c UL us LISTED

H8932/H8936

Network Display

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Follow safe electrical work practices. See NFPA 70E in the USA, or applicable local codes.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Read, understand and follow the instructions before installing this product.
- Turn off all power supplying equipment before working on or inside the equipment.
- Use a properly rated voltage sensing device to confirm power is off.
  DO NOT DEPEND ON THIS PRODUCT FOR VOLTAGE INDICATION
- Only install this product on insulated conductors.

Failure to follow these instructions will result in death or serious injury.

A qualified person is one who has skills and knowledge related to the construction and operation of this electrical equipment and the installation, and has received safety training to recognize and avoid the hazards involved. NEC2009 Article 100

No responsibility is assumed by Veris Industries for any consequences arising out of the use of this material.

NOTICE

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- The installer is responsible for conformance to all applicable codes.
- Mount this product inside a suitable fire and electrical enclosure.

FCC PART 15 INFORMATION

NOTE: This equipment has been tested by the manufacturer and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications to this product without the express authorization of Veris Industries nullify this statement.

Control system design must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to acheive a safe state during and after a path failure. Examples of critical control functions are emergency stop and over-travel stop.

⚠ WARNING

LOSS OF CONTROL

- Assure that the system will reach a safe state during and after a control path failure.
- Separate or redundant control paths must be provided for critical control functions.
- Test the effect of transmission delays or failures of communication links.[1]
- Each implementation of equipment using communication links must be individually and thoroughly tested for proper operation before placing it in service.

Failure to follow these instructions may cause injury, death or equipment damage.

[1]For additional information about anticipated transmission delays or failures of the link, refer to NEMA ICS 1.1 (latest edition). *Safety Guidelins for the Application, Installation, and Maintenance of Solid-State Control* or its equivalent in your specific country, language, and/or location.

Specifications

AC Power Source	Dedicated 120/240 VAC, line-to-neutral; fused
Fuse Ratings	200mA at 250V 5x20 mm fast blow
AC Power Voltage Tolerance	90-132VAC for 120V
AC Power Frequency	50/60 Hz
AC Power Termination	2-position Euro style pluggable connector (max. wire size 12 gauge)
Terminal Block Torque	4.9 in-lb (0.56 N-m)
Alternate DC Power Source	12VDC, 300mA unfused
Environmental:	
Operating Temperature Range	0° to 50°C (32° to 122°F)
Operating Humidity Range	<95% RH, non-condensing
Storage Temperature Range	-20° to 70°C (68° to 158°F)
Network Communications:	
Interface	Downstream: RS-485; Upstream: RS-485, RS-232
Protocol	Modbus RTU
Baud Rate	UI-selectable 2400, 4800, 9600, 19200
Parity	UI-selectable NONE, ODD, EVEN
Communication Format	8-data-bits, 1-start-bit, 1-stop-bit
RS-485	¼ load transceivers; duplex is UI-selectable 2-wire or 4-wire; 5-position Euro-style pluggable connector
RS-232 (Upstream only)	DCE, no handshaking; DB-9 connection; pin 2: transmitted data from display; pin 3: received data to display; pin 5: ground
Terminal Block Torque	4.4 in-lb (0.5 N-m)
UI Switch Inputs:	
Number/Function	4 (Meter, Up, Down, Select)
Auxiliary Input (Remote Alarm):	
Type	Contact closure or pull-to-ground
Isolation	Optical to 2500VAC
Sense	UI-selectable N.O. or N.C.
Terminal Block Torque	3.5 to 4.4 in-lb (0.4 to 0.5 N-m)
LCD:	
Size	1" x 4" visible area, 2 lines x 16 characters per line
Backlight	Green, UI-adjustable brightness in 10 steps
Status (Tri-Color LED)	Green = normal operation; Yellow = warning; Red = alarm

PRODUCT IDENTIFICATION

MODEL	DESCRIPTION
H8932	without enclosure
H8936	with enclosure

SUPPORTED METERS

MODEL	DESCRIPTION
H8035/H8036	Enercept Power Meter
H8163 with H8163-CB	Energy Meter
H663/H704	Branch Circuit Meter
H8238	Multi-Circuit Monitor
E5xCx	Power and Energy Meter, Modbus Protocol versions
E30/E31	Panelboard Monitoring System

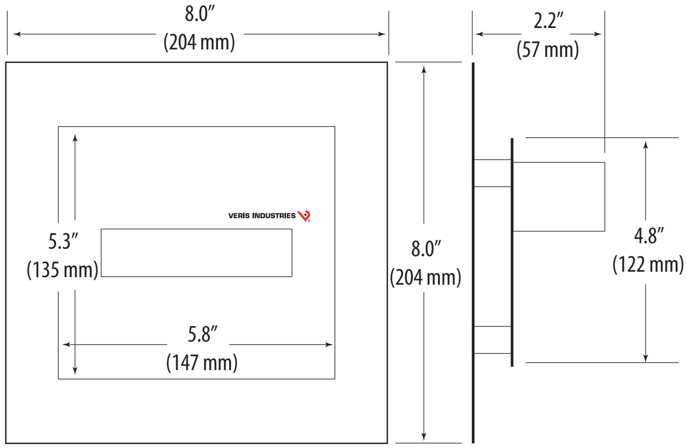
OPERATION

The H8932/H8936 Network Display is designed to provide an easily visible display for data collected by Modbus metering devices. The H893x is connected in series, downstream from the Modbus master and upstream from the meters. All data values collected by all supported meters are viewed, except for a limited data set for E3x panelboard monitors. See the section titled Data Values for Supported Devices for lists of data values that are presented on the Network Display.

