

Battery Brain Product line – Description and models

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APPLICATIONS:

ON ALL KINDS OF BATTERIES, IN ORDER TO PREVENT ANY ANOMALOUS DISCHARGE:

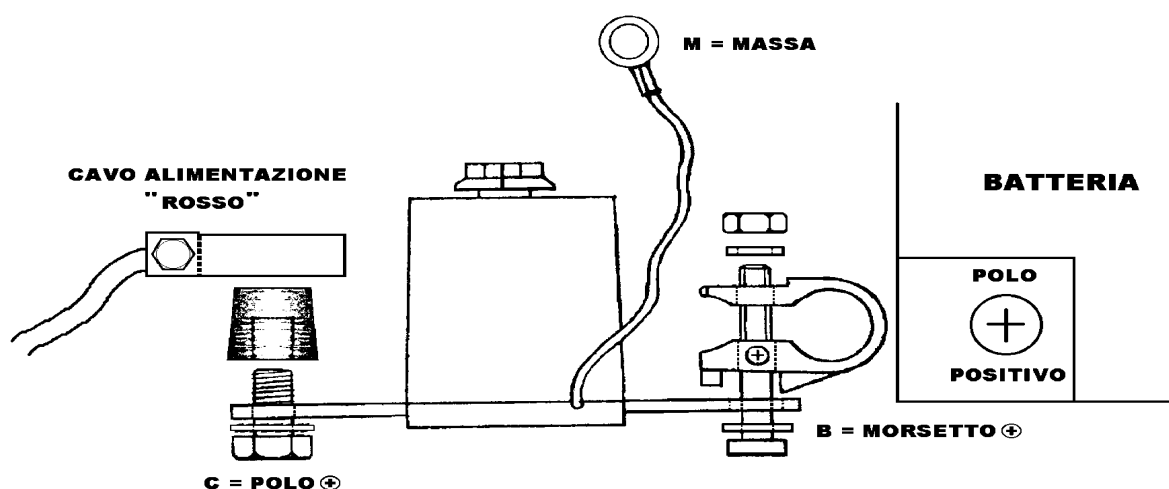
- CARS
- MID – SIZE TRUCKS
- BOATS
- FORKLIFTS
- MOTORCYCLES
- CAMPERS

GENERAL FEATURES

The Battery Brain is an energy control device that continuously monitors the battery of a vehicle, when the engine is either running or not.

If, for any reason, the voltage level drops below a preset level (security level) the Battery Brain automatically disconnects the battery from the electrical system of the vehicle, leaving enough energy in the battery for engine start.

The Battery Brain is a small device and can be easily installed on the plus pole of the battery. A ground wire connects the Battery Brain to the negative pole (coachwork).



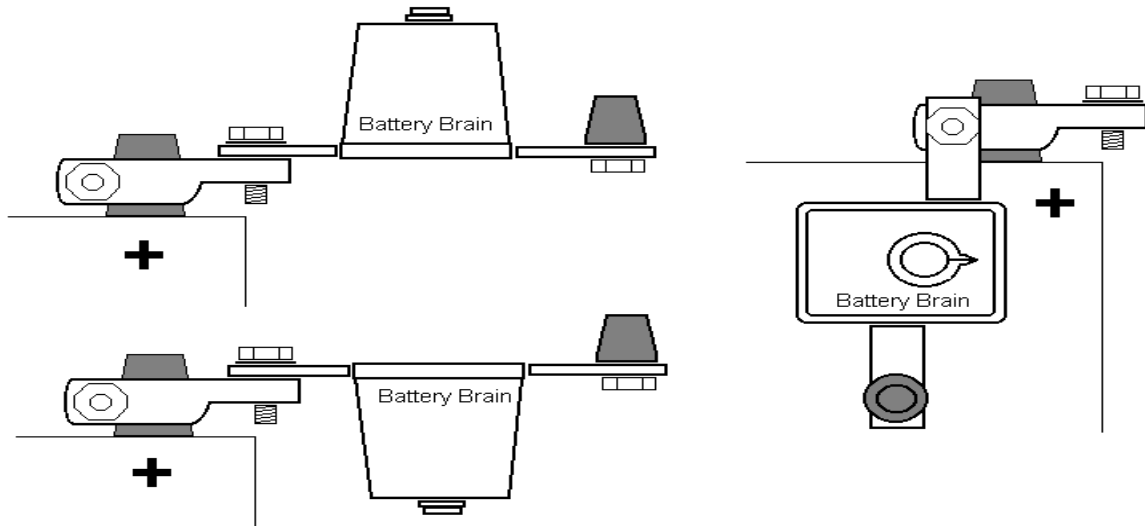
OPERATION INSTRUCTIONS:

