



AVR-L User Manual

HMI LCD Addendum

Touchscreen Interface Guide

Sollatek (UK) Limited

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1 Overview

The AVR-L is equipped with a 7-inch colour LCD touchscreen that serves as the primary Human-Machine Interface (HMI). This display replaces the separate digital panel meters and laptop-based CDP software used in earlier AVR3LS models. All monitoring, configuration, diagnostics, and network management can now be performed directly from the touchscreen.

The display unit runs a web-based application on an embedded processor module. It communicates with the slot board on each phase via an internal serial connection over RS-485. The display operates independently of the regulation hardware, if the display is rebooted or powered off, the AVR continues to regulate voltage normally.

1.1 Screen Resolution and Touch

The display resolution is 1024 × 600 pixels. The interface is designed for finger-touch operation with adequately sized buttons and controls. An on-screen virtual keyboard appears automatically when text input is required (passwords, serial numbers, site codes). A virtual date/time picker is used for clock synchronisation.

1.2 User Access Levels

The interface has an access level. Most screens are visible to all users, but configuration and maintenance functions require Engineer Mode login.

Username	Password	Access Level	Description
admin	sollatek	Engineer (Admin)	Full read/write access. Unlocks the Settings menu and advanced controls in Logs, Connectivity, and Maintenance.

1.3 Sollatek Stock Code

973LS075 AVR3LS-70kVA 230/400V 3x100/75A PI

973LS101 AVR3LS-90kVA 230/400V 3x133/100A PI

973LS151 AVR3LS-140kVA 230/400V 3x200/150A PI

2 Layout and Navigation



Fig 1: Overall layout showing side bar, top bar, and content area (Dashboard visible)

The interface is divided into three permanent zones that are visible on every screen:

2.1 Sidebar (Left)

The sidebar occupies a strip on the left edge of the screen. It contains the main navigation icons stacked vertically, plus a Login/Logout button at the bottom. Tapping a main icon switch to that section. For sections with sub-views (Logs, Connectivity, Settings), tapping the icon reveals a secondary icon column with a back arrow to return to the main menu.

The main navigation icons, from top to bottom, are:

1. Dashboard: Real-time three-phase monitoring. This is the default screen on power-up.
2. Logs: Event data, statistics, and log file management. Sub-views: Basic Info, Event Browser, Event Logs, Critical Logs.
3. Connectivity: Network and serial connection management. Sub-views: Network, Serial Connection, Protocols.
4. Settings: Unit configuration and maintenance. Engineer Mode required. Sub-views: Basic, Event Logging Masks, Calibration, Maintenance.
5. About: Product information, contact details, and system health.

6. Login/Logout: Opens the login screen or logs out the current user.

2.2 Top Bar

The top bar spans the full width above the content area and displays:

1. **SOLLATEK AVR Monitor (left):** Product branding. The word SOLLATEK appears in amber, followed by AVR Monitor in grey.
2. **Connection Status Icons (centre-right):** Five small icon tiles showing the live state of: Power, WiFi, Battery, Serial Link, and USB. Each icon is green when connected and grey when offline.
3. **Date & Time (right):** Live-updating clock showing the current date and time from the display unit in yellow/amber text.
4. **User Badge (far right, when logged in):** Shows the currently authenticated username.

2.3 Content Area

The main content area occupies the remaining space (right of the sidebar, below the top bar). All screen layouts, tables, controls, and data are rendered here. The area is responsive and adapts to different screen sizes.

2.4 Themes and Touch Responsiveness

The interface uses a professional dark-and-light theme with navy blue (#1A3C6E) for headings, accent colours (amber, green, cyan, purple, orange) for status indicators, and high-contrast text for readability. All controls respond instantly to finger touch with visual feedback. Buttons highlight on press, dropdown menus expand, and form fields show a cursor or selection.

3 Dashboard



Fig 1: Dashboard screen with all three phase cards, wave bars, readings, and output gauges

The Dashboard is the primary monitoring screen and the default view when the unit powers on. It displays real-time data for all three phases side by side in a three-column layout.

3.1 Phase Cards Layout

Each phase occupies one vertical card. The cards are identical in structure and display measurements updated approximately every 2 seconds when the serial connection is active.

3.2 Phase Card Header

The top of each card displays the phase name (Phase 1, Phase 2, or Phase 3) followed by a status badge in the top-right corner. The status badge shows the current state with a colored dot and label:

Status Badge	Colour	Meaning
OK	Green	Phase is regulating correctly within $\pm 3\%$ of the nominal voltage.
Disconnected	Grey	Phase is in disconnect or bypass mode (no active regulation).
No Serial	Red	Serial communication with the ST276 control board has been lost.

Warning	Amber	Phase is regulating but errors detected (NTC sensor fault or thyristor issue).
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3.3 Animated Wave Bar

Below the phase header, an animated wave bar provides a visual comparison between input voltage (blue/cyan sine wave on the left) and output voltage (blue/cyan sine wave on the right). This gives operators an immediate, intuitive sense of how much correction the AVR is applying. When input and output are nearly identical, the waves are almost the same. When significant correction is needed, the input wave appears distorted while the output wave remains smooth.

