules.

(For all products except for a product UID-0808THS, see a separate table)

Uni-I/O modules are compatible with UniStream™ Programmable Logic Controllers. They may be either snapped onto the back of a UniStream™ HMI Panel next to a CPU-for-Panel to create an all-in-one HMI + PLC controller, or installed on a standard DIN Rail using a Local Expansion Kit.

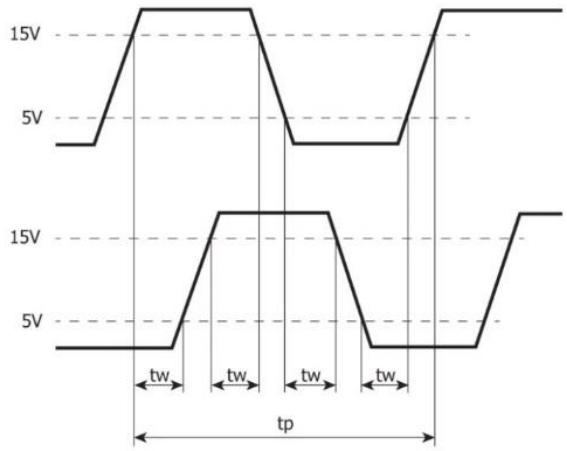
Installation Guides are available in the Unitronics Technical Library at www.unitronicsPLC.com.

This specification sheet refers to the models in the following table:

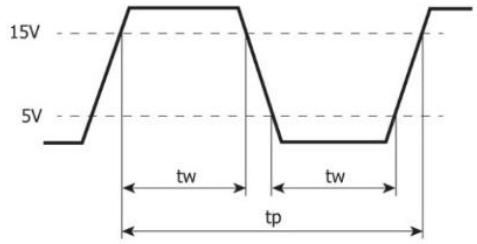
Part no.	UID-0808R	UID-0016R	UID-0808T	UID-0016T	UID-1600
Inputs	8	-	8	-	16
Type	Sink or Source, 24VDC	-	Sink or Source, 24VDC	-	Sink or Source, 24VDC
Outputs	8	16	8	16	
Type	Relay, 24VDC (power supply)		Transistor, Source (pnp), 24VDC		
Isolation	All inputs and outputs are isolated				

Inputs	UID-1600	UID-0808R, UID-0808T
Number of inputs	16	8
Type	Sink or Source	
Isolation groups	Four groups of 4 inputs each	Two groups of 4 inputs each
Isolation voltage		
Group to bus	500VAC for 1 minute	
Group to group	500VAC for 1 minute	
Input to input within group	None	
Nominal voltage	24VDC @ 6mA	
Input voltage		
Sink/Source	On state: 15-30VDC, 4mA minimum Off state: 0-5VDC, 1mA maximum	
Nominal impedance	4kΩ	
Filter	Settable between 1 to 32 ms (individually per group)	

Inputs	UID-0808THS
Number of inputs	8
Type	Sink or Source
Isolation groups	Two groups of 4 inputs each
Isolation voltage	
Group to bus	500VAC for 1 minute
Group to group	500VAC for 1 minute
Input to input of the same group	None
Nominal voltage	24VDC @ 6mA
Input voltage	
Sink/Source	On state: 15-30VDC, 4mA min. Off state: 0-5VDC, 1mA max.
Nominal impedance	4kΩ
Filter	Settable between 1 to 32ms (individually per group)
High speed inputs (3)	
Frequency / Period	Quadrature mode: 200kHz max. / 5μs min. (t_p in the Quadrature Mode figure below) Pulse/Direction mode: 250kHz max. / 4μs min. (t_p in the Pulse/Dir Mode figure below)
Pulse width	Quadrature mode: 0.8μs min. for each state (t_w in Quadrature Mode figure below). Pulse/Direction mode: 1.5μs min. for each state (t_w in Pulse/Dir Mode figure below).
Cable	Shielded twisted pair