When motor is off:

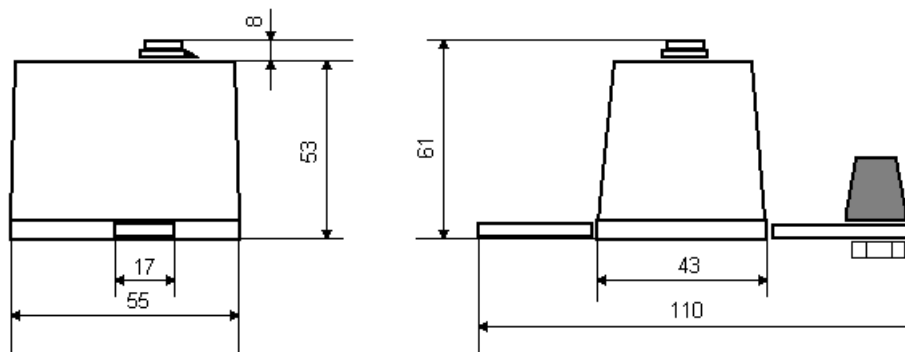
- 1) Disconnect the positive cable from the positive pole.
- 2) Connect that cable to the Battery Brain.
- 3) Set the Battery Brain on the battery positive side.
- 4) Connect the black wire M on the battery negative side.
- 5) Connect the supply wire on the Battery Brain C pole.
- 6) **Warning: please make sure the knob on the Battery Brain is in the ON position.**

NOTE: If the warning signal of 'no charge' in your vehicle turns ON, move the knob on the Battery Brain to the OFF position, and get help with your charging problem.

Different ways to install the Battery Brain:



Dimensions:



WEIGHT: 350 gram.

Type I (manual control version) – Automotive version



- Device with automatic disconnect and manual restart.
- Battery voltage level is continuously monitored. The battery will be automatically disconnected when the voltage drops below the pre-set level, leaving enough energy in the battery.
- Pressing the knob on the Battery Brain, resumes the contact between the battery and the electrical system.
- Normal use, with the knob in position ON.
- **WARNING!** When the Battery Brain is in the OFF position, the circuit is isolated and in case of leaks, the battery will totally discharge.

Specifications:

- Working voltage Mod. B00120: 12V
- Disconnect threshold: 11,9V
- Delay: about 30 sec.

Type II (remote control version) – Automotive version



- Device with automatic disconnect and manual restart.
- Battery voltage level is continuously monitored. The battery will be automatically disconnected when the voltage drops below the pre-set level, leaving enough energy in the battery.
- Activating the remote control for 4-5 seconds, will resume the contact between the battery and the electrical system.
- The contact can be resumed also by pressing the knob on the Battery Brain.
- In normal use, the knob on the Battery Brain is in the ON position.
- **WARNING!** When the Battery Brain is in the OFF position, the circuit is isolated and in case of leaks, the battery will totally discharge.
- The remote control is a standard type and a replacement or additional one, can be acquired easily.

Specifications:

- Working voltage Mod. BEU120: 12V
- Disconnect threshold: 11,9V
- Delay: about 30 sec.
- Frequency receiver and transmitter RC USA: 315 mhz
- Frequency receiver and transmitter RC EUROPE: 433,9 mhz

Type II (remote control version) – Marine version



- Device with automatic disconnect and manual restart.
- Battery voltage level is continuously monitored. The battery will be automatically disconnected when the voltage drops below the pre-set level, leaving enough energy in the battery.
- Activating the remote control for 4-5 seconds, will resume the contact between the battery and the electrical system.
- The contact can be resumed also by pressing the knob on the Battery Brain.
- In normal use, the knob on the Battery Brain is in the ON position.
- **WARNING!** When the Battery Brain is in the OFF position, the circuit is isolated and in case of leaks, the battery will totally discharge.
- The remote control is a standard type and a replacement or additional one, can be acquired easily.