DIMENSIONS

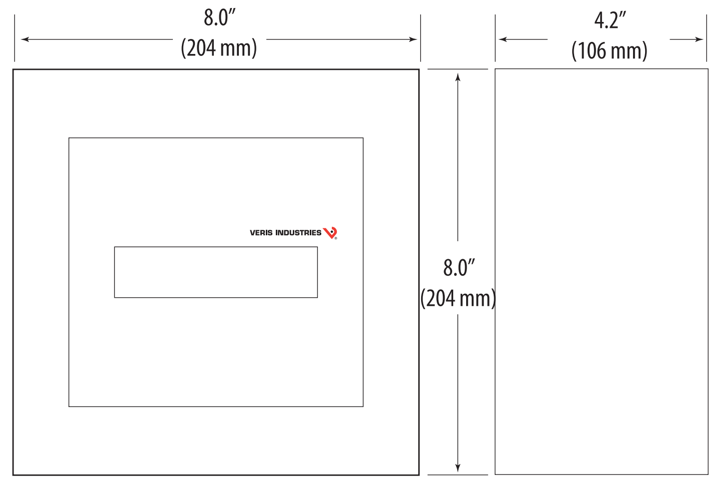
H8932

Front View *Side View*

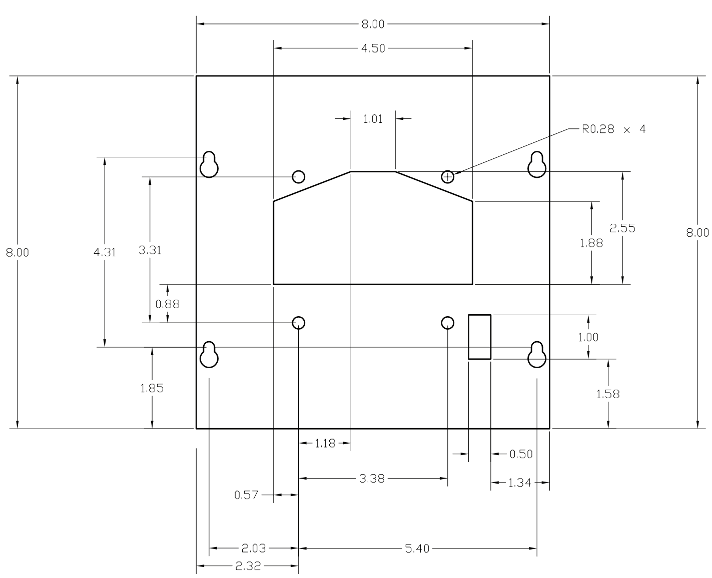


H8936

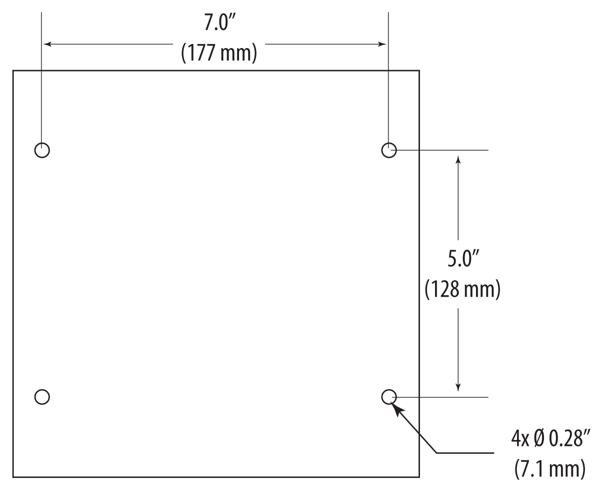
Front View *Side View*



Mounting plate template
(plate not provided with the H8932)

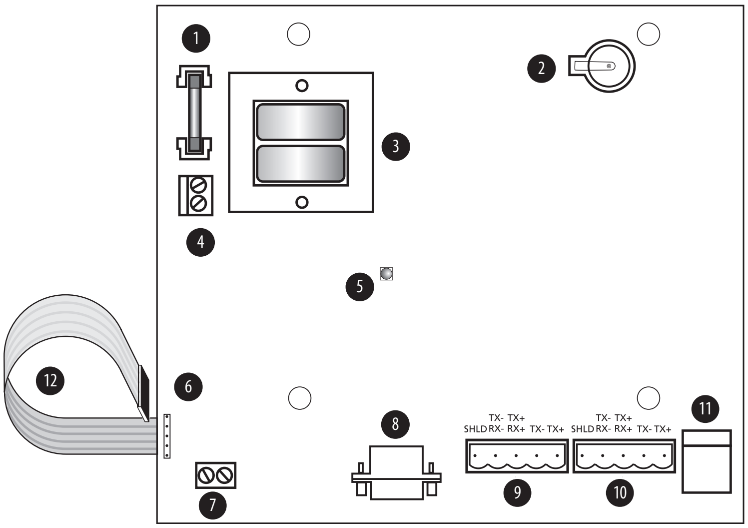


Back View

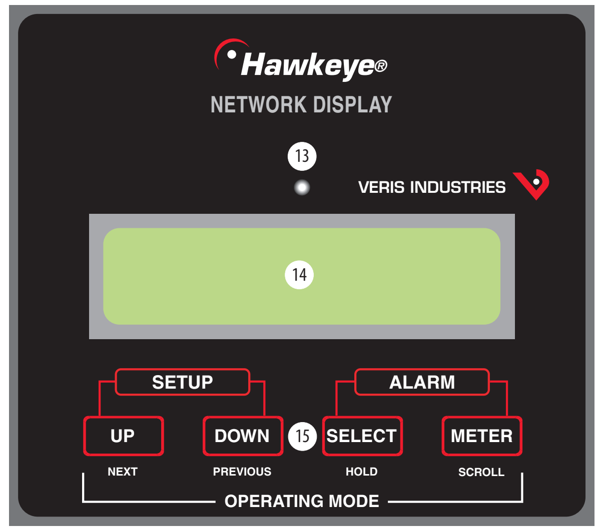


PRODUCT DIAGRAM

BACK



FRONT



1. ***250 VAC 200 mA Fast Blow Fuse:*** Fused power connection for circuit protection.
2. ***Lithium Battery:*** On board clock back up.

⚠ **CAUTION! DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.**

3. ***Power Transformer:*** Linear power supply for reliability and low noise.
4. ***120 VAC Power Supply Terminals:*** 2-position Euro style pluggable connector for 120 VAC, 60 Hz line to neutral power connection.
5. ***Auxiliary Input Status LED:*** Indicates alarm condition for the auxiliary input.
6. ***Membrane Switch Pin Connector:*** Connection point for push button panel.
7. ***Auxiliary Input Contacts:*** Contact closure or pull-to-ground (10mA max.)
8. ***Upstream RS-232 Input Jack:*** Connection point for upstream RS-232 network.
9. ***Upstream RS-485 Connection Point:*** 5-position Euro style pluggable connector for upstream RS-485 network. 2-wire or 4-wire selectable.
10. ***Downstream RS-485 Connection Point:*** 5-position Euro style pluggable connector for downstream RS-485 network. 2-wire or 4-wire selectable.
11. ***12 VDC Power Port:*** Alternate 12 VDC connection point for use with plug-in wall mount transformer or power supply (auxiliary input is disabled if 12 VDC power is used).
12. ***Membrane Switch Ribbon Cable***
13. ***Tri-Color LED:*** green = normal operation (no networked devices are in warning or alarm mode); yellow = warning (one or more networked devices are in warning mode); red = alarm (one or more networked devices are in alarm mode or the auxiliary input is active).
14. ***LCD Display:*** Local data display; high resolution LCD with adjustable backlight
15. ***Membrane Keypad:*** Easy front-panel setup

