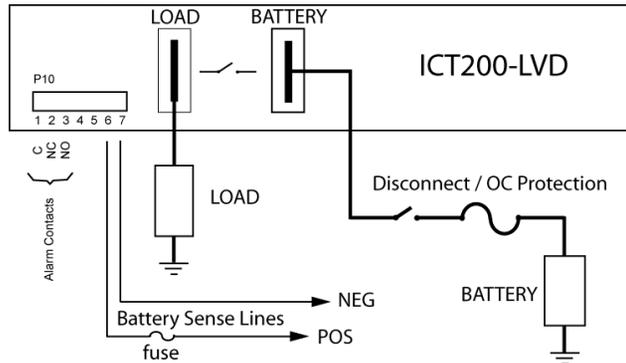


ICT200-LVD LOW VOLTAGE DISCONNECT SWITCH

This automatic LVD switch is designed to protect your battery from excessive discharge that may cause permanent degradation of the cells. The ICT200-LVD disconnect switch may be wired in series with the battery positive or negative lead for use with any dc grounding configuration.

The intelligent back-lit LCD display makes set up simple. Selecting your nominal battery voltage at first power up will automatically set the disconnect and reconnect voltages to standard levels for the battery voltage chosen. Custom voltage thresholds may be set for specialized applications, and the internal contactor may be manually set to an open or closed state if required. The display also shows the battery voltage and the current drawn by the load, along with the operating state of the LVD and any alarm conditions.

CONNECTION DIAGRAM



! WARNINGS

Risk of personal injury or damage to equipment and property!
Always observe the following:

- Use an appropriate over-current protection device in line with the battery sense connection, and in line with the main load battery connection
- Use a disconnect switch or circuit breaker in series with the main load battery connection, for installation and service
- Use wire and connectors rated for the maximum load current, and size of fuse or circuit breaker. Tighten all connections
- Ensure load current does not exceed max rating of unit

INSTALLATION

Mount the unit in a standard 19" equipment rack using the front panel mounting ears (included).

With the main battery service disconnect switch open; connect the LVD LOAD and BATTERY terminals using appropriately sized wire, disconnect, and an over-current protection device rated for the application. Bond the chassis to ground using the ground stud located on the back panel.

Installation (continued)

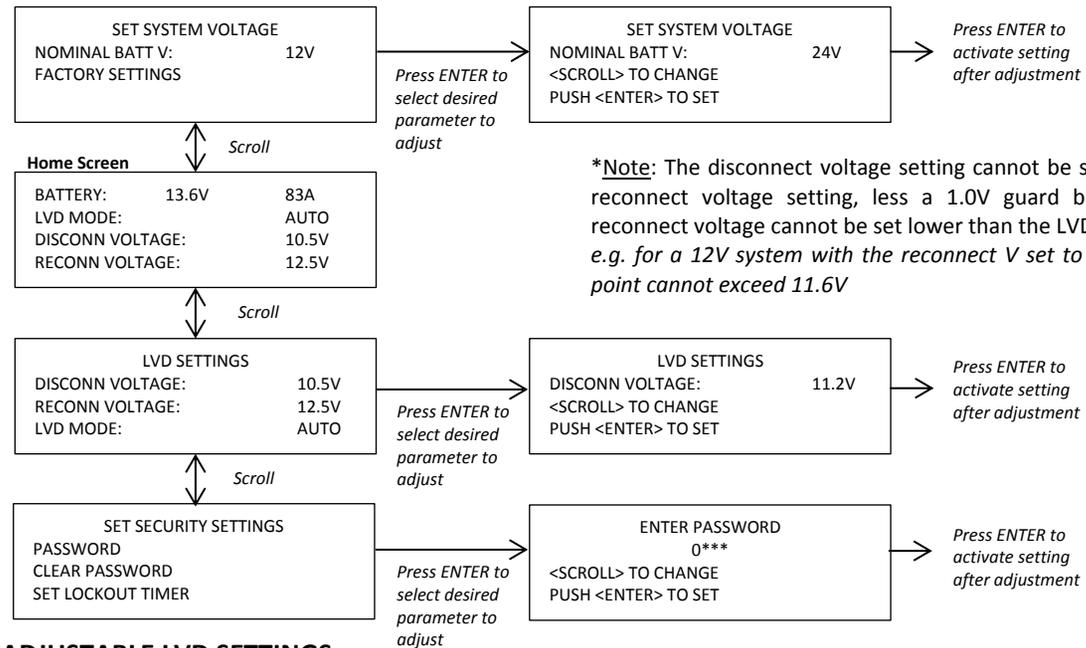
Connect the alarm output contacts (if desired) to an external monitoring system, using the REMOTE connector (P10) terminals 1, 2, and 3 as shown in the REMOTE table, below. Use the mating 7 pin REMOTE connector plug (included).

Connect the battery sense lines using 22 AWG or larger wire and an over current protection device (5A fuse or circuit breaker) to the battery terminals. These lines provide power to the unit, and allow the control circuitry to sense the battery voltage. The internal display should then power up, allowing the nominal battery voltage to be set (see Initial Set Up section).