Specifications:

- Working voltage Mod. MEU120: 12V
- Disconnection threshold: 11,9V
- Delay: about 30 sec.
- Frequency receiver and transmitter RC USA: 315 mhz
- Frequency receiver and transmitter RC EUROPE: 433,9 mhz
- Dual silicon protection on electronics and electromechanical parts.

TECHNICAL SPECIFICATIONS

- Continuous working current: 200 A
- Short working current: 1000 A per 5 seconds
- Working temperature: - 30° + 85° C°
- Current draw, in function: < 15 mA
- Current draw, battery in OFF position: < 5 mA
- Working Range 12 volt models: 8 – 18 volts
- Protection level: IP 44
- Contacts: Silver-plated copper

WARNING

- Time to wait for reset: 3 sec.
- OFF position switches off the Battery Brain.
- Restart the Battery Brain by turning the knob to ON position .
- Take care of the correct connections, particularly of the GROUND.

CERTIFICATIONS

- Storage temperature $-28^{\circ} +80^{\circ} C^{\circ}$ performed by IBM* Vimercate Lab.
- Drop test performed by IBM* Vimercate Lab.
- Vibration test performed by IBM* Vimercate lab.
- Salty Fog test 96 h as per ASTM B 117-95 performed by IBM* Vimercate Lab.
- Water Spray test as per IP 4-4 performed by IBM* Vimercate Lab.
- Field test –20 pcs monitored in field starting from Nov. '97

* IBM Vimercate Lab. is a Certificate Lab by SINAL

- Receiver and Transmitter compliance with I-ETS 300 220, certified by TUV
- Battery Brain EMC Test compliance with ETS 300-683, certified by TESEO* Spa (report 98145 dtd. 23.10.98)

* TESEO Spa is an Accredited Lab.

- Flammability for plastic material: UL 94 V-0
- Printed circuit board conforms to: UL 94 V-0
- Battery Brain manufacturer: UNI EN ISO 9002 approved

PATENT: NR. 09/481.669 USA

BUNDESAMT FÜR POST UND TELEKOMMUNIKATION

Federal Office For Posts And Telecommunications



**EG-BAUMUSTERBESCHEINIGUNG
EC TYPE-EXAMINATION CERTIFICATE**

Registrier-Nr.: B133060J **Anlage(n):** 1
Registration no.: **Annex(es):**

Benannte Stelle: Bundesamt für Post und Telekommunikation
Notified body:

Bescheinigungsinhaber: BESTIDEA
Certificate Holder: Via C. Cantu' 15/C
I-ALBAVILLA -CO-

Produktbezeichnung: HPA 933
Designation of product:

Produktbeschreibung: Funkanlage geringer Leistung
Product description:

Diese Bescheinigung ist erstellt in Übereinstimmung mit der Richtlinie des Rates 89/336/EWG (Amtsblatt der Europäischen Gemeinschaften Nr. L 139 v. 23. Mai 1989) und gilt nur in Verbindung mit der/den beigefügten Anlage/n.

This certificate is issued according to the directive of the council 89/336/EEC (Official Journal of the European Communities L 139 from 23. May 1989) and can only be used in conjunction with the above mentioned annex(es)

Ort, Datum: Saarbrücken, 15.10.1997
Place, Date:

Im Auftrag:
On Behalf of
the Directory:


Hans-Werner Bies





LATI INDUSTRIA TERMOPLASTICI S P A
 V/O SPRINGBORN LABORATORIES INC
 MR A J KARSZES
 SPRINGBORN CENTER
 ENFIELD CT 06082

REC'D FEB 6 1996

Your most recent listing is shown below. Please review this information and report any inaccuracies to the UL Engineering staff member who handled your Assignment.