INSTALLATION

Component List

A. Face Plate with membrane switch ribbon cable

B. Box Lid (H8936 only) or panel (not included with H8932)

C. Threaded spacers (H8936 only)

D. Four threaded stand-offs

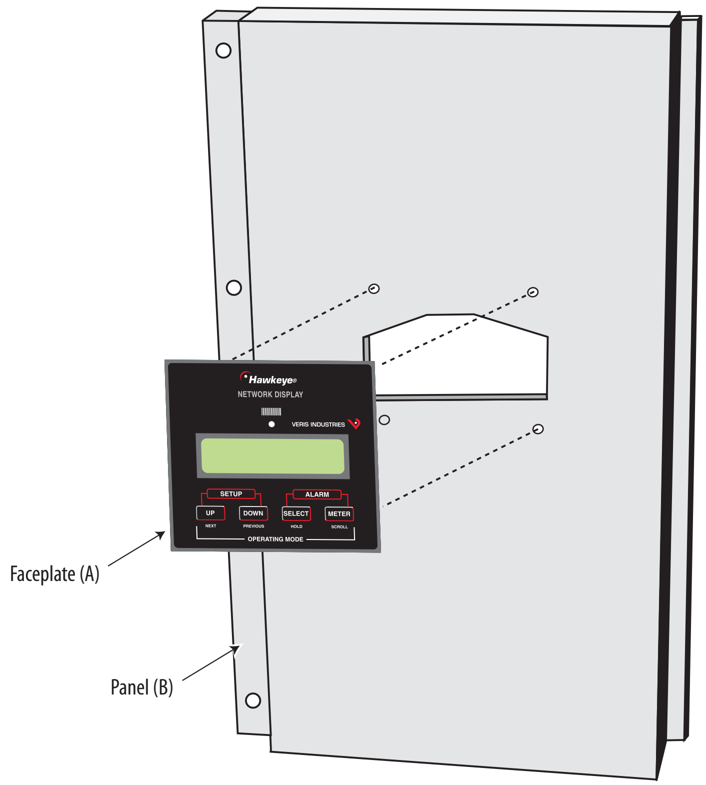
E. Network Display

F. Four #6-32 screws

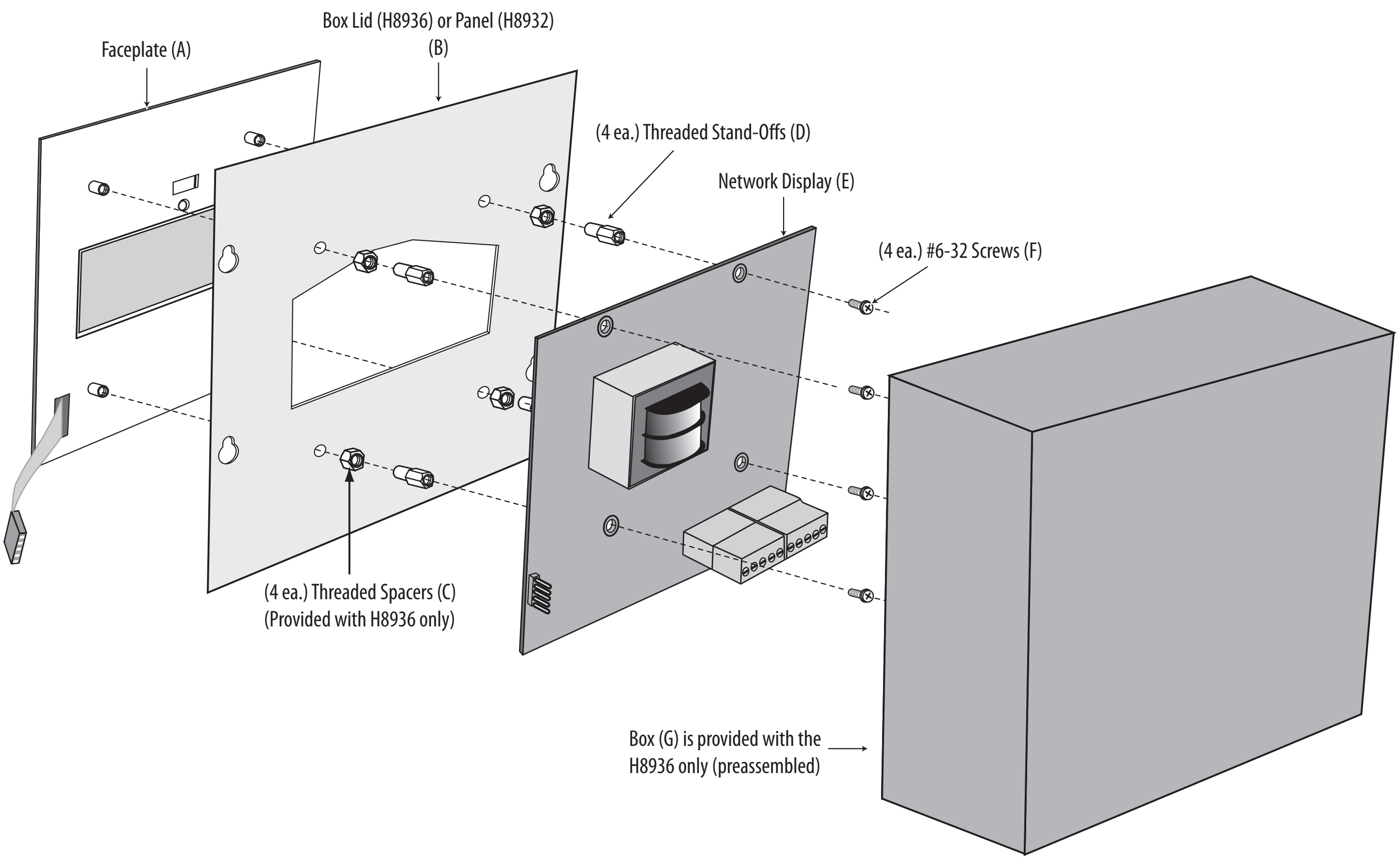
G. Box (H8936 only)

H8932 Mounting in a Panel (see right)

1. Drill 4 holes in the panel and cut out an area for the H8932.
2. Secure the faceplate by screwing the four threaded stand-offs (D) into the face plate studs from the inside of the door.
3. Attach the Network Display (E) to the threaded studs using four #6-32 screws (F) provided.
4. Connect the membrane switch ribbon cable to the membrane switch pin connector.