Quadrature Mode



Pulse/Direction mode

Outputs	UID-0808R	UID-0016R	UID-0808T	UID-0016T
Number of outputs	8	16	8	16
Output type	Relay, SPST-NO (Form A)		Transistor, Source	
Isolation groups	Two groups of 4 outputs each	Four groups of 4 outputs each	One group of 8 outputs	One group of 16 outputs
Isolation voltage				
Group to bus	1,500VAC for 1 minute		500VAC for 1 minute	
Group to group	1,500VAC for 1 minute		-	
Output to output within group	None		None	
Output power supply to bus	None		500VAC for 1 minute	
Output power supply to output	1,500VAC for 1 minute		None	
Current	2A maximum per output (Resistive load)		0.5A maximum per output. UID-0016T: total cumulative output current for O4-O7 and O12-O15 cannot exceed 2A.	
Voltage	250VAC / 30VDC maximum		See Outputs Power Supply specfication	
Minimum load	1mA, 5VDC		-	
ON state voltage drop	-		0.5V maximum	
OFF state leakage current	-		10µA maximum	
Switching times	10ms maximum		Turn-on/off: 80µs max. (Load resistance < 4kΩ)	
Short-circuit protection	None		Yes	
Life expectancy (1)	100k operations at maximum load		-	

Outputs Power Supply	UID-0808R	UID-0016R	UID-0808T	UID-0016T
Nominal operating voltage	24VDC			
Operating voltage	20.4 – 28.8VDC			
Maximum current consumption (2)	40mA@24VDC	80mA@24VDC	30mA@24VDC(Error! Reference source not found.	60mA@24VDC(Error! Reference source not found.)

IO/COM Bus	UID-0808R	UID-0016R	UID-0808T	UID-0016T	UID-1600
Bus maximum current consumption	100mA	90mA	110mA	120mA	100mA

Outputs	UID-0808THS
Number of outputs	8
Output type	Transistor, Source
Isolation groups	One group of 8 outputs
Isolation voltage	
Output to bus	500VAC for 1 minute
Output to output	None
Output power supply to bus	500VAC for 1 minute
Output power supply to output	None
Current	0.5A max. per output
Voltage	See Outputs Power Supply specfication
On state voltage drop	O0, O1: 0.2V max O2 – O7: 0.5V max
Off state leakage current	10µA max
Short circuit protection	O0, O1: None O2-O7: Yes
Switching times	O0, O1: Turn-on: 0.4µs max. (470Ω and 4kΩ load) Turn-off: 1.1µs max. (470Ω load), 3.4µs max. (4kΩ load) O2-O7: Turn-on/off: 80µs max. (Load resistance < 4kΩ)
PWM Frequency (4) (5)	O0, O1: 250kHz max. (470Ω load) 100kHz max. (4kΩ load) O4, O5: 3kHz max. (Load resistance < 4kΩ)
Cable (PWM mode)	O0, O1: Shielded twisted pair O4, O5: Shielded or unshielded

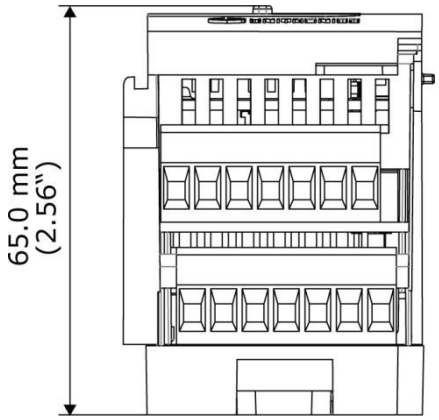
Outputs Power Supply	UID-0808THS
Nominal operating voltage	24VDC
Operating voltage	20.4 – 28.8VDC
Maximum current consumption (6)	30mA@24VDC

IO/COM Bus	UID-0808THS
Bus current consumption	120mA max.

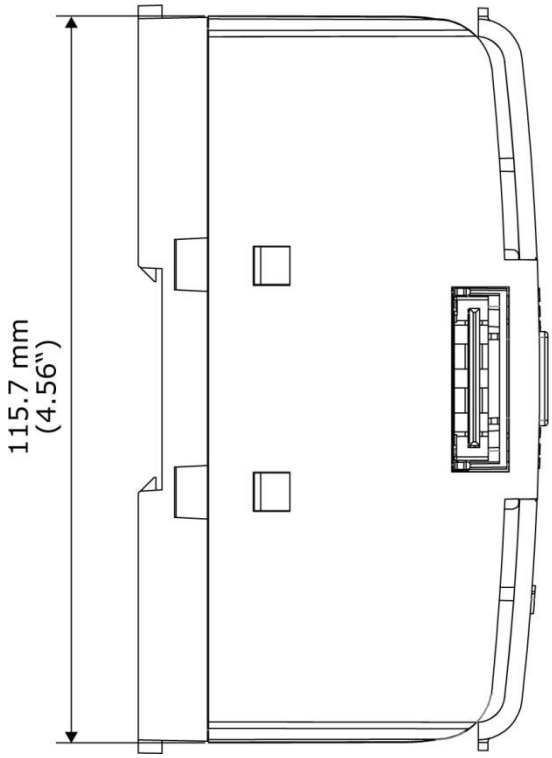
LED Indications			
Input LEDs	Green	Input state	
Output LEDs	Green	Output state	
Status LED	A triple color LED. Indications are as follows:		
	Color	**LED State**	**Status**
	Green	On	Operating normally
		Slow blink	Boot
		Rapid blink	OS initialization
	Green/Red	Slow blink	Configuration mismatch
	Red	On	Output short-circuit (models with transistor outputs)
		Slow blink	No IO exchange
		Rapid blink	Communication error
	Orange	Rapid blink	OS Upgrade
		Slow Blink	Firmware Error, Contact Support