3.4 Measurement Readings

Below the wave bar, a grid of measurement labels and values displays the current state. Labels appear in grey text on the left, values in amber/yellow on the right:

Measurement	Unit	Description
INPUT	V	Incoming mains voltage (V_{in}). Colour-coded: blue when within range, amber/red when outside limits.
OUTPUT	V	Regulated output voltage (V_{out}). Shown in green when within nominal range.
CURRENT	A	Load current drawn on this phase.
FREQUENCY	Hz	AC signal frequency (typically 50 Hz or 60 Hz).
HEATSINK	°C	Temperature of the thyristor heatsink module.
TRANSFORMER	°C	Temperature of the phase transformer winding.
POWER	W	Calculated electrical power (voltage x current).
INPUT TAP	–	Currently active input transformer tap position (1-7 or equivalent).
OUTPUT TAP	–	Currently active output transformer tap position (1-7 or equivalent).
FAN	ON/OFF	Whether the cooling fan for this phase is currently running.

3.5 Output Voltage Gauge

At the bottom of each phase card, a semi-circular arc gauge displays the output voltage graphically. The gauge has a scale from 0 to 276 V, with the nominal range (typically 190–250 V) highlighted in green. A dynamic arc fills from left to right to show the current V_{out} value. The large number in the centre displays the current voltage, with the nominal target shown below it (e.g., 'Nominal 230 V').

The gauge provides a quick visual check: if the arc is in the green zone, the output is within limits. If it moves toward the red zones at the left or right edges, the voltage is approaching the limits of the AVR's correction range.

4 Logs Section

The Logs section provides access to operational data logged by the unit. It has four sub-screens, selectable from a secondary sidebar when the Logs icon is active. All Logs screens include a phase selector (buttons for Phase 1, 2, 3) to filter data by phase.

4.1 Logs > Basic Info



Fig 2: Logs > Basic Info view with statistics grid, time range pills, and phase selector

Displays a six-card statistics grid showing minimum, average, maximum, and current (live) values for six key measurements: Input Voltage, Output Voltage, Current, Frequency, Heatsink Temperature, and Transformer Temperature. Each card has a coloured left border accent (yellow for voltage, green for current, cyan for frequency, orange/red for temperature) and displays the four values in white text on a dark background.

Controls:

Time Range Pills (top right): Filter the statistics window. Options: 12h, 24h, 7d, 30d. The active range is highlighted in amber.

Phase Selector (bottom): Three numbered buttons (1, 2, 3) to switch between phases. The active phase is highlighted in gold/amber.

4.2 Logs > Event Browser



Fig 3: Logs > Event Browser with toolbar, file selector, filter, metadata, and CSV table

The Event Browser is the primary tool for reviewing the event history from the unit. It downloads and displays event log CSV files in an interactive, filterable table.

Toolbar Row:

- **Phase Selector (1, 2, 3):** Choose which phase to download logs from or view.
- **Download last (Admin only):** Downloads only new events since the last read from the selected phase's ST276 board.
- **Download full (Admin only):** Downloads the complete event log from the control board.
- **Download critical (Admin only):** Downloads the critical fault log from the control board.
- **Save to USB (Admin only):** Copies the currently loaded log file(s) to the first connected USB drive.

File Selection and Filtering:

- **File Dropdown:** Select from previously saved log CSV files stored on the display. The dropdown shows the filename and row count (e.g., 'demo_event_log.csv · 3 rows').
- **Refresh Button:** Re-scans the disk for log files and updates the dropdown list.
- **'Latest event' Button:** Quick load the most recent event log file.
- **'Latest critical' Button:** Quick load the most recent critical log file.

- **'All events' Filter Dropdown:** Filter the displayed table by event category (All events, Sync, Bad Thyristor, I/P Voltage, O/P Voltage, Current, Temperature, Bypass, Fuse, Vdd, or Other).

Metadata Panel:

Expandable 'Site, serial & header details' Section – Shows header information extracted from the CSV: Site Code, Serial Number, Firmware Version, Nominal Voltage, Commissioned Date, and Log Date Range.

Event Table:

The main area displays CSV data in a scrollable table with columns: DATE, TIME, EVENT REASON, EVENT ID, STATUS MSB, STATUS LSB, REASON CODE, VIN RAW, VOUT RAW, I RAW. Column headers are in yellow/amber text, data rows are in white. Alternating row shading (light grey / white) improves readability.

4.3 Logs > Event Logs

DATE	TIME	EVENT REASON	EVENT ID	STATUS MSB	STATUS LSB	REASON CODE	VIN RAW	VOUT RAW	I RAW
11/04/2026	14:30:05	Out of Sync	5	128	64	12	241	230	5.2
11/04/2026	14:31:12	I/P Volt High	8	0	0	3	255	228	12.1
11/04/2026	15:02:00	O/P Current	15	10	20	42	240	231	8.0

Fig 4: Logs > Event Logs sub-view with file selector and CSV table

A simplified view for displaying saved event logs. The screen includes a file dropdown, a 'Latest' button to load the most recent log, and a refresh button. The CSV content is displayed in a read-only table with the same column structure as the Event Browser. A purple accent border appears on the left sidebar icon when this sub-view is active.

4.4 Logs > Critical Logs



Fig 5: Logs > Critical Logs sub-view with file selector and CSV table

Identical layout to Event Logs but displays critical fault logs. These contain only severe events such as bad thyristors, emergency shutdowns, and hardware faults. A red/orange accent border appears on the left sidebar icon when this sub-view is active.

NOTE: The display saves logs to the first USB drive connected. Do not connect more than one drive at once.

WARNING: Log deletion is irreversible. In Engineer Mode, the 'Delete Unit Logs' and 'Clear Local Logs' buttons permanently remove log data.