H8932/H8936 Assembly Example:



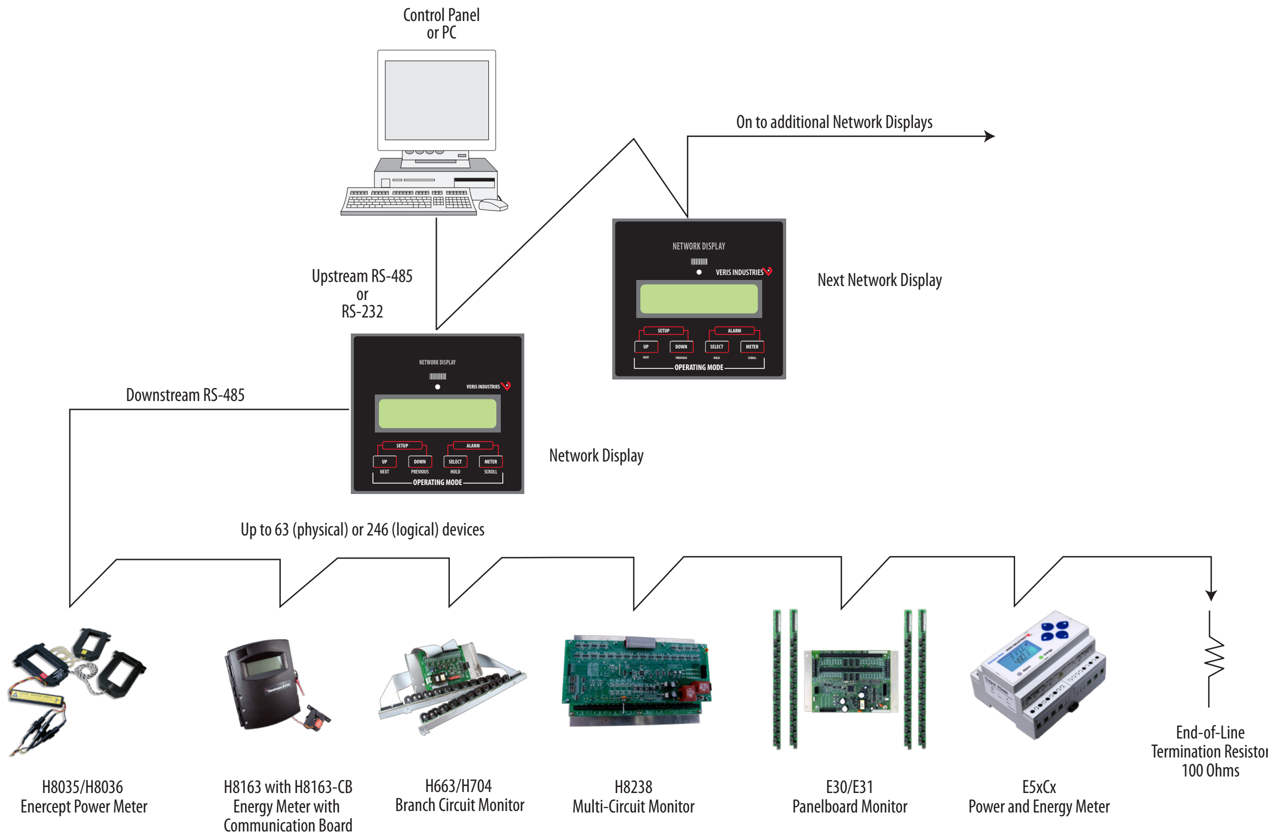
  USA 800.354.8556 or 1.503.598.4564 / support@veris.com

NETWORK CONFIGURATION

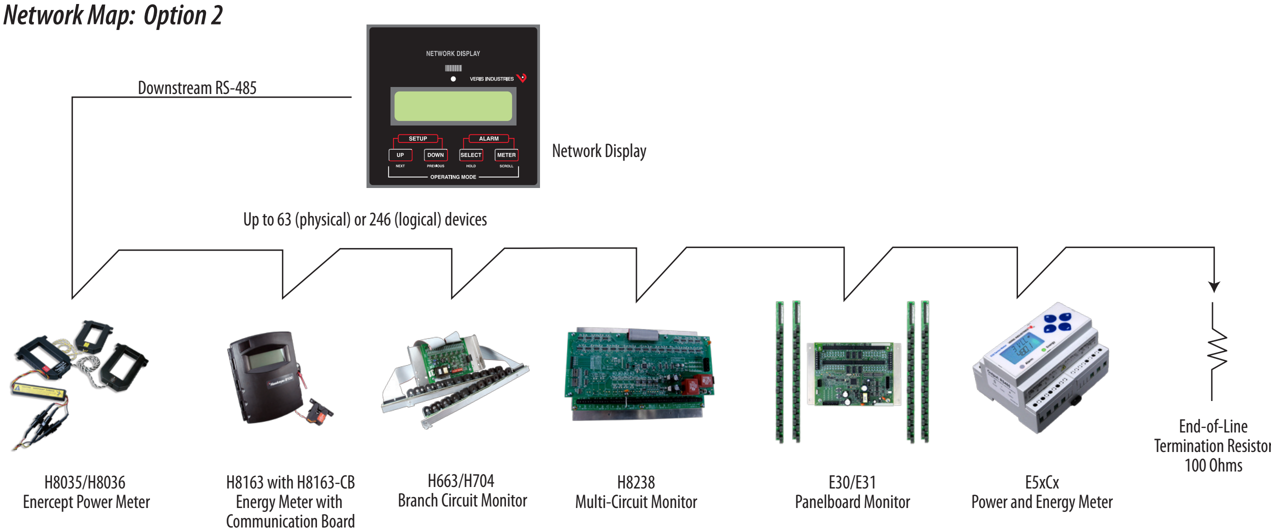
Wiring the Network(s)

The H8932/H8936 resides on a Modbus network as a pass-through device. Unlike most Modbus RTU devices, it is not wired in a daisy chain configuration. This allows the user to make separate upstream and downstream networks, allowing for flexible data retrieval, as the upstream options include RS-232 or RS-485.

