

# **ITSLUX Integration Manual**

Revision 1.0



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**Pumatronix Equipamentos Eletrônicos Ltda.**

Rua Bartolomeu Lourenço de Gusmão, 1970. Curitiba, Brasil

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## Change History

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Date	Revision	Content updated
06/28/2022	1.0	Initial Version

## Overview

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This document aims to guide the developer in using the operation interfaces available for the ITSLUX illuminator, which make it possible to configure the behavior of the device and to read the current state of the equipment. This document details the options available through the ITSCAM 400 web interface and the RS-232 serial interface.



*ITSLUX model I3016X*

## Summary

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## 1. Supervision and configuration using RS-232

When using the RS-232 connection for communication with ITSLUX, the following features are available:

- 1) Reading of the model used;
- 2) Real-time operating temperature information;
- 3) Voltage statistics in capacitors;
- 4) Identification of burnt LEDs;
- 5) Confirmation of firing;
- 6) Sending a trigger request;
- 7) Configuration of the behavior of the indicative LEDs (red and yellow);
- 8) Adjust the maximum time that the illuminator will be activated, respecting the protection time and maximum activation time. This disassociates the shutter of the connected ITSCAM device with the equipment's operating time;
- 9) It allows the configuration of the power of the multiple shots, the first one uses 100% of the capacity of the product and the others are variables from 1 to 100%.

## 2. Real-Time Illuminator Status Information

Illuminators send information about their working state in real time using serial output. Thus, the analysis can be done remotely with a structure that reads and transmits the data or directly by ITSCAM, which makes this data available over the network.

It can be visualized remotely and in real time if the operating temperature of the illuminator is within acceptable limits and the equipment diagnosis. This diagnosis contains possible electrical problems such as internal short circuit, the voltage level of the capacitors and whether there are burned LEDs as well as their location.

Bit	Meaning
7	Hardware defect. Refer the Product to Pumatronix Technical Assistance
6	
5	
4	
3	
2	Incorrect operating voltage
1	Product operating with excess temperature
0	Row(s) not triggered on shot

### Communication Protocol

The ITSLUX activates the lighting system immediately upon receipt of a request and, after firing, sends a message with information about the firing and the equipment state.

The communication protocol consists of two Bytes. The first signals the ITSLUX response and corresponds to the value 00h. Information are distributed in the bits of the second Byte as follows:



**Correctly fired shots returns 2 Bytes with a value of 00h.**

List of possible results of the second Byte of the protocol:

2nd Byte Value	Bit								Meaning
	7	6	5	4	3	2	1	0	
00h	0	0	0	0	0	0	0	0	Shot successful
01h	0	0	0	0	0	0	0	1	Not all LEDs are triggered
02h	0	0	0	0	0	0	1	0	ITSLUX operating at high temperature
03h	0	0	0	0	0	0	1	1	LEDs burnt and operating at high temperature
04h	0	0	0	0	0	1	0	0	ITSLUX operating at incorrect voltage
05h	0	0	0	0	0	1	0	1	ITSLUX operating at incorrect voltage and with burnt LEDs
06h	0	0	0	0	0	1	1	0	ITSLUX operating at incorrect voltage and high temperature
07h	0	0	0	0	0	1	1	1	ITSLUX operating with incorrect voltage, high temperature and burnt LEDs
80h	1	0	0	0	0	0	0	0	<b>Defective product. Refer to Pumatronix Technical Assistance with the value received as the reason for the defect</b>
81h	1	0	0	0	0	0	0	1	
82h	1	0	0	0	0	0	1	0	
83h	1	0	0	0	0	0	1	1	
84h	1	0	0	0	0	1	0	0	
85h	1	0	0	0	0	1	0	1	
86h	1	0	0	0	0	1	1	0	
87h	1	0	0	0	0	1	1	1	



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