4.5 Event Reference

The following events are monitored and logged by the ST276 control boards:

Event ID	Event Description	Threshold / Condition
1	Bad thyristor	Thyristor failure detected by cross-current analysis
2	Shutdown mode	Unit in emergency shutdown state
3	Power interruption mode	Mains power interrupted
4	Vdd low	< 12 V
5	Vdd back good	> 14 V

6	O/P voltage high	> 240 VAC
7	O/P voltage low	< 200 VAC
8	O/P voltage back good	230 / 210 VAC
9	I/P voltage high	> 260 VAC
10	I/P voltage low	< 150 VAC
11	I/P voltage back good	250 / 200 VAC
12	I/P current high	> 95% of CT rating
13	I/P current back good	< 85% of CT rating
14-21	Temp01-04 high / back good	NTC sensor threshold exceeded
22-25	Temp01-04 faulty	NTC sensor open circuit or short
26	Out of Sync	Phase slip detected across the three phases
27	Back in Sync	Phase synchronisation restored
28-29	O/P sense fuse bad / back good	Output voltage sense circuit fuse status
30-31	Pri sense fuse bad / back good	Primary (input) sense circuit fuse status

5 Connectivity Section

The Connectivity section manages the unit's network connections, internal serial communication, and protocol information. It has three sub-screens, selectable from a secondary sidebar when the Connectivity icon is active.

5.1 Connectivity > Network

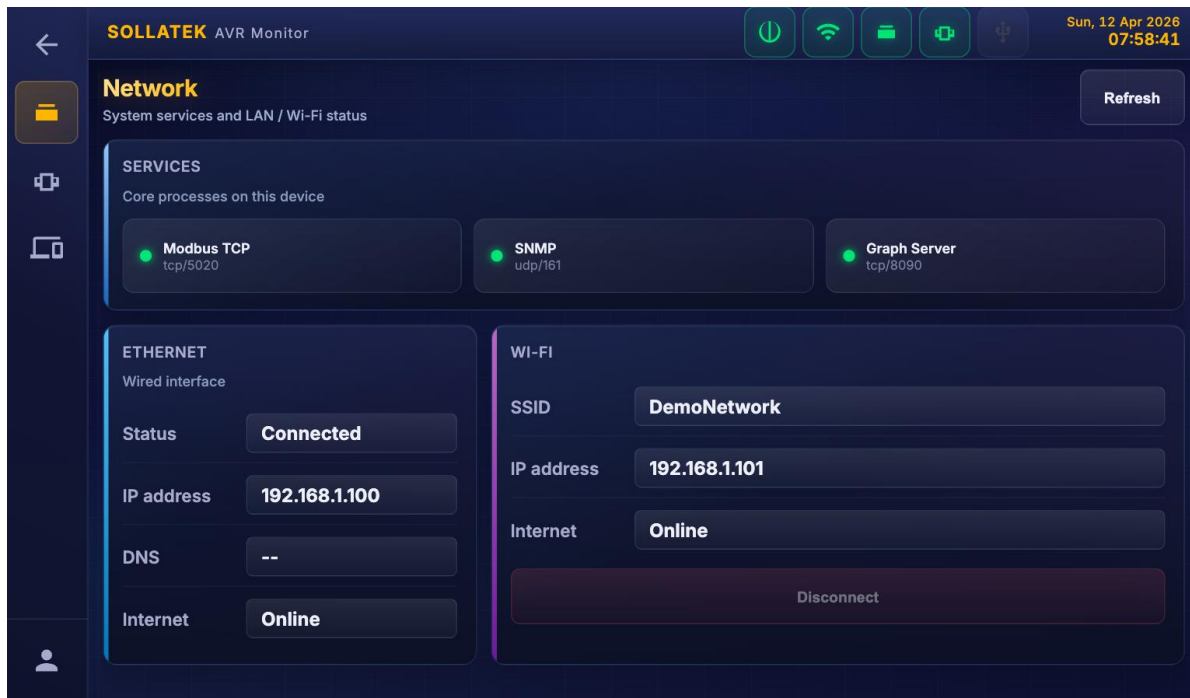


Fig 6: Connectivity > Network view with Services, Ethernet, and Wi-Fi panels

Displays system services, Ethernet connection status, and Wi-Fi connection controls in three glass-style panels arranged side by side.

SERVICES Panel:

Shows the running status of the unit's backend services. Each service displays a small green dot (indicating 'Running'), service name, and port number:

- Modbus TCP tcp/5020 - Exposes AVR measurements as Modbus registers for SCADA integration.
- SNMP udp/161 - Publishes AVR measurements as SNMP OIDs for network management systems.
- Graph Server tcp/8090 - Serves historical data and graphs via web interface.

ETHERNET Panel:

Displays wired network connection status with the following fields:

Status: Connected or Disconnected.

IP Address: The assigned IPv4 address (e.g., 192.168.1.100).

DNS: DNS server address or '-' if not configured.

Internet: Online or Offline, indicating whether the WAN gateway is reachable.

WI-FI Panel:

When disconnected, displays a list of available wireless networks with SSID and signal strength. Selecting a network opens the on-screen keyboard to enter the password. A connect button completes the association. When connected, shows:

SSID: The name of the connected wireless network (e.g., DemoNetwork).

IP Address: The assigned IPv4 address on the Wi-Fi interface (e.g., 192.168.1.101).

Internet: Online or Offline, indicating WAN connectivity via Wi-Fi.

Disconnect Button: A red-gradient button to disassociate from the current network.