Network Map: Option 1



Network Map: Option 2

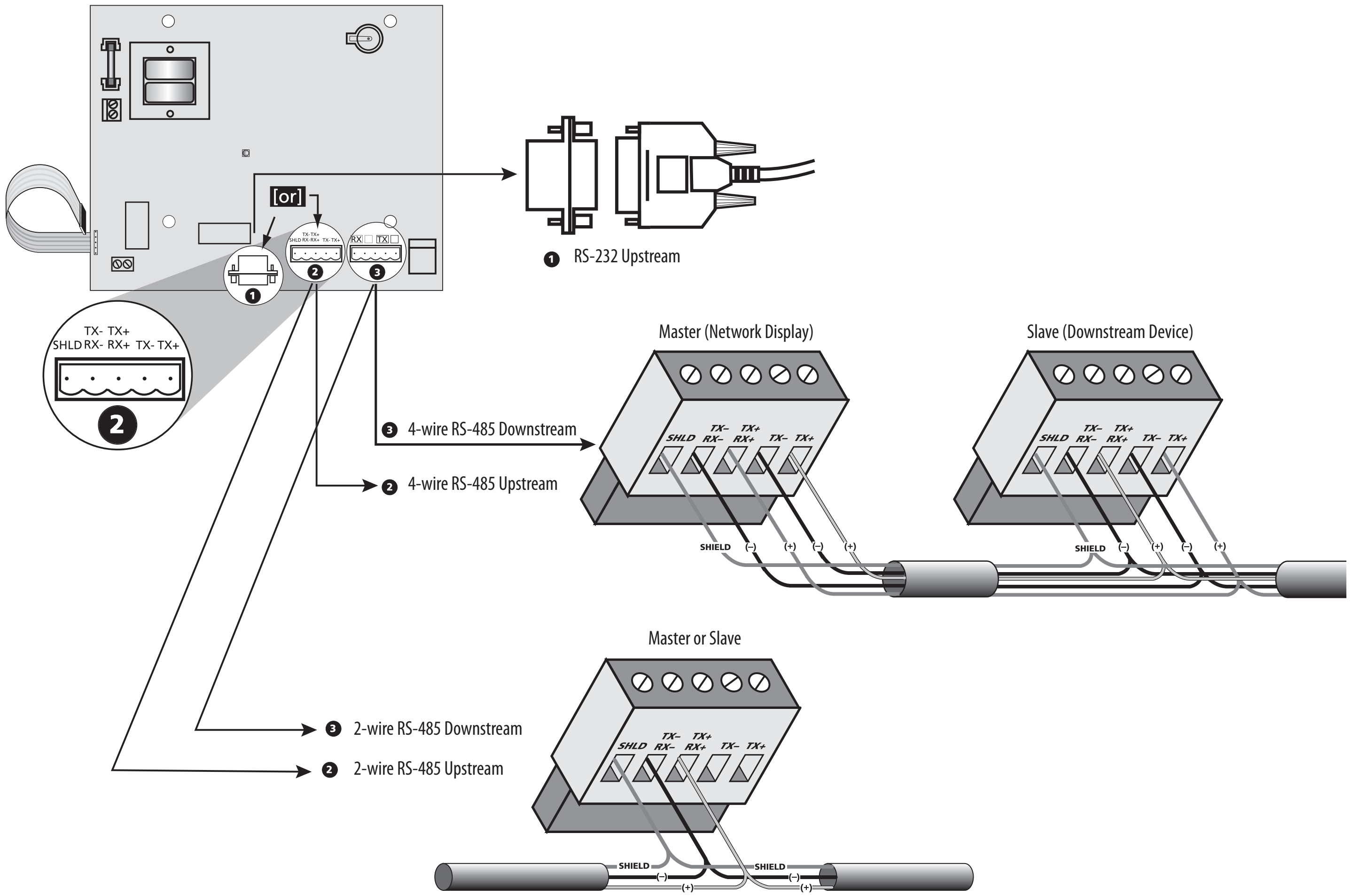


NOTE: The manufacturer does not recommend connecting multiple network displays in series on the downstream network.

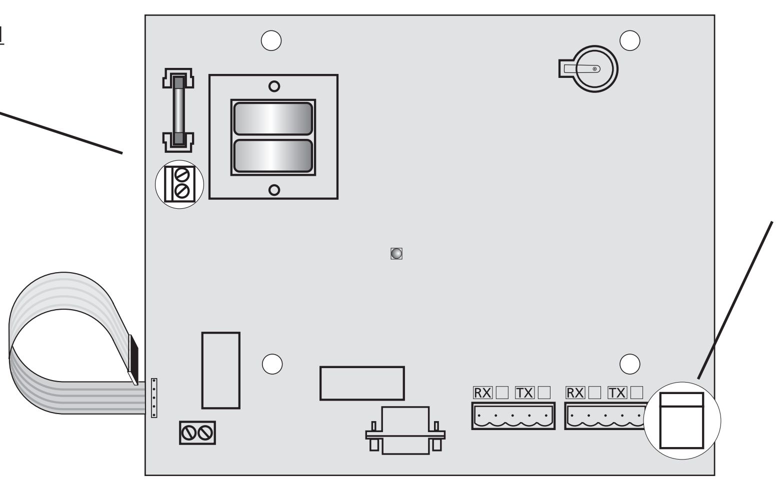
NOTE: Other Modbus devices must respond to the "Report Slave ID" command (11h) to allow pass-through communication from the upstream network.

WIRING

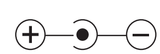
1. Connect the upstream RS-485 or RS-232 devices (if used).
2. Connect the downstream RS-485 device daisy chain.
3. Connect the power. Use either 120 VAC (240 VAC if using the E model) 2-wire or 12 VDC as shown below.
4. Terminate the downstream and upstream networks per the RS-485 standard.



Power Wiring Option #1
120 VAC



Power Wiring Option #2*
12 VDC



Internal fusing is not active on the 12 VDC input. Do not connect both power options at the same time.
External ½ A fuse must be provided by installer.

SETUP

Use the Setup mode to initialize and configure the display to the application requirements. Use Setup Sub-menus to group parameters for setup.

Entering Setup Mode

To Enter → Setup Mode

Press Simultaneously → UP ↑ DOWN ↓

Enter Password → * * * * * * * (SELECT, DOWN, DOWN, SELECT, UP, UP)

Press →

UP ↑	DOWN ↓	SELECT	METER
Show next submenu	Show previous submenu	Go to submenu or start action	Return to monitoring

Setup Mode Sub-Menus

After entering the password (Select, Down, Down, Select, Up, Up), the device enters the Setup Mode Sub-Menus. Scroll through these menus using the Up or Down buttons, and enter a menu by pressing Select.

