

LIMITED WARRANTY & LIMITATION OF LIABILITY LIMITED WARRANTY & LIMITATION OF LIABILITY

Each Fluke product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is one year and begins on the date of shipment. Parts, product repairs and services are warranted for 90 days. This warranty extends only to the original buyer or end-user customer of a Fluke authorized reseller, and does not apply to fuses, disposable batteries or to any product which, in Fluke's opinion, has been misused, altered, neglected or damaged by accident or abnormal conditions of operation or handling. Fluke warrants that software will operate substantially in accordance with its functional specifications for 90 days and that it has been properly recorded on non-defective media. Fluke does not warrant that software will be error free or operate without interruption.

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Fluke's warranty obligation is limited, at Fluke's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to a Fluke authorized service center within the warranty period.

To obtain warranty service, contact your nearest Fluke authorized service center or send the product, with a description of the difficulty, postage and insurance prepaid (FOB Destination), to the nearest Fluke authorized service center. Fluke assumes no risk for damage in transit. Following warranty repair, the product will be returned to Buyer, transportation prepaid (FOB Destination). If Fluke determines that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, Fluke will provide an estimate of repair costs and obtain authorization before commencing the work. Following repair, the product will be returned to the Buyer transportation prepaid and the Buyer will be billed for the repair and return transportation charges (FOB Shipping Point).

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Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this Warranty is held invalid or unenforceable by a court of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.

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SERVICE CENTERS

To locate an authorized service center,
visit us on the World Wide Web:

<http://www.fluke.com>

or call Fluke using any of the phone numbers listed below:

+1-888-993-5853 in U.S.A. and Canada

+31-40-2675200 in Europe

+1-425-446-5500 from other countries

FLUKE®

EBC290 External Battery Charger

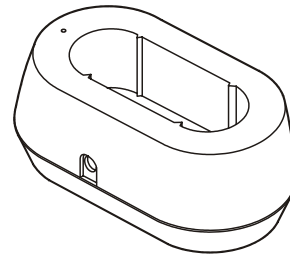
Instruction Sheet

Introducing the EBC290

EBC290 is an External Battery Charger for compatible Li-ion batteries as used in Fluke Test Tools.

EBC290 is powered by Power Adapter BC190 as supplied with Test Tool Fluke 190 Series II. Instead of Power Adapter Model BC190 you can also use Model BC430.

EBC290 is provided with a microprocessor controlled charging circuit to optimally charge the battery.



Unpacking

Following items must be included in the shipment:

- EBC290 External Battery Charger.
- Instruction Sheet (this document).

Check the contents of the shipping box for completeness. If something in the box has been damaged or is missing, contact your distributor or the nearest FLUKE sales or service office immediately.

Safety Information



Read First: Safety Information.
To ensure safe operation of the charger,
follow these instructions:




- Read the operating instructions before use and follow all applicable safety instructions.
- Use the Product only as specified in the operating instructions; otherwise the device's safety features may become inoperative.
- Use the Product only with the Li-ion batteries as specified for use with Fluke Test Tools. Use Power Adapter BC190 or BC430 to supply the Battery Charger, otherwise the device's safety features may become inoperative or the charger may become defective.
- Read the instructions for safe use and handling of Li-ion batteries as indicated in the Battery's Instruction Sheet.
- Before each use, inspect Battery Charger, Battery and Power Adapter for any damage. Do not use parts that are cracked or damaged.
- Adhere to local and national safety codes concerning the use and disposal of Charger and Li-ion Batteries.

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Symbols

	Risk of Danger. Important information. See Instruction Sheet.
	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.
	Conforms to relevant European standards.

Specifications

Electrical Specifications

Power connection	BC190 or BC430
Adapter requirement	17.8 V / 0.84 A
Input current limiter	714 mA \pm 5%
Input voltage range	15 to 23 V
Batteries	BP291
capacity	52 Wh
Charge time	5.5 Hours
Charge operating range	0 to 45°C (determined by battery)
Charge disable protection (smbus controlled)	54°C \pm 3°C battery temp (determined by battery)
Charge disable protection (hardware controlled)	58°C \pm 3°C battery temp (determined by battery)

General Specifications

Temperature: Operating	0 °C to +45 °C (determined by battery)
Non Operating (Storage)	-20°C to +60 °C
Maximum Relative Humidity Non Operating (Storage):	No precipitating (noncondensing) Recovery time two hours
Operating:	No precipitation (noncondensing)
0 ... 10 °C	95 \pm 5 %
10 ... 30 °C	75 \pm 5 %
30 ... 40 °C	45 \pm 5 %
40 ... 45 °C	
Emission and Immunity	EN-IEC-61326-1 (first edition 2005).
Height x Width x Depth (excluding battery)	44 x 65 x 100 mm
Weight	85 g

Using the EBC290

To use the EBC290, follow these instructions (Refer to Figure 1):

1. Connect the Power Adapter BC190 (or BC430) to a mains outlet and insert the DC plug of the Power Adapter into the External Charger.

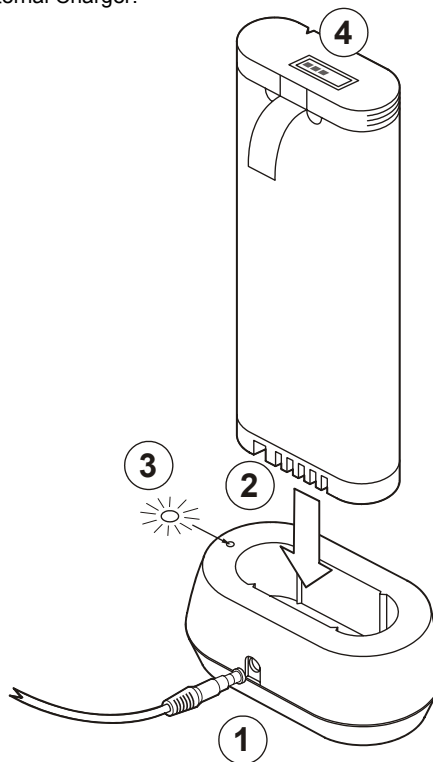


Fig. 1

2. Insert the battery to be charged into the External charger. Take careful notice of the correct placement of the battery.
3. Observe the green LED indicator:
 - Slow flashing indicates that the battery is charging.
 - Continuously on indicates that the battery is fully charged.
 - Fast flashing indicates a battery error.
4. During the charging process the number of segments to turn on in the battery display will increase over time. All segments on indicates that the battery is charged to 100 % of its present capacity.

Cleaning

Before cleaning, separate the product from Power Adapter and Battery.

Clean the EBC290 with a damp cloth and a mild detergent. Do not use abrasives, solvents, or alcohol.

Troubleshooting

In case of an error, the green LED in the Charger will flash at a high rate which indicates a possible battery problem. When available, insert another battery to determine if the error is caused by the battery or by a defective charger.