

# Branch Current Monitor, Solid-Core

## Monitor Current on Every Breaker

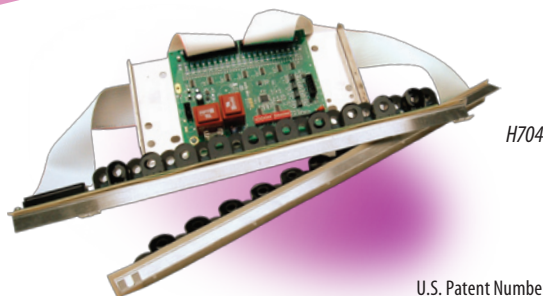
### APPLICATIONS

- Retrofitting panelboards
- Cost allocation
- Protecting against overload
- Managing and balancing loads
- Lighting circuits

### FEATURES

#### A simple solution for individual circuit current monitoring

- Up to 63 H704s can be networked on one Modbus RS-485 drop...simplified wiring
- Reports current consumed on each circuit in the panel board...one product covers multiple points
- 3/4 or 1 inch on center current sensors accommodate standard breakers...easy installation
- Provides Modbus registers for current limit warnings and alarms...prevents breaker trips
- Integrates with available network display for local indication
- Built-in ability to set the orientation and numbering of the circuits



H704

U.S. Patent Number 6,330,516



### DESCRIPTION

The **H704 Series** branch circuit current monitoring system provides a cost-effective solution for electrical load management, making it ideally suited for applications where load capacity requirements are dynamic, such as the data storage industry, lighting panels, etc.

The H704 monitors the current draw of each breaker in a panelboard. The accumulated information can be transmitted to a Modbus host and/or viewed on an optional local display via an RS-485 network. Data updates occur approximately once per second to provide timely preventative maintenance information. As a circuit approaches capacity, warning and alarm levels trigger (see graph, facing page). Additional capacity can then be added, or loads balanced, to prevent costly downtime from overloaded circuits and unexpected breaker trips.

### SPECIFICATIONS

<i>Inputs:</i>	
<b>Input Power</b>	120VAC (+10/-25%) line-to-neutral, 50/60Hz; (208/230VAC for H704-42E)
<b>Frequency</b>	50/60Hz
<i>Accuracy:</i>	
<b>Accuracy</b>	±2% of reading from 5A to 50A
<b>Sampling Frequency</b>	1280 Hz
<b>Update Rate</b>	1.2 sec
<i>Outputs:</i>	
<b>Type</b>	Modbus® RTU
<b>Connection</b>	DIP-switch selectable 2-wire or 4-wire
<b>Address</b>	DIP-switch selectable address 1 to 247
<b>Baud Rate</b>	DIP-switch selectable 2400, 4800, 9600, 19200
<b>Parity</b>	DIP-switch selectable NONE, ODD, EVEN
<b>Communication Format</b>	8 data-bits, 1 start-bit, 1 stop-bit
<i>Mechanical:</i>	
<b>Connection to Conductor</b>	Solid-core toroid†
<b>Number of Channels</b>	up to 42
<i>Environmental:</i>	
<b>Operating Temperature Range</b>	0° to 60°C (32° to 140°F) (<95%RH, non-condensing)
<b>Storage Temperature Range</b>	-40° to 70°C (-40° to 158°F)

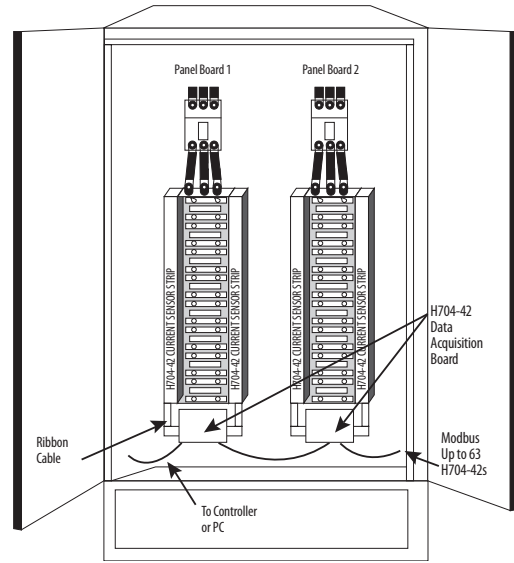
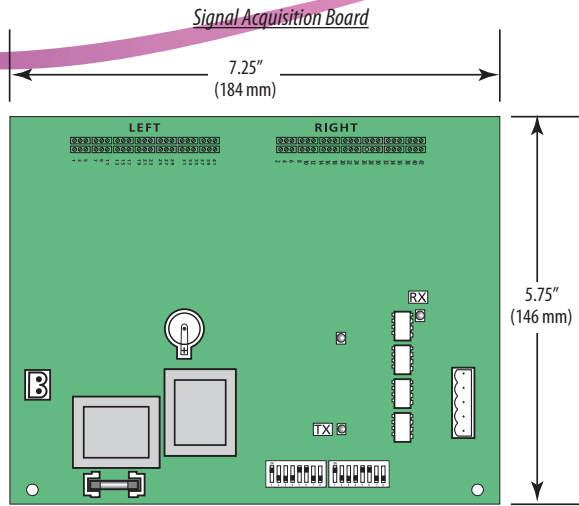
† Do not apply 300V Class current transformers to circuits having a line-to-neutral voltage greater than 300V, unless adequate additional insulation is applied between the primary conductor and the current transformers. Veris assumes no responsibility for damage of equipment or personal injury caused by products operated on circuits above their published ratings.