NOTE: The display can connect to 802.11 b/g/n Wi-Fi networks. Enterprise WPA2-Enterprise (RADIUS) networks are not supported.

5.2 Connectivity > Serial Connection

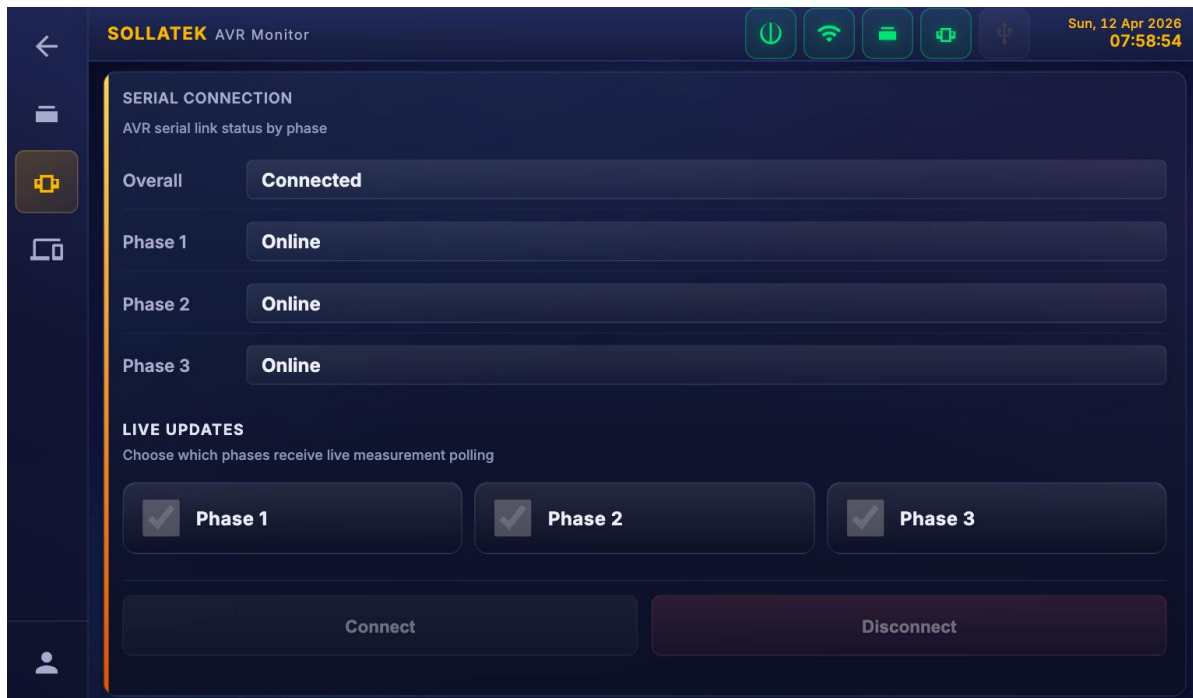


Fig 7: Connectivity > Serial Connection view with overall status and live polling controls

Displays the internal Modbus RTU serial connection (RS-485) between the display and the three ST276 control boards.

Overall Status:

Connection State: Connected or disconnected, showing which COM port is in use (e.g., /dev/ttyUSB0).

Per-Phase Status:

Three status indicators show the live serial communication status for each phase:

- Phase 1: Online / Offline
- Phase 2: Online / Offline
- Phase 3: Online / Offline

LIVE UPDATES Section:

A titled section with the instruction 'Choose which phases receive live measurement polling'. Below are three checkbox cards, one for each phase (Phase 1, Phase 2, Phase 3), all checked (enabled) by default. Unchecking a phase stops real-time data polling for that phase, saving bandwidth if only one or two phases are being monitored.

Action Buttons:

- **Connect Button:** Manually initiates the serial connection if it has been disconnected.
- **Disconnect Button:** Manually closes the serial port connection. Phase regulation continues independently.

NOTE: The serial connection can be temporarily lost if: USB cable is unplugged, ST276 board loses power, or the display is rebooted. The connection automatically recovers when the issue is resolved.

5.3 Connectivity > Protocols



Fig 8: Connectivity > Protocols view with Modbus register map and SNMP OID reference

A read-only reference screen showing the Modbus TCP register map and SNMP OID reference tables. This information is intended for engineers integrating the AVR with external monitoring systems such as SCADA, Grafana, or enterprise network management platforms.

Modbus TCP Registers Section:

An expandable section (typically expanded by default) showing the Modbus register map. Displays a 'Running' green badge and header information:

Host: 192.168.1.100 (or the display unit's current IP)

Port: 5020

Block Size: 50 registers per phase

Total: 300 registers (150 base + 50 per phase x 3)

