PROJECTA

INVERTER CHARGER BATTERY MONITOR

P/No INVCHRD-BT

WARNINGS – IMPORTANT PLEASE READ

- Do not disassemble the monitor. Take to a qualified person if the unit requires repairing.

PRODUCT OVERVIEW

NO	DEFINITION	DESCRIPTION
1	Solar	To indicate solar charger is charging
2	Invert	To indicate inverters is working
3	Bypass	To indicate Grid or generator is presenting
4	Charge	To indicate battery is charging
5	Overload alarm	To indicate when inverter is overloaded
6	Battery low voltage alarm	To indicate when inverter reach under-voltage
7	Over temperature alarm	To indicate when inverter is over-temperature
8	Load percentage	To indicate the percentage of actual load power against rated power of inverter installed
9	Inverter ON/OFF switch	To turn Inverter ON or OFF
10	Scroll up / Back	LCD displaying value
11	LCD screen	
12	Scroll down / confirm button	To scroll down to next item. Or as function of confirmation of your selection and configuration. With long press for 3 secs.
13	Mute button	To mute or unmute the alarm
14	Battery SOC	To indicate battery state of charge

DISPLAY INFORMATION IN VALUE INFORMATION AREA

V Battery Voltage
A Battery Current
/ Battery SOC

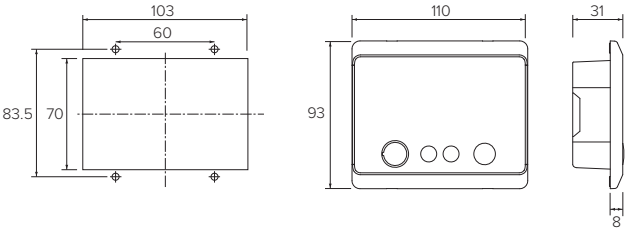
FEATURES

- Device allows users to remotely monitor and control Projecta Inverter Chargers
- Displays battery voltage*, current*, inverter load percentage, AC input/output voltage, frequency and power
- Battery status can be monitored via smart phone or tablet if connected.
- Inbuilt intelligent battery monitoring technology

* Will show battery information where a Projecta HD sereies battery is connected to the system.

INSTALLATION

Step 1: Cut holes on mounting surface following the cut-out dimension of solid line area in the below diagram
Step 2: Place the INVCHRD-BT in position properly and fix the INVCHRD-BT by 4pcs M3*12 screws

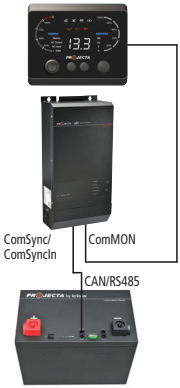


CONNECTION

- Use the cable with RJ45 terminal to connect the INVCHRD-BT to the ComMON terminal of the inverter charger in Fig.1.
- Use the cable with RJ45 terminal to connect the INVCHRD-BT to the ComMON terminal of the inverter charger and connect the ComSync or ComSyncIn terminal of the inverter charger to the CAN/RS485 terminal of the HD Series lithium battery in Fig.2.

Fig. 1

Fig. 2



APP

INVCHRD-BT Support APP can be downloaded on the Google Play Store for Android Devices and the AppStore for Apple Devices.

DETAIL LED DISPLAY INFORMATION OF BATTERY SOC

Battery Status	SOC	LED 1	LED 2	LED 3	LED 4	LED 5
Charging	SOC=100%	Illuminate	Illuminate	Illuminate	Illuminate	Illuminate
	80%≤SOC < 100%	Illuminate	Illuminate	Illuminate	Illuminate	Flash
	60%≤SOC < 80%	Illuminate	Illuminate	Illuminate	Flash	Off
	40%≤SOC < 60%	Illuminate	Illuminate	Flash	Off	Off
	20%≤SOC < 40%	Illuminate	Flash	Off	Off	Off
	0%≤SOC < 20%	Flash	Off	Off	Off	Off
Discharge	80%≤SOC ≤ 100%	Illuminate	Illuminate	Illuminate	Illuminate	Illuminate
	60%≤SOC < 80%	Illuminate	Illuminate	Illuminate	Illuminate	Off
	40%≤SOC < 60%	Illuminate	Illuminate	Illuminate	Off	Off
	20%≤SOC < 40%	Illuminate	Illuminate	Off	Off	Off
	0%≤SOC < 20%	Illuminate	Off	Off	Off	Off
	SOC=0	Off	Off	Off	Off	Off