1. VIEW SYSTEM INFO: Lists the model number and firmware version of the device.
2. FIND METERS: Initiates a search and identifies meters on the network. Exit the search by pressing any key (do not exit until all active addresses have been counted). Unsupported devices are designated as "unknown device," and parameters are not displayed.
3. REVIEW METERS: Review all meters on the network.
4. SETUP COMMUNICATIONS: Scroll through this list of available parameters using the Select button; change a parameter value using the Up and Down buttons.

UP	DOWN	SELECT	METER
Increment parameter	Decrement parameter	Go to next parameter	Return to setup menu

Communications Parameters:

Address Routing (On, Off)
Modbus Address (1-247)
Upstream Type (RS-485, RS-232)
Upstream Duplex (2-wire, 4-wire) (not available for RS-232)
Upstream Baudrate (2400, 4800, 9600, 19200)
Upstream Parity (NONE, ODD, EVEN)
Downstream Duplex (2-wire, 4-wire)
Downstream Baudrate (2400, 4800, 9600, 19200)
Downstream Parity (NONE, ODD, EVEN)

5. SETUP OPERATION: Scroll through this list of available parameters using the Select button; select a parameter value using the Up and Down buttons.

UP	DOWN	SELECT	METER
Increment parameter	Decrement parameter	Go to next parameter	Return to setup menu

Operation Parameters:

Backlight Brightness (0-9; 0 = off)
Auxiliary Input (open, closed)
Rotate Parameters (Yes, No)

Status LED and Relay Operation

The status LED displays the condition of the alarm registers on a color cue basis.

Green: normal operation (no networked devices are in warning or alarm mode)
Yellow: warning (one or more networked devices are in warning mode)
Red: alarm (one or more networked devices are in alarm mode or the auxiliary input is active).

Monitoring Mode

Monitoring mode is the default mode for the H8932/H8936. In monitoring mode, the data values are updated at 4-second intervals. The H8932/H8936 can be set either to cycle automatically through all parameters on all devices or to display a selected parameter continuously.

UP	DOWN	SELECT	METER
Go to the next parameter set.	Go to the previous parameter set.	Hold a reading on the LCD (display will flash). For use in automatic cycle mode (See Setup Operations). The current reading does not update, allowing time to manually record the reading. Press any other button to release the held reading.	Go to the next meter

Alarm Mode

Alarm Mode provides a means of viewing and resetting warnings and alarms on the downstream network. To enter Alarm mode, press the Select and Meter buttons simultaneously.

To Enter → Alarm Menu

Press Simultaneously → SELECT METER

Press →

UP	SELECT	METER
Go to the next alarm.	Reset the currently displayed alarm.	Exit the alarm display.

MAIN MENU NAVIGATION

Default Mode → **MONITORING**

UP	DOWN	SELECT	METER
Show next parameter set	Show previous parameter set	Hold reading	Go to next meter

To Enter → **ALARM MENU**

Press Simultaneously → SELECT METER

Press →	UP		SELECT	METER
	Show next alarm		Clear alarm	Return to monitoring mode

To Enter → **SETUP MENU**

Press Simultaneously → UP DOWN

Enter Password → * * * * * * * (SELECT, DOWN, DOWN, SELECT, UP, UP)

Press →	UP	DOWN	SELECT	METER
	Show next sub-menu	Show previous sub-menu	Enter a sub-menu or start action	Return to monitoring mode

SUB-MENU NAVIGATION

1st Sub-menu:
View System Info

SELECT — Enter the sub-menu

METER — Return to setup menu

UP DOWN

Scroll parameters:
- Model Number/Serial Number
- Version/Revision
- Memory/Clock

2nd Sub-menu:
Find Meters

SELECT — Find Meters

METER — Return to setup menu

3rd Sub-menu:
Review Meters

SELECT — Review Meters

METER — Return to setup menu

UP — Scroll through meters

4th Sub-menu:
Setup Communications

SELECT — Enter the sub-menu

METER — Return to setup menu

SELECT

Scroll parameters:
- Address Routing (On, Off)
- Modbus Address (1-247)
- Upstream Type (RS-485, RS-232)
- Upstream Duplex (2-wire, 4-wire) (not available for RS-232)
- Upstream Baudrate (2400, 4800, 9600, 19200)
- Upstream Parity (NONE, ODD, EVEN)
- Downstream Duplex (2-wire, 4-wire)
- Downstream Baudrate (2400, 4800, 9600, 19200)
- Downstream Parity (NONE, ODD, EVEN)

UP — Increment Parameter

DOWN — Decrement Parameter

5th Sub-menu:
Setup Operation

SELECT — Enter the sub-menu

METER — Return to setup menu

SELECT

Scroll parameters:
- Backlight Brightness (0-9; 0=Off)
- Auxiliary Input (open, closed)
- Rotate Parameters (Yes, No)

UP — Increment Parameter

DOWN — Decrement Parameter

DATA VALUES FOR SUPPORTED DEVICES

H8035 Enercept Power Meter

Display*	Units*	Description	Modbus Address
KWH	kWh	Energy Consumption	258/259
KW	kW	Real Power	260/261

H8036 Enercept Power Meter

Display*	Units*	Description	Modbus Address
KWH	kWh	Energy Consumption	257/258
KW	kW	Real Power	261/262
KVAR	kVAR	Reactive Power	263/264
KVA	kVA	Apparent Power	265/266
PF	---	Power Factor	267/268
V-LL	Volts	Average Voltage, L-L	269/270
V-LN	Volts	Average Voltage, L-N	271/272
AMPS	Amps	Average Current	273/274
KW-A	kW	Real Power, Phase A	275/276
KW-B	kW	Real Power, Phase B	277/278
KW-C	kW	Real Power, Phase C	279/280
PF-A	---	Power Factor, Phase A	281/282
PF-B	---	Power Factor, Phase B	283/284
PF-C	---	Power Factor, Phase C	285/286
V-AB	Volts	Voltage, Phase A-B	287/288
V-BC	Volts	Voltage, Phase B-C	289/290
V-AC	Volts	Voltage, Phase A-C	291/292
V-AN	Volts	Voltage, Phase A-N	293/294
V-BN	Volts	Voltage, Phase B-N	295/296
V-CN	Volts	Voltage, Phase C-N	297/298
AMPA	Amps	Current, Phase A	299/300
AMPB	Amps	Current, Phase B	301/302
AMPC	Amps	Current, Phase C	303/304
AVE	kW	Average Real Power	305/306
MIN	kW	Minimum Real Power	307/308
MAX	kW	Maximum Real Power	309/310