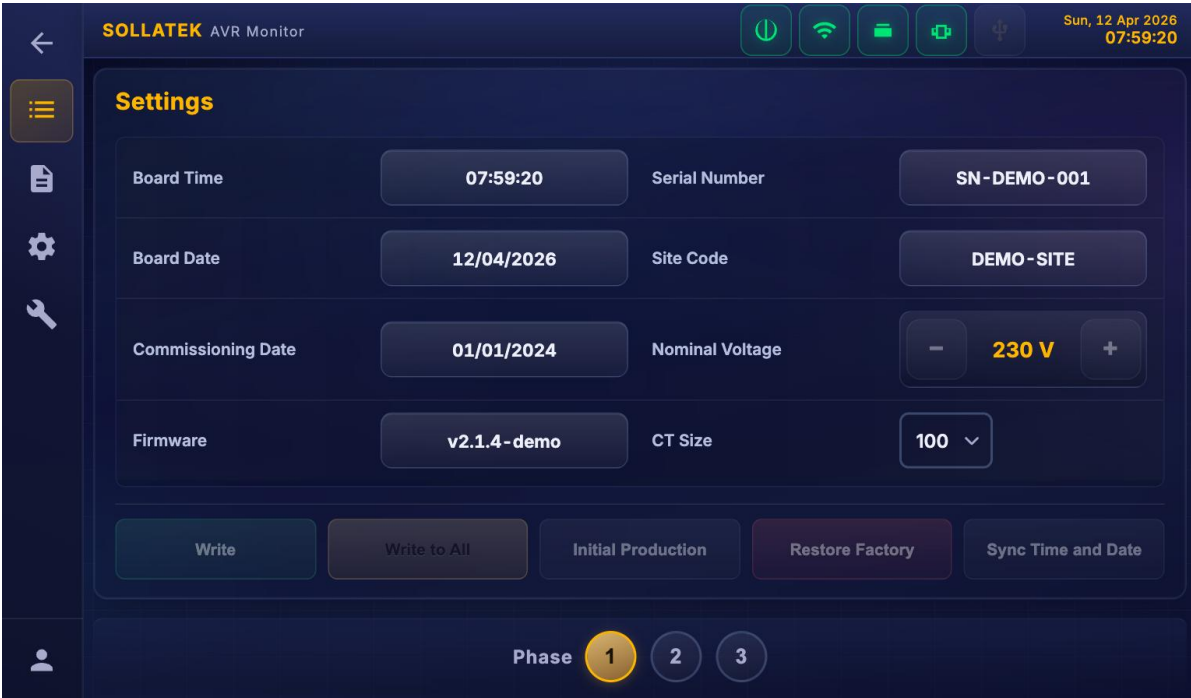
Update Interval: 5 seconds

Below the header, a table displays the register map with columns: OFFSET, LEN, NAME, TYPE, DESCRIPTION. Examples of registers include: PhaseNumber(0), PhaseAvailable(1), InputVoltage(2), OutputVoltage(4), Current(6), Frequency(8), HeatsinkTemperature(10), TransformerTemperature(12), Timestamp(14). Data types shown in green text: UINT16, FLOAT32, UINT32.

SNMP OID Map Section:

An expandable section (typically collapsed) showing the SNMP object identifier reference. Displays a 'Running' green badge. When expanded, shows the complete OID paths for each measurement with a {phase} placeholder for per-phase values, and the corresponding data type.

6 Login and User Access



14: Login screen with username, password fields, on-screen keyboard, and Lock icon

The Login screen is accessed by tapping the person icon at the bottom of the sidebar. It allows users to enter Engineer Mode (admin access) or exit the current session.

6.1 Login Fields

Username Field: Text input for the user login name (e.g., 'admin' or 'viewer'). Tap to activate the on-screen keyboard.

Password Field: Secure text input. Characters are masked as dots. Tap to activate the keyboard or press the eye icon to show/hide the password.

6.2 On-Screen Keyboard

A full QWERTY virtual keyboard appears below the password field. It includes letter keys (A-Z), number pad (7-9, 4-6, 1-3, 0), space bar, backspace, and Shift key for uppercase input. All keys respond to finger touch.

6.3 Action Buttons

- **Lock Icon (top right, amber):** Visual indicator showing the security state. Tapping Unlock proceeds with authentication.
- **Unlock Button:** Submits the entered credentials. On success, switches to Engineer Mode and hides admin-only UI elements. On failure, displays an error message.

- **Lock Button (when already logged in):** Exits Engineer Mode and returns the user to Viewer access level.

6.4 User Credentials Reference

Username	Password	Access Level
viewer	viewer	Viewer (Default) - Read-only access
admin	sollatek	Engineer (Admin) - Full read/write access

NOTE: Default credentials are set at the factory. For security in production deployments, change the admin password immediately after initial setup.

7 Settings Section (Engineer Mode Only)

NOTE: The entire Settings section is only accessible when logged in as admin. The Settings icon in the sidebar is hidden until authentication.

Settings has four sub-screens, selectable from a secondary sidebar when the Settings icon is active. All changes made in Settings apply per-phase or globally as indicated.

7.1 Settings > Basic



Fig 9: Settings > Basic with configuration fields, stepper controls, and action buttons

Used to read and write operational parameters on the ST276 control boards. The screen displays fields in a two-column layout on the left, with action buttons and the phase selector on the right.

Read-Only Fields:

Board Time: Current time on the selected control board's real-time clock (HH:MM:SS format).

Board Date: Current date on the selected control board (DD/MM/YYYY format).

Commissioning Date: Date the unit was originally commissioned (read from the board).

Firmware: Firmware version running on the selected ST276 board (e.g., v2.1.4-demo).

Editable Fields:

Serial Number: Unit's serial identifier. Tap the field to open the on-screen keyboard and edit (up to 20 characters).

Site Code: Customer site identifier for operational tracking. Tap to edit via on-screen keyboard.

Nominal Voltage: Target output voltage. Adjustable using +/- stepper buttons. Range: 200-250 V, typically 230 V.

CT Size: Current transformer rating. Dropdown selector: 50 A, 100 A, 200 A, or 400 A. Default: 100 A.