QMF22 January 29, 1996
 Component - Plastics

LATI INDUSTRIA TERMOPLASTICI S P A		E54080 (M)									
		(A038-cont. from A030 card)									
KELON B FR H CEG/ 250V0	All	0.75	94V0	140	120	140	0	0	—	—	—
		1.5	94V0	140	120	140	0	0	—	—	—
		3.0	94V0	140	120	140	0	0	0	8	2
KELON B FR H2 CEG/500-VOCT3	All	0.75	94V-1	—	—	—	—	—	—	—	—
		1.2	94V0	—	—	—	0	0	—	—	—
		3.0	94V0	—	—	—	0	0	—	—	0
Copolymer polyamide (PA6/66), Type 6/66 nylon, furnished in the form of pellets.											
→ Lactamid 66 H2-V0	All	0.71	94V0	140	95	110	4	0	—	—	—
		1.8	94V0	140	95	110	3	0	—	—	—
		3.0	94V0	140	95	110	2	0	0	8	0

Reports: October 9, 1985; May 9, 1994; June 13, 1996.

Replaces E54080A035 dated January 30, 1995. (Cont. on AD40 card)
 #8170001 77047 Underwriters Laboratories Inc. 011/022271
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LATI EXPORT

30/01 98 EN 13:51 FAX 0039 332 408335

TESEO S.P.A.C.E.	CONFORMANCE TEST REPORT	
EMC TESTING ACCREDITED LABORATORY	Doc. n.: 98145 Total pages: 50	Cover Page 1/2
EQUIPMENT UNDER TEST: Battery Brain s/n 001		

TESEO S.p.A.
technologies and systems on electronics and optics

CONFORMANCE TEST REPORT

Doc. n. 98145

issued October 23rd, 1998

for

EMC TESTING

According to: *prETS 300 683 - January 1997*

Performed for: *SACE s.r.l.*

Equipment Under Test: *Battery Brain s/n 001*

Test laboratory manager: *Andrea BUCZKOWSKY*

Torino, *October 23rd, 1998*

Signature: *Andrea Buczkowsky*

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This document has been printed in original on paper reporting the TESEO S.P.A.C.E. logo in colour.

Date: October 23 rd , 1998	revision: 0
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Accessories Kit :

Standard clamp



Extension kit



Remote controls spare parts



F.A.O. (Frequently Asked Questions)

1. How does the **Battery Brain** work?

If you left the car lights on, an open door, interior lights, the car radio, or there is an unknown shortage in the electrical system, the **Battery Brain** will disconnect the load when the battery energy drains beneath a certain level. This way the **Battery Brain** prevents the vehicle battery from being drained under the energy level needed to restart the engine.

2. How long it takes for the **Battery Brain** to disconnect?

It depends on the battery's condition. If it is a used battery, the **Battery Brain** will disconnect the load from the battery in a shorter time than in a new battery. It also depends on the amount of load that was left on, while the engine was not running. In any case it will save the driver from getting stranded without the ability to restart the car. Furthermore the **Battery Brain** will not disconnect the load from the vehicle while the engine is in normal operation.

3. Will the **Battery Brain** disconnect the alarm devices?

All alarm devices can be connected directly to the positive post on the battery. For convenience, there is a special connector on the **Battery Brain** positive side. When the **Battery Brain** disconnects the load from the battery, the alarm, in this instance, will still be energised. In general, without the **Battery Brain**, the battery can drain completely and the alarm cannot work anyway by preventing this from happening in the first place.

4. What is the energy consumption of the **Battery Brain**?

The **Battery Brain** is using 10 milli-amps in normal operation. After disconnecting the load from the battery, the consumption is virtually to zero.

5. What type of vehicle can use the **Battery Brain**?

All vehicles, from passenger cars, and light trucks, motorcycles, boats, handicap vehicles, etc.

6. What is the life expectancy of the **Battery Brain**?

The **Battery Brain** uses state of the art technology and operation will last for many years. The manufacturer warranty is one years.

7. What other advantages does the **Battery Brain** provides?

The **Battery Brain** provides protection, when there are too many electricity consumers such as air condition, refrigerators, heaters, car sound system, outside lights for taxis and buses etc., that drain the car battery, making it difficult for the alternator to fill up the battery to the level required even while the engine is running, causing the car engine to stop. The **Battery Brain**, connected to the specific consumer will detect the battery drainage and **will disconnect that specific consumer ONLY**, allowing the energy level in the battery to rise again to the normal level. The isolated consumer can be reconnected and reactivated within 10 minutes by pressing the **Battery Brain** remote control, while driving.