

# UNIVERSAL I/O SIMULATOR

## HE-TK001

### 1 TECHNICAL SPECIFICATIONS

#### GENERAL

Primary Voltage	24VDC +/- 10%
Current Capacity	1A 24Vdc Desktop Supply (External) Meanwell GST25A24 or equivalent
Relative Humidity	5-95% non-condensing
Operating Temperature	0° to 50°C
Storage Temperature	-20° to 70°C
Weight	4 oz.
Mounting	DIN Rail or Rubber Foot Pads
Panel Seal	IP20
Packaging	100% Recyclable

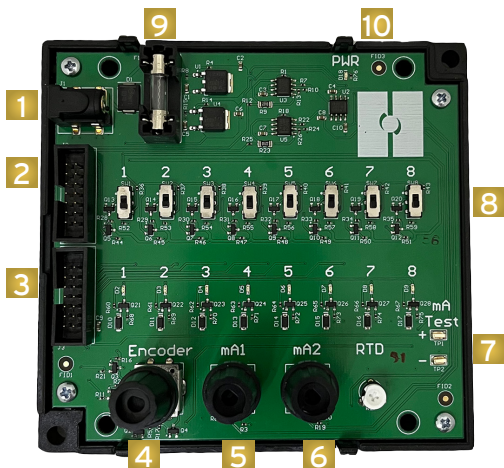
### 2 DC Power In

The Universal I/O Simulator is provided with a 24VDC 1-Amp Power Supply (Power Brick). A removable AC power cord connects to the Power Brick on one side and to a wall outlet on the other. 24VDC is supplied via a permanently attached cord terminated with a barrel connector.

The barrel connector plugs directly into the Universal I/O Simulator to provide power. 24VDC is passed through the board and to the V+ and Common connections in order to power the OCS and to supply any I/O power required.

If connected and powered correctly, the Power LED Indicator will be lit. If the Power LED Indicator is not lit, please check **to see if** the fuse is connected and installed correctly. If it is, and the Power LED Indicator is still not lit, check your power supply.

### 3 OVERVIEW



- |                                |                                  |
|--------------------------------|----------------------------------|
| 1. Power Connector             | 6. Adjustment Knob for RTD Input |
| 2. J2                          | 7. LEDs for Digital Outputs      |
| 3. J3                          | 8. Switches for Digital Inputs   |
| 4. Encoder Knob for HSC        | 9. Fuse and Fuse Holder          |
| 5. Adjustment Knobs for 4-20mA | 10. Power LED Indicator          |

### 4 I/O CONNECTORS

Refer to the datasheet of the OCS controller being used. Match the following wires to OCS Power and I/O terminal connections. Depending on the OCS model, some wires may not be used; tape them off separately from one another to avoid circuitry damage.

#### Top Connector - J2

Input Connector Pinout	Pin #	Wire Color
I1 (Switch 1)	1	Black
I2 (Switch 2)	2	Brown
I3 (Switch 3)	3	Red
I4 (Switch 4)	4	Orange
I5 (Switch 5)	5	Yellow
I6 (Switch 6)	6	Green
I7 (Switch 7)	7	Blue
I8 (Switch 8)	8	Violet
Common	9	Grey
H1 (Encoder A)	10	White
H2 (Encoder B)	11	White/Black
Common	12	White/Brown
AI1 (4-20mA Circuit / Pot 1)	13	White/Red
AI2 (4-20mA Circuit / Pot 2)	14	White/Orange

#### Bottom Connector - J3

Output / Power Connector Pinout	Pin #	Wire Color
Q1 / LED Circuit 1	1	Black
Q2 / LED Circuit 2	2	Brown
Q3 / LED Circuit 3	3	Red
Q4 / LED Circuit 4	4	Orange
Q5 / LED Circuit 5	5	Yellow
Q6 / LED Circuit 6	6	Green
Q7 / LED Circuit 7	7	Blue
Q8 / LED Circuit 8	8	Violet
V+ (OCS Power)	9	Grey
V+ (Output Power)	10	White
AQ1 (mA Test Points)"	11	White/Black
Common (OCS Ground)	12	White/Brown
RTD Excitation	13	White/Red
RTD Sense	14	White/Orange

## 5 INSTALLATION PROCEDURE

1. The HE-TK001 conveniently mounts on a DIN rail [\*see below].
2. Be sure the DIN rail is in a horizontal position before installing the unit.
3. The orientation shown below is necessary to prevent the unit from slipping off the DIN rail.
4. Align the unit on the DIN rail then push the DIN rail clip until it clicks into place. Check to ensure that the unit is secure on the DIN rail.
5. Do NOT mount the unit on its side as this may cause the unit from slipping off the DIN rail.



## 6 SAFETY

Adhere to the following safety precautions whenever any type of connection is made to the module:

1. Connect the safety (earth) ground on the power connector first before making any other connections.
2. When connecting to the electric circuits or pulse-initiating equipment, open their related breakers.
3. Do NOT make connection to live power lines.
4. Make connections to the module first; then connect to the circuit to be monitored.
5. Route power wires in a safe manner in accordance with good practice and local codes.
6. Wear proper personal protective equipment including safety glasses and insulated gloves when making connections to power circuits.
7. Ensure hands, shoes, and floor are dry before making any connection to a power line.
8. Make sure the unit is turned OFF before making connection to terminals.
9. Make sure all circuits are de-energized before making connections.
10. Before each use, inspect all cables for breaks or cracks in the insulation. Replace immediately if defective.
11. Use copper conductors in Field Wiring only, 60/75°C.

## 7 PART NUMBER

The global part number is **HE-TK001**.

## 8 TECHNICAL SUPPORT

For assistance and manual updates, contact Technical Support at the following locations:

**North America**  
 (317) 916-4274  
[www.hornerautomation.com](http://www.hornerautomation.com)  
[techsppt@heapg.com](mailto:techsppt@heapg.com)

**Europe**  
 (+) 353-21-4321-266  
[www.hornerautomation.eu](http://www.hornerautomation.eu)  
[technical.support@horner-apg.com](mailto:technical.support@horner-apg.com)