Action Buttons:

- **Write:** Writes the displayed settings to the selected phase's control board only.
- **Write to All:** Writes the displayed settings to all three phase control boards simultaneously.
- **Initial Production:** Factory Initialisation procedure. Clears event/critical logs and resets bad thyristor and emergency flags. Use only during first installation.
- **Restore Factory:** Resets nominal voltage, site code, serial number, and other parameters to factory defaults for the selected phase.
- **Sync Time and Date:** Opens a date/time picker to synchronise the control board clocks to the display unit's time.

Phase Selector (bottom):

Phase Buttons (1, 2, 3): Select which phase the Read/Write operations apply to. The active phase is highlighted in gold/amber.

7.2 Settings > Event Logging Masks

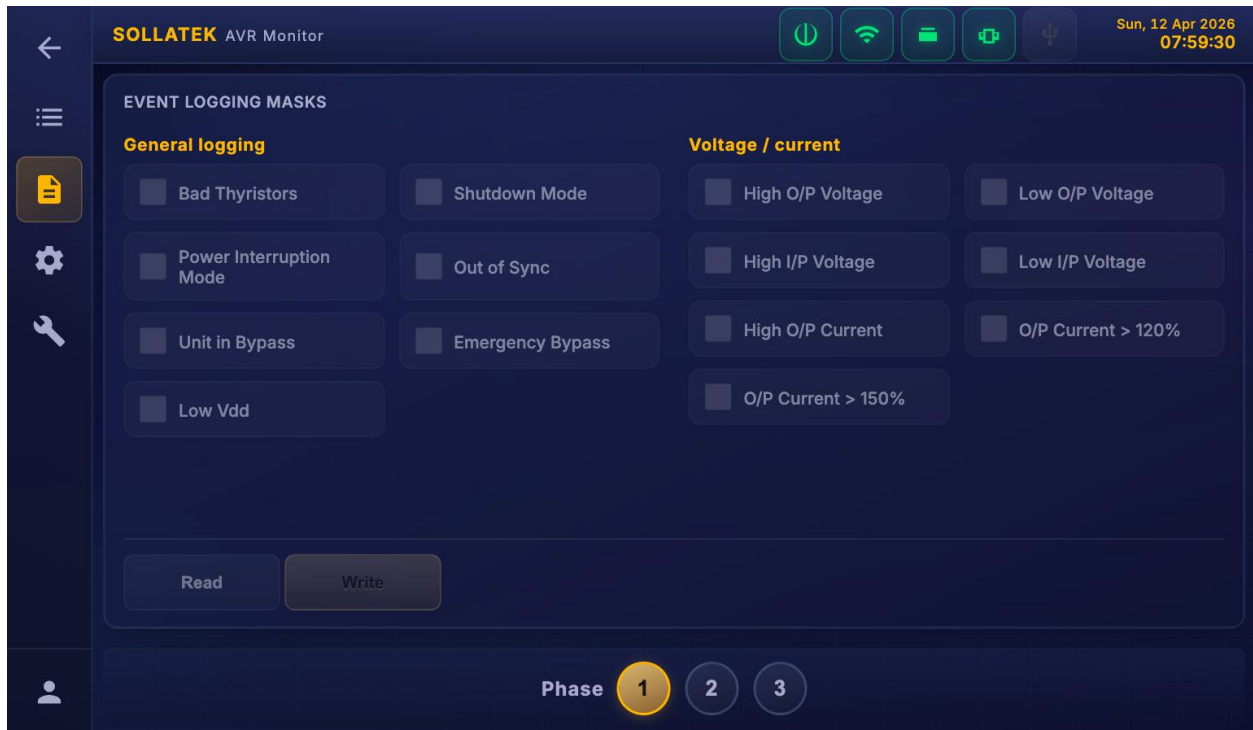


Fig 10: Settings > Event Logging Masks with event-type checkboxes and Read/Write buttons

Configures which event types should be recorded by the ST276 control boards. The screen is divided into two groups side by side, each with a yellow heading and a list of checkbox cards.

General Logging Group:

- Bad Thyristors - Log when thyristor faults are detected
- Shutdown Mode - Log when the unit enters emergency shutdown
- Power Interruption Mode - Log when mains power is lost
- Out of Sync - Log when phase synchronisation is lost
- Unit in Bypass - Log when any phase enters bypass mode
- Emergency Bypass - Log when emergency bypass is triggered
- Low Vdd - Log when the DC power supply voltage drops

Voltage / Current Logging Group:

- High O/P Voltage - Log when output exceeds the high threshold (typically 240 V)
- Low O/P Voltage - Log when output drops below the low threshold (typically 200 V)
- High I/P Voltage - Log when input exceeds the high threshold (typically 260 V)
- Low I/P Voltage - Log when input drops below the low threshold (typically 150 V)
- High O/P Current - Log when current exceeds limits
- O/P Current > 120% - Log when current exceeds 120% of CT rating
- O/P Current > 150% - Log when current exceeds 150% of CT rating

Action Buttons:

- **Read:** Loads the current logging configuration from the selected phase's board and updates the checkboxes.
- **Write:** Saves the displayed checkbox configuration to the selected phase's board.