H8163 Energy Meter with H8163-CB Board

Display*	Units*	Description	Modbus Address
KWH	kWh	Energy Consumption	257/258
KW	kW	Real Power	261/262
KVAR	kVAR	Reactive Power	263/264
KVA	kVA	Apparent Power	265/266
PF	---	Power Factor	267/268
V-LL	Volts	Average Voltage, L-L	269/270
V-LN	Volts	Average Voltage, L-N	271/272
AMPS	Amps	Average Current	273/274
KW-A	kW	Real Power, Phase A	275/276
KW-B	kW	Real Power, Phase B	277/278
KW-C	kW	Real Power, Phase C	279/280
PF-A	---	Power Factor, Phase A	281/282
PF-B	---	Power Factor, Phase B	283/284
PF-C	---	Power Factor, Phase C	285/286
V-AB	Volts	Voltage, Phase A-B	287/288
V-BC	Volts	Voltage, Phase B-C	289/290
V-AC	Volts	Voltage, Phase A-C	291/292
V-AN	Volts	Voltage, Phase A-N	293/294
V-BN	Volts	Voltage, Phase B-N	295/296
V-CN	Volts	Voltage, Phase C-N	297/298
AMPA	Amps	Current, Phase A	299/300
AMPB	Amps	Current, Phase B	301/302
AMPC	Amps	Current, Phase C	303/304

** The prefix (k) changes to M or G for very large readings.*

H663 and H704 Branch Circuit Monitors

Display	Units	Description	Modbus Address
CH01	Amps	Current, Channel 1	1
CH02	Amps	Current, Channel 2	2
CH03	Amps	Current, Channel 3	3
CH04	Amps	Current, Channel 4	4
CH05	Amps	Current, Channel 5	5
CH06	Amps	Current, Channel 6	6
CH07	Amps	Current, Channel 7	7
CH08	Amps	Current, Channel 8	8
CH09	Amps	Current, Channel 9	9
CH10	Amps	Current, Channel 10	10
CH11	Amps	Current, Channel 11	11
CH12	Amps	Current, Channel 12	12
CH13	Amps	Current, Channel 13	13
CH14	Amps	Current, Channel 14	14
CH15	Amps	Current, Channel 15	15
CH16	Amps	Current, Channel 16	16
CH17	Amps	Current, Channel 17	17
CH18	Amps	Current, Channel 18	18
CH19	Amps	Current, Channel 19	19
CH20	Amps	Current, Channel 20	20
CH21	Amps	Current, Channel 21	21
CH22	Amps	Current, Channel 22	22
CH23	Amps	Current, Channel 23	23
CH24	Amps	Current, Channel 24	24
CH25	Amps	Current, Channel 25	25
CH26	Amps	Current, Channel 26	26
CH27	Amps	Current, Channel 27	27
CH28	Amps	Current, Channel 28	28
CH29	Amps	Current, Channel 29	29
CH30	Amps	Current, Channel 30	30
CH31	Amps	Current, Channel 31	31
CH32	Amps	Current, Channel 32	32
CH33	Amps	Current, Channel 33	33
CH34	Amps	Current, Channel 34	34
CH35	Amps	Current, Channel 35	35
CH36	Amps	Current, Channel 36	36
CH37	Amps	Current, Channel 37	37
CH38	Amps	Current, Channel 38	38
CH39	Amps	Current, Channel 39	39
CH40	Amps	Current, Channel 40	40
CH41	Amps	Current, Channel 41	41
CH42	Amps	Current, Channel 42	42

H8238 Multi-Circuit Monitor

Display*	Units*	Description	Modbus Address
KWH	kWh	Energy Consumption	258/259
KW	kW	Real Power	260/261
KVAR	kVAR	Reactive Power	262/263
KVA	kVA	Apparent Power	264/265
PF	---	Power Factor	266/267
V-LL	Volts	Average Voltage, L-L	268/269
V-LN	Volts	Average Voltage, L-N	270/271
AMPS	Amps	Average Current	272/273
FREQ	Hz	Frequency	274/275
KW-A	kW	Real Power, Phase A	276/277
KW-B	kW	Real Power, Phase B	278/279
KW-C	kW	Real Power, Phase C	280/281
PF-A	---	Power Factor, Phase A	282/283
PF-B	---	Power Factor, Phase B	284/285
PF-C	---	Power Factor, Phase C	286/287
V-AB	Volts	Voltage, Phase A-B	288/289
V-BC	Volts	Voltage, Phase B-C	290/291
V-AC	Volts	Voltage, Phase A-C	292/293
V-AN	Volts	Voltage, Phase A-N	294/295
V-BN	Volts	Voltage, Phase B-N	296/297
V-CN	Volts	Voltage, Phase C-N	298/299
AMPA	Amps	Current, Phase A	300/301
AMPB	Amps	Current, Phase B	302/303
AMPC	Amps	Current, Phase C	304/305
AVE	kW	Average Real Power	308/309
MIN	kW	Minimum Real Power	310/311
MAX	kW	Maximum Real Power	312/313

** The prefix (k) changes to M or G for very large readings.*

E50Cx Power and Energy Meter

Display*	Units*	Description	Modbus Address
KWH	kWh	Energy Consumption	259/260
KW	kW	Real Power	261/262
KVAR	kVAR	Reactive Power	263/264
KVA	kVA	Apparent Power	265/266
PF	---	Power Factor	267/268
V-LL	Volts	Average Voltage, L-L	269/270
V-LN	Volts	Average Voltage, L-N	271/272
AMPS	Amps	Average Current	273/274
KW-A	kW	Real Power, Phase A	275/276
KW-B	kW	Real Power, Phase B	277/278
KW-C	kW	Real Power, Phase C	279/280
PF-A	---	Power Factor, Phase A	281/282
PF-B	---	Power Factor, Phase B	283/284
PF-C	---	Power Factor, Phase C	285/286
V-AB	Volts	Voltage, Phase A-B	287/288
V-BC	Volts	Voltage, Phase B-C	289/290
V-AC	Volts	Voltage, Phase A-C	291/292
V-AN	Volts	Voltage, Phase A-N	293/294
V-BN	Volts	Voltage, Phase B-N	295/296
V-CN	Volts	Voltage, Phase C-N	297/298
AMPA	Amps	Instantaneous Current, Phase A	299/300
AMPB	Amps	Instantaneous Current, Phase B	301/302
AMPC	Amps	Instantaneous Current, Phase C	303/304
FREQ	Hz	Frequency, derived from Phase A	307/308
KVAH	kVAh	Apparent Energy Consumption	309/310
KVRH	kVARh	Reactive Energy Consumption	311/312
KVAA	kVA	Apparent Power, Phase A	313/314
KVAB	kVA	Apparent Power, Phase B	315/316
KVAC	kVA	Apparent Power, Phase C	317/318
KVRA	kVAR	Reactive Power, Phase A	319/320
KVRB	kVAR	Reactive Power, Phase B	321/322
KVRC	kVAR	Reactive Power, Phase C	323/324
PDKW	kW	Total Real Power Present Demand	325/326
PDKR	kW	Total Reactive Power Present Demand	327/328
PDKA	kW	Total Apparent Power Present Demand	329/330
MDKW	kW	Total Real Power Max. Demand	331/332
MDKR	kW	Total Reactive Max. Present Demand	333/334
MDKA	kW	Total Apparent Max. Present Demand	335/336