DISPLAY INFORMATION VALUE AREA

Display Information		Item
Battery	V	Battery voltage
	A	Battery current
AC Output	kW	AC output power
	Hz	AC output frequency
	V	AC output voltage
	A	AC output current
AC Input	kW	AC Input power
	Hz	AC Input frequency
	V	AC Input voltage
	A	AC Input current
Solar	kW	PV power
	V	PV voltage

Note: Solar is for the INVCHR3-48V with built in MPPT

CONFIGURATION ITEMS AND SETTING VALUES

Display Information		Configuration Item	Default Setting and Setting Step
Battery	V	Absorption Voltage, ON	Step: 0.1V, Default: 14.1V
	V	Float Voltage, Flashing	Step: 0.1V, Default: 13.6V
	A	Max Charge Current	Step: 1A, Default: 30A
AC Output	V	Output Voltage	Step: 10V, Default: 240V
	Hz	Output Frequency	Default: 50/60Hz
AC Input	A	AC Input Rating	Step: 1A, Default: 32A
Buzzer	Alarms	Buzzer ON or OFF	Default: ON
Enable SOC Display		SOC lights and battery back-ground lights are all flash	ON: Enable SOC display OFF: Disable SOC display Default: ON
Enable Screen Off Function		Power lights and battery back-ground lights are all flash	ON: Enable the Screen Off Function OFF: Disable the Screen Off Function Default: OFF

NOTE: Once the Screen Off function is enabled, the screen will automatically go off if there is no key operation for three minutes. If the inverter status changes or an alarm occurs, it will be restarted keep the screen on for three minutes.

CONFIGURATION

Step 1. To enter into the configuration: Press scroll down/confirm button for 2 seconds.

Step 2. Then you can use scroll up or scroll down button to choose the parameter you want to change.

Step 3. Long press the scroll down/confirm button for 2 seconds to trigger on the configuration, the number/icon will flash.

Step 4. Use scroll up or scroll down button to change the value.

Step 5. Afterwards, long press the scroll down/ confirm button for 2 seconds to confirm the configuration. The two bars (load ratio and battery soc) will flash indicating the configuration is in process.

Step 6. After you have done all configuration you need, please press scroll up/return button for 2 seconds to exist configuration.

ERROR CODES

The INVCHRD-BT to Projecta's Inverter Chargers

INVERTER ERROR CODES

CODE	DISPLAY	DESCRIPTION
101	U_Bus_OV	Battery Over-Voltage
102	U_Bus_LV	Battery Under-Voltage
103	U_Bus_HW_Pro	DC Bus Hardware Under-Voltage
104	PSU_Fault	Auxiliary Power Error
105	T_HS_OT	Heat Sink Over-Temperature
106	T_TX_OT	Transformer Over-Temperature
107	Sam_HD_Fault	Sampling Fault
108	EEPROM_Fail	EEPROM Fault
109	Output_ShortCut	Output Short Circuit
110	Output_OverLoad	Output Over-Load
111	CoolSys_Err	Fan Error
112	U_BAT_Low_Deep	Battery Deep Discharge
113	U_INV_LV	Inverter Output Under-Voltage
114	Instant_OC_Soft	Inverter Output Instant
115	EPO	Emergency Stop
116	Rly_Err	Relay Error

