

SIEMENS

Rail Automation

Vital Interface Unit (VIU)

VIU 16i / 8i

The VIU is a general purpose programmable logic controller. It can monitor the state of its inputs, control vital outputs, perform logic functions and generate vital communications messages to report its status or the status of devices connected to it. The primary purpose of the VIU-16i/8i is to control wayside signal lamps by using current sensors or by controlling the lamp voltage (AC or DC).

Each VIU unit has the ability to control sixteen (16i), or eight (8i) vital inputs, and four (16i) or two (8i) vital outputs. If additional vital I/O is required, multiple VIU Units can be cascaded using up to four units, one main (Master) unit and three auxiliary (Slave) units. In this case, the auxiliary VIU-16i/8i units communicate with the main VIU-16i/8i unit using vital Advanced Train Control System (ATCS) message protocols. The main VIU-16i/8i unit consolidates the message(s) and creates one central message. Each VIU provides event recording capability.

The ATCS protocol also supports remote configuration and control of selected non-UCN (Universal Check Number) protected VIU operational parameters.



Features

- Integrated IP Connectivity
- Built-in keypad and display for configuration, troubleshooting and diagnostics
- Standard USB interface allows download of event logs and configuration information or upload of executive and application software
- Access from a laptop using standard web browser
- Consolidated event logging for distributed/networked VIU units
- User programmable (Boolean Logic), generic lamp/switch monitoring application for all locations
- Use to interface locomotive-based equipment to wayside equipment to allow for display of signal aspects in-cab

Specifications

Power:

- Input Voltage: 9.0-20.0 VDC
- Steady State Current: 1.9 A at 9 VDC
1.2 A at 13.5 VDC
1 A at 16.5 VDC
- Inrush Current: At 9 VDC input - 11 A spike followed by 40 msec at 6.2 A
At 13.5 VDC input - 12 A spike followed by 40 msec at 6.4 A
At 16.5 VDC input - 20 A spike followed by 40 msec at 6 A
- Input Isolation: 2000 Vrms at 60 Hz
- Maximum Ripple: 1V (peak-to-peak)

Vital I/O:

- Voltage Levels: 8V to 20V = energized,
-2V to 4V = de-energized
(4 to 6 V indeterminate)
- Isolation: 2000 Vrms at 60 Hz

Environmental:

- Operating Temperature Range: -40° F to + 160° F (-40° C to + 70° C)
- Maximum Humidity: 90% non-condensing

Physical:

- Dimensions: 8.80 inches high (22.35 centimeters)
6 inches wide (15.24 centimeters)
11.02 inches deep (27.99 centimeters)
- Weight: 11 pounds (5 kilograms)



The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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