** The prefix (k) changes to M or G for very large readings.*

E51Cx Power and Energy Meter

Display*	Units*	Description	Modbus Address
KWH	kWh	Accumulated Real Energy: Net (Import - Export)	257/258
KVAH	kVAh	Apparent Energy: Net (Import - Export)	271/272
KW	kW	Total Net Instantaneous Real Power	277/278
KVAR	kVAR	Total Net Instantaneous Reactive Power	279/280
KVA	kVA	Total Net Instantaneous Apparent Power	281/282
PF	---	Power Factor	283/284
V-LL	Volts	Average Voltage, L-L	285/286
V-LN	Volts	Average Voltage, L-N	287/288
AMPS	Amps	Average Current	289/290
FREQ	Hz	Frequency	290/291
PUL 1	kW	Pulse Counter 1 (Import Real Energy)	313/314
PUL 2	kW	Pulse Counter 2 (Export Reactive Energy)	315/316
KW-A	kW	Real Power, Phase A	365/366
KW-B	kW	Real Power, Phase B	367/368
KW-C	kW	Real Power, Phase C	369/370
KVRA	kVAR	Reactive Power, Phase A	371/372
KVRB	kVAR	Reactive Power, Phase B	373/374
KVRC	kVAR	Reactive Power, Phase C	375/376
KVAA	kVA	Apparent Power, Phase A	377/378
KVAB	kVA	Apparent Power, Phase B	379/380
KVAC	kVA	Apparent Power, Phase C	381/382
PF-A	---	Power Factor, Phase A	383/384
PF-B	---	Power Factor, Phase B	385/386
PF-C	---	Power Factor, Phase C	387/388
V-AB	Volts	Voltage, Phase A-B	389/390
V-BC	Volts	Voltage, Phase B-C	391/392
V-AC	Volts	Voltage, Phase A-C	393/394
V-AN	Volts	Voltage, Phase A-N	395/396
V-BN	Volts	Voltage, Phase B-N	397/398
V-CN	Volts	Voltage, Phase C-N	399/400
AMPA	Amps	Instantaneous Current, Phase A	401/402
AMPB	Amps	Instantaneous Current, Phase B	403/404
AMPC	Amps	Instantaneous Current, Phase C	405/406
PDKW	kW	Total Real Power Present Demand	293/294
PDKR	kW	Total Reactive Power Present Demand	295/296
PDKA	kW	Total Apparent Power Present Demand	297/298
MDWI	kW	Total Real Power Max. Demand	299/300
MDRI	kW	Total Reactive Power Max. Demand	301/302
MDAI	kW	Total Apparent Power Max. Demand	303/304
MDWE	kW	Total Real Power Max. Demand	305/306
MDRE	kW	Total Reactive Power Max. Demand	307/308
MDAE	kW	Total Apparent Power Max. Demand	309/310

E3x Panelboard Monitoring System

The E3x meters collect a large amount of data, but only a subset of this data is presented on the H8932/H8936 Network Display, based on phase configuration and model type.

Phase Configuration:

The H8932/H8936 can be configured to display single, two, or three phased readings from the E3x meter, based on the value selected in Modbus register 536.

Register 536 Value	Display Configuration
0 or 1 = Single phase	Single phase setup displays channel 1-42
2 = Two phase	Two phase setup displays channel 1-21
3 = Three phase	Three phase setup displays channel 1-14

Model Type:

Display*	Units*	Description	Model			Modbus Address
			A	B	C	
Mains						
FREQ	Hz	Frequency, Phase A	•	•		600/601
V-AN	Volts	Voltage, Phase A-N	•	•		606/607
V-BN	Volts	Voltage, Phase B-N	•	•		608/609
V-CN	Volts	Voltage, Phase C-N	•	•		610/611
V-AB	Volts	Voltage, Phase A-B	•	•		612/613
V-BC	Volts	Voltage, Phase B-C	•	•		614/615
V-AC	Volts	Voltage, Phase A-C	•	•		616/617
AUX KWH	kWh	Aux. Total Energy	•	•		618/619
AUX KW	kW	Aux. Total Real Power, Phases A, B, C	•	•		620/621
AUX PF	---	Aux. Total Power Factor	•	•		622/623
AUX AMPS	Amps	Aux. Average Current, Phases A, B, C	•	•	•	624/625
Branch Circuits (1 to 42), Single Phase (xx = channel number, 1 through 42)						
Mxx KWH	kWh	Energy	•			2000 to 2083
Mxx KW	kW	Real Power	•			2084 to 2167
Mxx PF	---	Power Factor	•			2168 to 2251
Mxx AMPS	Amps	Current	•	•	•	2252 to 2335
Branch Circuits (1 to 42), Two Phase (xx = channel number, 1 through 42)						
Mxx KWH	kWh	Energy	•			5000 to 5041
Mxx KW	kW	Real Power	•			5042 to 5083
Mxx PF	---	Power Factor	•			5084 to 5125
Mxx AMPS	Amps	Current	•	•	•	5126 to 5167
Branch Circuits (1 to 42), Three Phase (xx = channel number, 1 through 42)						
Mxx KWH	kWh	Energy	•			8000 to 8027
Mxx KW	kW	Real Power	•			8028 to 8055
Mxx PF	---	Power Factor	•			8056 to 8083
Mxx AMPS	Amps	Current	•	•	•	8084 to 8111

** The prefix (k) changes to M or G for very large readings.*