Environmental	
Protection	IP20, NEMA1
Operating temperature	-20°C to 55°C (-4°F to 131°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)
Relative Humidity (RH)	5% to 95% (non-condensing)
Operating Altitude	2,000m (6,562 ft)
Shock	IEC 60068-2-27, 15G, 11ms duration
Vibration	IEC 60068-2-6, 5Hz to 8.4Hz, 3.5mm constant amplitude, 8.4Hz to 150Hz, 1G acceleration.

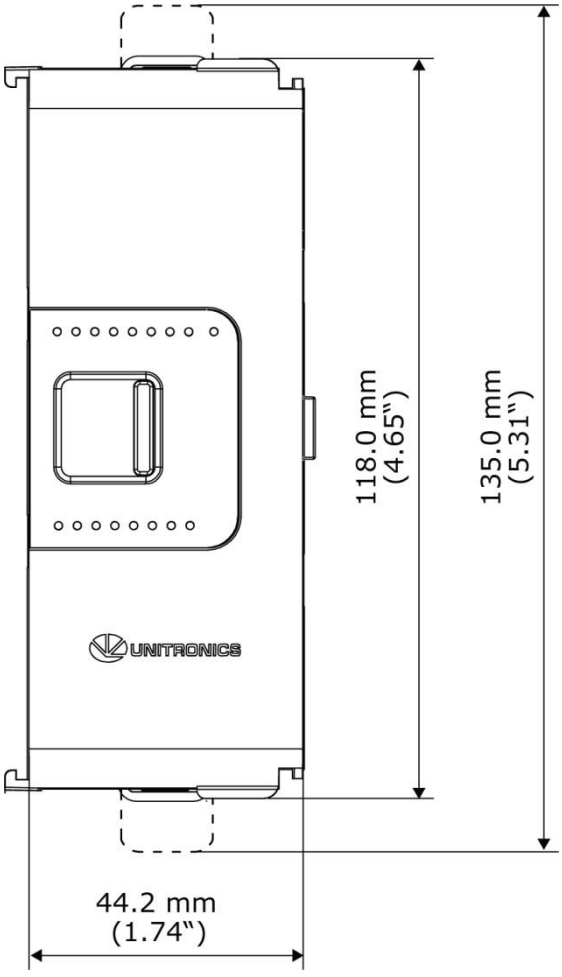
Dimensions	UID-0808R	UID-0016R	UID-0808T	UID-0808THS	UID-0016T	UID-1600
Weight	0.15 Kg (0.331 lb)	0.17 Kg (0.374 lb)	0.13 Kg (0.287 lb)	0.13 K (0.287 lb)	0.13 Kg (0.287 lb)	0.13 Kg (0.287 lb)
Size	Identical for all models, as shown in the images below					



Top View



Side View



Front View

Notes all Modules: **UID-0808R, UID-0016R, UID-0808T, UID-0016T, UID-1600**

1. Life expectancy of the relay contacts depends on the application that they are used in. The product's installation guide provides procedures for using the contacts with long cables, or with inductive loads.
2. Current consumption does not include load current.

Notes for UID-0808THS:

3 The UID-0808THS utilizes two high speed blocks that can each be assigned either to the inputs or to the outputs.
4. Outputs O0 and O1 can be configured as either normal digital outputs or as high speed PWM outputs. Outputs O4 and O5 can be configured as either normal digital outputs or as normal PWM outputs. PWM outputs specifications apply only when outputs are configured as PWM outputs.
5. Outputs O0 and O1 share the same frequency but capable of producing different duty-cycles; Outputs O4 and O5 share the same frequency but capable of producing different duty-cycles.
6. Current consumption does not include load current.

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