

IPS-BC-360W

Transtech Battery Charger / Power Supply

360Watt with Universal Supply 85-265Vac 12Vdc and 24Vdc 10 Amp Output

GENERAL DESCRIPTION

The IPS-BC-360W is a uniquely designed combined industrial power supply / battery charger, designed to supply instrument installations with both 12v and 24v and charge sealed lead-acid backup batteries.

To comply with the requirements of EN61000 for electronic equipment consuming more than 75W, the input stage is Power Factor Corrected.

The IPS-BC-360W may be operated without batteries, in which case the 12V and 24V outputs will approach 13.8V and 27.6V respectively.

When the IPS-BC-360W is operated as a battery charger the unique control circuitry prevents either battery being overcharged (boiled). This unique feature can either sink or source current, rising or falling automatically depending upon the state of charge of either battery. In the event of loss of ACV, or an internal fault an alarm contact will close.



FEATURES

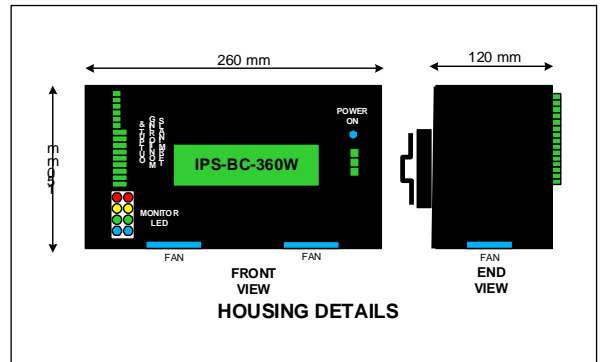
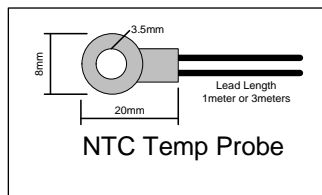
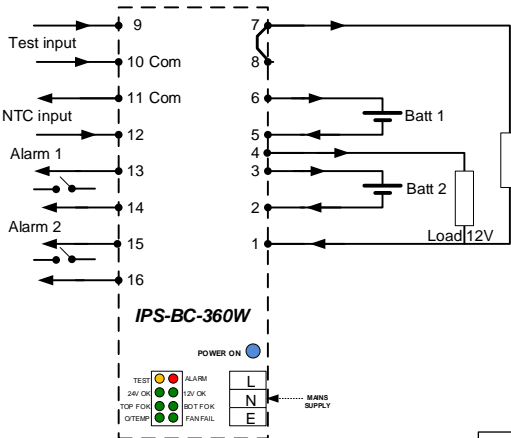
- ◆ Power Factor Correcting (automatic)
- ◆ Unique “automatic sink or source” charging of batteries.
- ◆ Auto disconnect on reverse battery volts
- ◆ Voltage measurement nominally 0.3%
- ◆ Current Limited Outputs
- ◆ Plug Off Terminals with engraved numbers
- ◆ Monitoring LED Panel for the following:-
- ◆ ACV
- ◆ DCV
- ◆ Fuse 1
- ◆ Fuse 2
- ◆ ALARM
- ◆ TEST
- ◆ FAN
- ◆ Over Temperature
- ◆ Complies with EN61000
- ◆ Remote Test Input with Contact output (Forces a low VDC to test battery condition)
- ◆ Supply Loss Alarm Output
- ◆ C-tick / CE marking (Tested to & Passed CSPIR 11)