MPPT CHARGER CONTROLLER ERROR CODES

CODE	DISPLAY	DESCRIPTION
301	U_Bus_OV	DC Bus Over-Voltage
303	U_Bus_OV HD	Battery Over-Voltage(Hardware)
304	Buck_ShortCut	Buck Short Circuit
305	I_Buck1_OC	Buck1 Over-Current
306	I_Buck2_OC	Buck2 Over-Current
307	T_Board_OT	Control Board Over-Temperature
308	T_HS_OT	Heat Sink Over-Temperature
309	PSU_LV	Auxiliary Power Under-Voltage
310	PSU_LV_HD	Auxiliary Power Under-Voltage(Hardware)
311	Sam_HD_Fault	Sampling Fault
312	EEPROM_Fail	EEPROM Fault

Note: Solar is for the INVCHR3-48V with built in MPPT

BMS ERROR CODES

CODE	DISPLAY	DESCRIPTION
ERR400	Module_OV	Lithium battery is over voltage protection
ERR401	Module_UV	Lithium battery is under voltage protection
ERR402	Module_OT	Lithium battery's temperature is too high
ERR403	Module_UT	Lithium battery's temperature is too low
ERR404	Discharge_OC	Lithium battery's discharge current is over current.
ERR405	Charge_OC	Lithium battery's charge current is over current.
ERR406	Module_INT_Err	Lithium battery module fault

WARNING CODES

INVERTER WARNING CODES

CODE	DISPLAY	DESCRIPTION
001	U_BAT_OV	Battey Over-Voltage Warning
002	U_BAT_LV	Battery Under-Voltage
003	U_BAT_LV_Fault	Battery Under-Voltage Protection
004	OverLoad	Over-Load
005	NTC_HS_Fault	Heat sink NTC Failed
006	NTC_TZ_Fault	Transformer NTC Failed
007	T_BAT_OT	Battery Over-Temperature
008	Fan_Fault	Fan Error
009	ParConnect_Err	Parallel Connection Error
010	ParComm_Err	Parallel CAN Communication Error
011	Par_ID_Conflict	Parallel ID Conflict
012	Par_ParaSet_Conflict	Parallel Parameter Setting Conflict
013	Par_SyncTimeOut_Err	Parallel Synchronization Timeout
014	ModeSet_Mismatch	Working Mode Setting Mismatched
015	Par_OutputCircuit_Err	Parallel Output Circuit Error
020	ACin_OV	AC Input Over-Voltage
022	ACin_OF	AC Input Over-Frequency
023	ACin_LF	AC Input Under-Frequency
024	ACin_PhaseErr	AC Input Phase Error
025	U_Neu_2_GND_Err	AC Input Voltage Between Neutral and Ground Error

MPPT CHARGER CONTROLLER WARNING CODES

CODE	DISPLAY	DESCRIPTION
203	CUR_Limit	MPPT Current Limit Warning
205	NTC_HS_Fault	Heat Sink NTC Failed
207	Fan_Fault	Fan Error

Note: Solar is for the INVCHR3-48V with built in MPPT

BMS WARNING CODES

CODE	DISPLAY	DESCRIPTION
050	Module_HV	Lithium battery is over voltage
051	Module_LV	Lithium battery is under voltage
052	Module_HT	Lithium battery's temperature is too high
053	Module_LT	Lithium battery's temperature is too low
054	Discharge_HC	Lithium battery's over current discharge.
055	Charge_HC	Lithium battery's charge current too high.
056	INT_Comm Fail	Communication error with lithium batteries.
057	EXT_Comm Fail	Communication error with inverter charger.
058	SOC_Low	Lithium battery's SOC is too low

SPECIFICATIONS

DISPLAY	DESCRIPTION
Input Voltage	6.5~16Vdc
Communication	RS485
Cable Length	5 metres
IP Rating	IP20
Working Temperature	-20~65°C
Suits Inverters	INVCHR2, INVCHR3 & INVCHR3-48V
Suits Batteries in system	LB100-HD, LB200HD, LB400-HD, LB50-48VHD, LB100-48HD

WARRANTY STATEMENT

Applicable only to product sold in Australia

Brown & Watson International Pty Ltd of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue (save and except for all bulbs and lenses whether made of glass or some other substance) will under normal use and service be free of failures in material and workmanship for a period of two (2) year (unless this period has been extended as indicated elsewhere) from the date of the original purchase by the consumer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the consumer.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that a warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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