7.3 Settings > Calibration

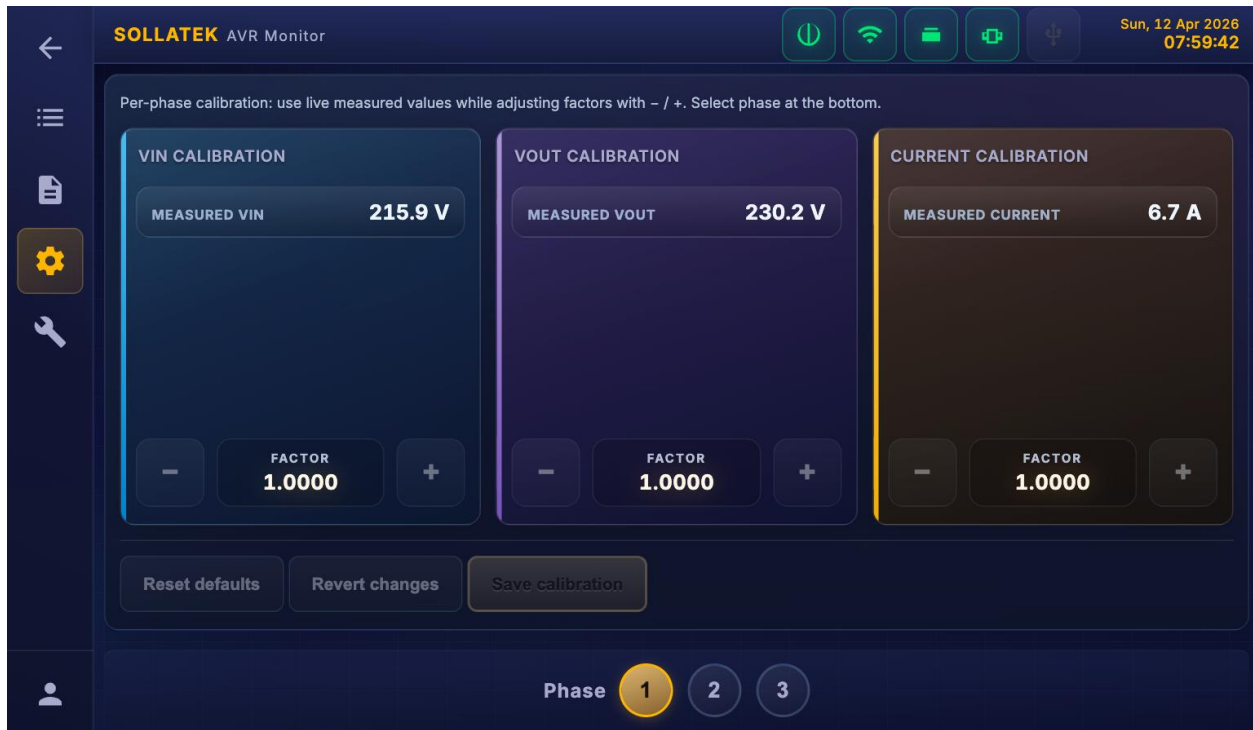


Fig 11: Settings > Calibration with three measurement cards showing factor steppers

Fine-tunes the measurement calibration on each control board. The screen displays the instruction 'Per-phase calibration: use live measured values while adjusting factors with - / +. Select phase at the bottom.' Three calibration cards are displayed side by side.

VIN CALIBRATION Card (left, cyan border):

MEASURED VIN: Live input voltage reading (e.g., 215.9 V). Updates in real time as the unit measures the input.

FACTOR: Calibration multiplier (e.g., 1.0000). Use -/+ buttons to adjust by increments of ± 0.0001 .

VOUT CALIBRATION Card (middle, purple border):

MEASURED VOUT: Live output voltage reading (e.g., 230.2 V).

FACTOR: Calibration multiplier for output voltage.

CURRENT CALIBRATION Card (right, amber/yellow border):

MEASURED CURRENT: Live load current reading (e.g., 6.7 A).

FACTOR: Calibration multiplier for current.

Action Buttons:

- **Reset Defaults:** Erases all calibration changes (even saved ones) and restores factory defaults (1.0000).
- **Revert Changes:** Restores the last saved calibration factors, discarding unsaved adjustments.
- **Save Calibration (amber):** Permanently saves the displayed factors to the selected control board.

Phase Selector (bottom):

Phase Buttons (1, 2, 3): Select which phase's calibration to adjust. The active phase is highlighted in gold/amber.

NOTE: A second source of measurements (e.g., a calibrated multimeter) must be used alongside the on-screen values to determine the correct calibration factors. Do not adjust calibration unless you have verified the unit's measurements against a known-good reference.

7.4 Settings > Maintenance



Fig 12: Settings > Maintenance with thyristor status grid and hardware action buttons

Provides direct control over hardware resets, status monitoring, and system reboots. The screen is divided into three sections: system clock, thyristor status, and hardware actions.

SYSTEM CLOCK Section:

AVR UNIT - Sync time to unit Button: Synchronises the display unit's time to the selected phase's ST276 control board.

MANUAL TIME - Set date & time Button: Opens a date/time picker to manually adjust the display and control board clocks.

THYRISTOR STATUS Section:

Displays the state of all six thyristors (T1-T6) for the selected phase as visual indicator cards. Each card shows the thyristor number and status:

Card Indicator	Colour	Meaning
OK	Green	Thyristor is operating correctly.
FAULT	Red	Thyristor is confirmed faulty and must be replaced.
POTENTIALLY FAULTY	Amber	Thyristor may be faulty. The system detected a failure in a pair but cannot isolate which individual unit failed. A second failure involving the same pair will confirm.