TECHNICAL DATA

Power Supply (Input)	85 – 265VAC /120 - 390VDC
Frequency	40 - 60Hz
Power	< 465VA
Power Factor correcting, controlled Start-Up Input Stage (Designed to requirements of EN61000). Two Stage EMI line filter and transient protection is standard.	
Inputs	
1. The test input switches load to the batteries, by monitoring the battery voltage the health of batteries can be determined from a remote location.	
2. An NTC with lead is included to allow for Battery Temperature Monitoring and Compensation.	
Outputs (Operated as Power Supply)	
Output 1 (< 13 amps)	27.6V nominal (no Battery)
Output 2 (< 10 amps)	13.8V nominal (no Battery)
Combined Ave Output	≤ 365W at 70C (99% DF)
Combined Peak Output	≤ 400W (3secs. & 1% DF)
Outputs (Operated as Battery Charger)	
Battery '1'	Limited to 13.8V nominal
Battery '2'	Limited to 13.8V nominal
Charge Temp. Coeff.	-4mV/C per cell.
Charge Current:	2 to 10A Factory Set (suitable for from 7AH to >100AH batteries).
Deep discharge	Automatic load disconnect.
Alarm Outputs 1Amp (dry contact N.O. with no power on)	
AL1 = Battery or Internal Fault	
AL2 = Supply Failure	

GENERAL SPECIFICATION

Efficiency	>83%
PFC (required)	to EN61000.
Emissions	to EN61000
Immunity ESD	to EN61000
Immunity RF fields	to EN61000
Isolation	(Input/Output) 4kV rms (VDE 0550 and BS4 15 Class 2)
Operating Temp	0 to 70 Deg C
Storage Temp	-25 to 85 Deg C
Reliability (estimated)	50,000 hours at 25C as per MIL-HDBK-217 or equiv.
Mounting Style	DIN mount
Terminals	Self-opening 5mm/12AWG (plug on/off)
Housing Material	Mild Steel & Polycarbonate
Ventilation	Natural
Dimensions	240mmX145mmX140mm
Weight	1.6 kg



TEST			ALARM
24V OK			12V OK
TOP F OK			BOT F OK
O/TEMP			FAN FAIL

LED	NORMAL	FAULT/ALARM
TEST	LED = off (normal)	LED = on (test input active)
ALARM	LED = off (all OK)	LED = on (If either battery is flat or reverse connected or Fuses blown)
24V OK	LED = on (all OK)	LED = off (Internal fault)
12V OK	LED = on (all OK)	LED = off (Internal fault or Test input active)
TOP F OK	LED = on (all OK)	LED = off (Top / 24V Fuse blown)
BOT F OK	LED = on (all OK)	LED = off (Bottom / 12V Fuse blown)
O/TEMP	LED = on (all OK)	LED = off (Over Temperature)
FAN FAIL	LED = on (all OK)	LED = off (Fan has failed)

CALIBRATION & SET-UP INSTRUCTIONS:-

- The unique design is for 2 x 12VDC Sealed Lead Acid batteries, each charged and monitored independent regardless of their condition or status.
- Either battery A or battery B may be removed without affecting the charging of the remaining battery.
(ALL disconnections/reconnections, as a precaution, should be done with POWER OFF). With one of the 12VDC Batteries removed the IPS-BC-360W can still deliver 3 Amps at 12VDC for the Radio Modem.
- Temperature compensation for the batteries is external and included with all IPS-BC-360W units (standard 1-meter leads). Longer leads can be provided.
- To tie the battery negative to Earth make this connection at "Load 0V" (term 4) only.

POWER UP (INITIAL or RESET FUNCTION):-

- Complete the wiring connections to the load and the batteries.
- Connect or close the DC load and the batteries.
- Allow a few seconds for the IPS-BC-360W to "auto-connect" the load to the batteries.
- Apply the AC Power (avoid turning the IPS-BC-360W off then on, always wait a few seconds)

REMOVAL or REPLACEMENT OF THE IPS-BC-360W:-

- Turn OFF AC Power (do not turn the IPS-BC-360W off then on, always wait a few seconds).
- Disconnect the DC Load and the batteries externally.
- Unplug the terminals on the IPS-BC-360W
- Replace the IPS-BC-360W
- Plug the terminals back on the IPS-BC-360W
- Reconnect or close the DC Load and then reconnect/close to the Batteries
- Allow a few seconds for the IPS-BC-360W to "auto-connect" the load to the batteries.
- Apply the AC Power (avoid turning the IPS-BC-360W off then on, always wait a few seconds)

Please ensure that **Batteries** are connected to **Battery Terminals** and **Loads** are connected to **Load terminals**.