Cellocator EC Power Surge Protector

Product Overview

Cellocator Division
Pointer Telocation Ltd.

Proprietary and Confidential

Version 1.2

Revised and Updated: March 22, 2017

POINTER

Pointer Telocation Ltd. 14 Hamelacha St., Rosh Ha'ayin 48091, Israel • Tel: 972-3-5723111 • Fax: 972-3-5723100 • www.pointer.com

Legal Notices

IMPORTANT

1. All legal terms and safety and operating instructions should be read thoroughly before the product accompanying this document is installed and operated.

2. This document should be retained for future reference.

3. Attachments, accessories or peripheral devices not supplied or recommended in writing by Pointer Telocation Ltd. may be hazardous and/or may cause damage to the product and should not, in any circumstances, be used or combined with the product.

General

The product accompanying this document is not designated for and should not be used in life support appliances, devices, machines or other systems of any sort where any malfunction of the product can reasonably be expected to result in injury or death. Customers of Pointer Telocation Ltd. using, integrating, and/or selling the product for use in such applications do so at their own risk and agree to fully indemnify Pointer Telocation Ltd. for any resulting loss or damages.

Warranty Exceptions and Disclaimers

Pointer Telocation Ltd. shall bear no responsibility and shall have no obligation under the foregoing limited warranty for any damages resulting from normal wear and tear, the cost of obtaining substitute products, or any defect that is (i) discovered by purchaser during the warranty period but purchaser does not notify Pointer Telocation Ltd. until after the end of the warranty period, (ii) caused by any accident, force majeure, misuse, abuse, handling or testing, improper installation or unauthorized repair or modification of the product, (iii) caused by use of any software not supplied by Pointer Telocation Ltd., or by use of the product other than in accordance with its documentation, or (iv) the result of electrostatic discharge, electrical surge, fire, flood or similar causes. Unless otherwise provided in a written agreement between the purchaser and Pointer Telocation Ltd., the purchaser shall be solely responsible for the proper configuration, testing and verification of the product prior to deployment in the field.

POINTER TELOCATION LTD.'S SOLE RESPONSIBILITY AND PURCHASER'S SOLE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE THE PRODUCT HARDWARE, SOFTWARE OR SOFTWARE MEDIA (OR IF REPAIR OR REPLACEMENT IS NOT POSSIBLE, OBTAIN A REFUND OF THE PURCHASE PRICE) AS PROVIDED ABOVE. POINTER TELOCATION LTD. EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, SATISFACTORY PERFORMANCE AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL POINTER TELOCATION LTD. BE LIABLE FOR ANY INDIRECT, SPECIAL, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOSS OR INTERRUPTION OF USE, DATA, REVENUES OR PROFITS) RESULTING FROM A BREACH OF THIS WARRANTY OR BASED ON ANY OTHER LEGAL THEORY, EVEN IF POINTER TELOCATION LTD. HAS BEEN ADVISED OF THE POSSIBILITY OR LIKELIHOOD OF SUCH DAMAGES.

Intellectual Property

Table of Contents

1 Introduction

1.1 Scope and Purpose

The purpose of this document is to describe the features, capabilities and installation instruction for the **FL0018 EC Power Surge Protector**. It is intended for service providers' managers, customer support, and sales personnel.

1.2 Abbreviations

Abbreviation	Description
EC	Economy

1.3 References

All the reference documents listed in the following table can be downloaded from the Knowledge Base section of the Cellocator website (www.cellocator.com).

#	Reference	Description
1.		
2.		

1.4 Revision History

Version	Date	Description
1.0	02/02/2014	Initial version
1.1	23/11/2016	Removal of the discontinued FL0014
1.2	22/03/2017	Updated image

2 Product Description

2.1 Overview

The **FL0018 EC Power Surge Protector** protects the Cellocator unit from high voltage spikes by cutting off the power when high voltage spikes are detected.

The EC Power Surge Protector utilizes an electrical circuit housed in shrink with a pair of wires connected to the vehicle power source and two wires connected to the Cellocator unit's Power and Ground.

The EC Power Surge Protector should be applied between the vehicle's power source and the protected Cellocator unit whenever one of the conditions described below is applicable, or when the native compliance of Cellocator devices with E-Mark standards for aftermarket ESA (ISO-7637 pulse type 1-4) is insufficient for some other reason. The EC Power Surge Protector was designed to protect all Cellocator units.

It is recommended to use the EC Power Surge Protector in vehicles where extreme electrical disturbances are expected. Possible scenarios are:

- Vehicles with poor voltage regulation systems.
- Whenever there is a doubt about the vehicle voltage disturbances.
- When there is a connector between the protected device and the power source with frequent connections and disconnections (like in a truck / trailer), the protection circuit should be installed between the connector and the device.

2.2 Features

- Low cost
- Convenient, easy installation
- Compatible with Cello and CR families
- ISO-7637 immunity standards compliant

2.3 Wire Description

The EC Power Surge Protector input wires are short and thick:

- The Input VCC (+) wire is **red**.
- The Input GND (-) wire is **black**.

The output wires are long and thin:

- The Output VCC (+) wire is **red**.
- The Output GND (-) wire is **black**.

,

3 Installation Instructions

The Input GND (-) wire should be connected to the car ground or car battery (-).

The Input VCC (+) input should be connected to the car 12/24V source or battery (+).

The Output GND (-) should be connected to the protected device GND (-) input.

The Output VCC (+) should be connected to the protected device VCC (+) input.

NOTES:

- Incorrect connections may lead to malfunction and damage.
- The Power Surge Protector should be installed in addition to the required fuse.

---

4 Technical Specifications

Electrical Ratings	Value
Operating temperature range	-40°c to 70°c
Storage temperature range	-40°c to 85°c
Humidity	95% non-condensing
Ingress protection	IP 50
Operating voltage range	9V – 36V
Provides immunity for pulses according to ISO-7637-2:2011	Yes
Provides immunity according to ISO-16750 - Load Dump pulse	96V
Maximum momentary reverse voltage protection	600V
Maximum self-current consumption	1 mA
Reverse polarity protection	Yes
RoHS compliant	Yes
Wire Specifications	
Input wires dimensions	10 cm, 16 AWG
Output wires dimensions	50 cm, 22 AWG
UL 1015 compliant	Yes