HARDWARE ACTIONS Section:

- **Reset Thyristors:** Clears the internal thyristor fault flags so that taps will be activated again after replacing faulty components.
- **Reset Contactor:** Resets the contactor relay state without rebooting the phase.
- **Reset Phase:** Reboots the ST276 control card on the selected phase. The phase briefly enters disconnect mode, then resumes regulation.
- **Reboot Unit:** Reboots all three ST276 control cards simultaneously. The display continues operating normally.
- **Reboot Display:** Performs a full reboot of the Raspberry Pi display module. Takes 2-3 minutes. Phase regulation is unaffected during the reboot.

Phase Selector (bottom):

Phase Buttons (1, 2, 3): Select which phase's maintenance functions apply to. The active phase is highlighted in gold/amber.

WARNING: Pressing 'Reset Phase' or 'Reboot Unit' will briefly interrupt power to the selected phase(s). Ensure that the load is suitable for a momentary dropout before proceeding.

8 About (Screen 13)



Fig 13: About screen with product info, contacts, system health bars, and QR code

The About screen provides comprehensive system information, software status, contact details, and system health metrics.

8.1 Software Status Cards

Two status cards at the top display the software state:

SOFTWARE Card: Shows 'Software is up to date' (or 'Update available' if a new version is detected). Displays the App version (e.g., v1.0.0-preview) and a green checkmark icon (or update icon if update pending).

BACKUP Card: Shows 'Configuration backup' status. Displays 'No backup available' or the date/time of the last backup. A minus icon (or download icon) indicates no backup is ready.

8.2 Product Information

Displays five fields with the unit's unique identifiers and versions:

Field	Example Value
Product	avrl-demo
Model	Preview Server
App Version	1.0.0-preview

Serial Number	PREVIEW-000000
Firmware Version	v2.1.4-demo

8.3 Contact Information

Phone	+44 (0) 1753 214 500
Support Email	support@sollatek.com
Sales Email	sales@sollatek.com
Address	Sollatek House, Waterside Drive, Slough, UK SL3 6EZ

8.4 QR Code Panel

A branded QR code panel displays the text 'SOLLATEK - Scan for product information and support' above a scannable QR code that links to www.sollatek.com. Below the code is the URL in grey text.

8.5 System Health Metrics

Three horizontal progress bars display the display unit's internal health status. Each bar shows a percentage or temperature value and is coloured according to severity:

Metric	Unit	Description
CPU TEMP	°C	Internal CPU temperature. Green: < 60 °C, Amber: 60-80 °C, Red: > 80 °C.
MEMORY	%	RAM usage. Green: < 70 %, Amber: 70-85 %, Red: > 85 %.
DISK	%	Storage usage. Green: < 70 %, Amber: 70-85 %, Red: > 85 %.

9 Quick Reference: Screen Map

Summary of all 14 screens and their access requirements:

Screen #	Name	Sub-View / Icon	Access	Primary Purpose
1	Dashboard	-	All users	Real-time three-phase monitoring with gauges and wave bars
2	Logs	Basic Info	All users	Min/avg/max/now statistics grid by time range
3	Logs	Event Browser	All users (download: Admin)	Browse, filter, and download event CSV logs
4	Logs	Event Logs	All users (download: Admin)	View saved event log files
5	Logs	Critical Logs	All users (download: Admin)	View saved critical fault logs
6	Connectivity	Network	All users (connect: Admin)	Ethernet, Wi-Fi, and service status
7	Connectivity	Serial Connection	All users (controls: Admin)	Internal serial connection management
8	Connectivity	Protocols	All users (controls: Admin)	Modbus TCP and SNMP reference tables
9	Settings	Basic	All users (controls: Admin)	Serial number, site code, nominal voltage, CT size
10	Settings	Event Logging Masks	All users (controls: Admin)	Enable/disable event logging categories
11	Settings	Calibration	All users (controls: Admin)	Fine-tune Vin, Vout, Current calibration factors
12	Settings	Maintenance	All users (controls: Admin)	Thyristor status, resets, phase/unit reboots
13	About	-	All users	Product info, contacts, system health metrics, QR code
14	Login	-	All users	Enter/exit Engineer Mode with username and password

9.1 Keyboard Shortcuts and Touch Gestures

The interface is designed for touchscreen operation on a 1024 x 600 display. No keyboard shortcuts are required, but the on-screen keyboard appears automatically when text input or password entry is needed.

Gesture / Action	Effect
Tap icon in sidebar	Navigate to that section. Reveals secondary icons if the section has sub-views.
Tap back arrow in secondary sidebar	Return to the main sidebar view.
Tap button or control	Activates the control with visual feedback (highlight/press effect).
Tap text field	Opens the on-screen keyboard for text input (alphanumeric, password, or numbers).
Tap +/- stepper buttons	Increments or decrements a numeric value (voltage, factor, etc.).
Tap dropdown menu	Expands to show available options. Tap an option to select.
Tap checkbox	Toggles the checkbox state (checked / unchecked).
Scroll table or list	Drag vertically to reveal additional rows or content.
Tap expandable section (>)	Expands the section to show details. Tap again (v) to collapse.

9.2 Status Indicators and Colour Codes

Throughout the interface, consistent colour coding communicates status at a glance:

Colour	Meaning
Green	Normal operation, connected, healthy, or successful.
Amber / Yellow	Warning, attention needed, moderately loaded, or active selection.
Red	Error, fault, critical issue, or disconnected.
Cyan / Light Blue	Informational, measurement in progress, or neutral state.
Purple / Violet	Special status, secondary action, or distinct category.
Grey	Offline, disabled, or neutral.