REMOTE Connector P10: (pins 4, 5 not used)

Pin Number	Name	Note
1	Common	Alarm out common
2	NC	Alarm NC (alarm state)
3	NO	Alarm NO (alarm state)
6	BATT POS	Battery sense Positive
7	BATT NEG	Battery sense Negative

CONTROL PANEL MENUS



ADJUSTABLE LVD SETTINGS:

System Voltage Setting (Nominal)	LVD (min)	LVD (default)	LVD (max)*	Reconnect (min)*	Reconnect (default)	Reconnect (max)
12V (default)	10.5	11.5	12.5	12.0	12.5	13.8
24V	21.0	23.0	25.0	24.0	25.0	27.6
48V	42.0	46.0	50.0	48.0	50.0	55.2

FRONT PANEL CONTROL

Use the front panel scroll knob, ENTER, and BACK buttons to navigate the interface menus and set up the following parameters:

- Nominal battery SYSTEM VOLTAGE (set to 12/24/48V to correctly scale factory default LVD points)
- Restore to FACTORY SETTINGS (default values, 12V system, AUTO mode, contactor open)
- LVD SETTINGS (set custom disconnect and reconnect voltage levels, set mode for AUTO disconnect or MANUAL-OPEN/MANUAL-CLOSED configuration)
- SECURITY SETTINGS (set a four digit password and lock-out timer to prevent unauthorized adjustment of LVD settings, if desired) (default is no password)

Use the scroll knob to cycle between the top-level menus, press ENTER to select a menu for adjustment, and then use the scroll knob to select the parameter for adjustment, press ENTER to select.

Adjust the selected parameter with the scroll knob; press ENTER to activate the setting. Use the BACK button to return to a higher level menu

INITIAL SET UP

Wire the unit per the installation instructions and connect power to the battery sense terminals. The **SET SYSTEM VOLTAGE** screen should be displayed on the front panel. Press **ENTER** to select that screen, then use the scroll wheel to select the **NOMINAL BATT V** line, press **ENTER** to select, and then adjust the encoder knob to select 12, 24 or 48V as required. Press **ENTER** to select. The unit disconnect and reconnect thresholds will now be set to the factory default levels for that battery voltage.

Normally this is the only setting required on the unit unless custom disconnect or reconnect points are desired, or the internal LVD contactor is to be manually set to open or closed. The external battery service disconnect switch may now be closed, allowing the load to be powered through the LVD unit.

ALARMS

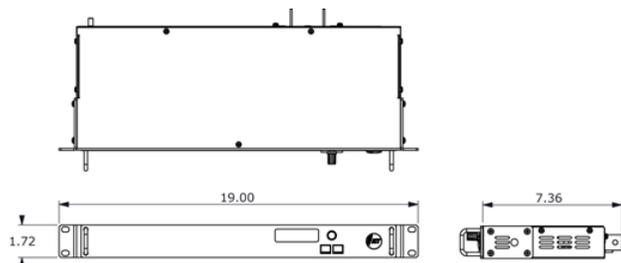
The Form-C alarm contact on the back panel is triggered for LVD trip, Over Current trip, or internal Over Temperature trip. The main LVD contactor will open for all alarm conditions, and must be manually re-set for an Over Current event by setting the **LVD Mode** back to **AUTO**.

ALARM		ALARM	
BATT LOW	10.5VDC	OVER CURRENT	
BATT DISCONN BY LVD		BATT DISCONN BY LVD	

Alarm Screens: *(any button press will return to home screen)*

SPECIFICATIONS

Battery Voltage:	10 to 65V
Maximum Load Current:	200A (12/24V), 100A (48V)
Auto Overload Disconnect Current: (+/- 5%)	
12/24V System setting	220A
48V System setting	110A
Display Accuracy (V):	+/- 2%
(Amps):	+/- 5%
LVD Delay (approx. time to switch state)	3s
Operating power (Tare loss):	< 1W
Alarm Contact (Form-C):	0.5A, 125Vac/dc max
Dimensions: (inches)	



LIMITED WARRANTY

ICT Ltd. warrants to the original consumer purchaser that this product shall be in good working order, free from defects in materials and workmanship, for a period of three (3) years from the date of purchase. Should failure occur during the above stated time period, then ICT will, at its option, repair or replace this product at no additional charge except as set forth below. All parts, whether for repair or replacement, will be furnished on an exchange basis. All exchange pieces become the property of ICT. This limited warranty shall not apply if the ICT product has been damaged by unreasonable use, accident, negligence, disaster, service, or modification by anyone other than the ICT factory.

Limited warranty service is obtained by delivering the product during the above stated three (3) years warranty period to an authorized ICT dealer or ICT factory and providing proof of purchase date. If this product is delivered by mail, you will insure the product or assume risk of loss or damage in transit, and prepay shipping charges to the factory.

Every reasonable effort has been made to ensure that ICT product manuals and promotional materials accurately describe ICT product specifications and capabilities at the time of publication. However, because of ongoing improvements and updating of ICT products, ICT cannot guarantee the accuracy of printed materials after the date of publication and disclaims liability for changes, errors or omissions.

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