H704 Series transducers are sold as an open device. Observe handling precautions for static sensitive devices to avoid damage to the circuitry which would not be covered under the factory warranty.

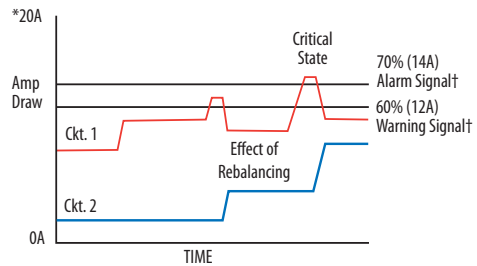
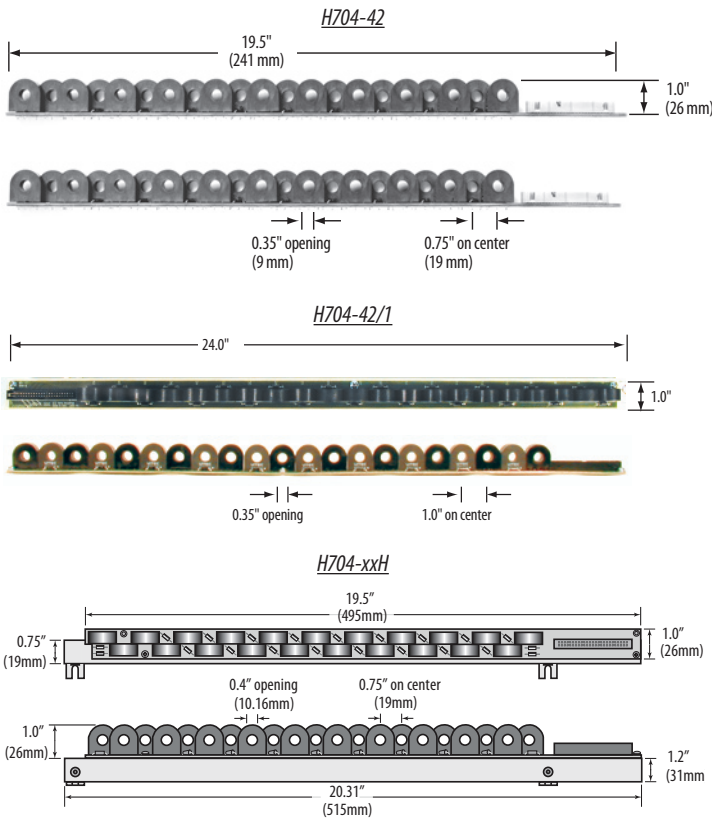
**DIMENSIONAL DRAWINGS**

**TYPICAL PANELBOARD INSTALLATION**



*Current Sensor Strip*

**OPERATION EXAMPLE**



\*Example represents 20 Amp circuit  
†Configurable time delay for alarm and warning

**ORDERING INFORMATION**



MODEL	BREAKER SPACING	AMPERAGE RANGE	OUTPUT
H704-42	3/4" on center	10-50* (configurable)	RTU Modbus <sup>†</sup>
H704-42/1	1" on center	10-50* (configurable)	RTU Modbus <sup>†</sup>

For the 100A version, order the H704-42H or H704-42/1H.  
For the 240VAC version, order the H704-42E or H704-42/1E.  
For the 240VAC, 100A version, order the H704-42EH or H704-42/1EH.  
For N2 protocol, order H726-xx.

Notes:  
\* Hole size accommodates up to 6 AWG (10mm2) THHN insulated conductors.  
<sup>†</sup> Other protocols available, consult factory.

**ACCESSORIES**

H8936 Network Display

**POWER/ENERGY MONITORING**