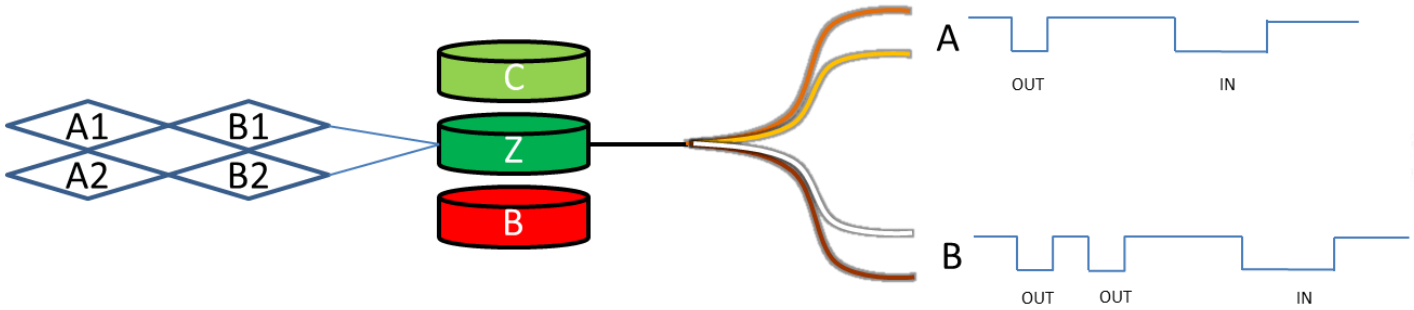
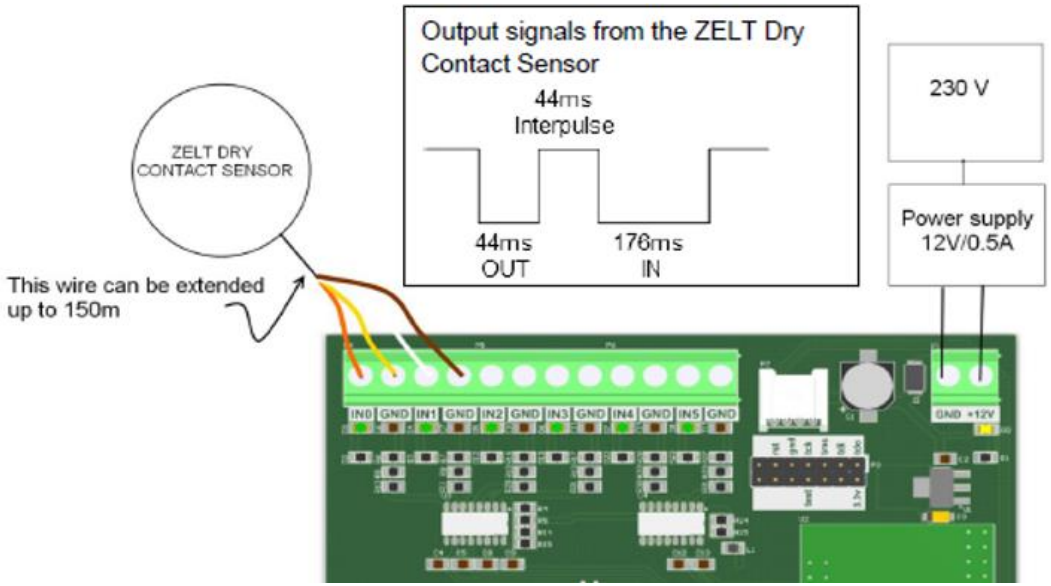
# Caratteristiche tecniche: Dry contact

- L’uscita del contatto secco si trova sempre nel sensore
- Il cavo puo’ arrivare fino a 150m di distanza, nella carta elettronica del pannello
- Distinzione del senso determinata in funzione della durata di chiusura del contatto



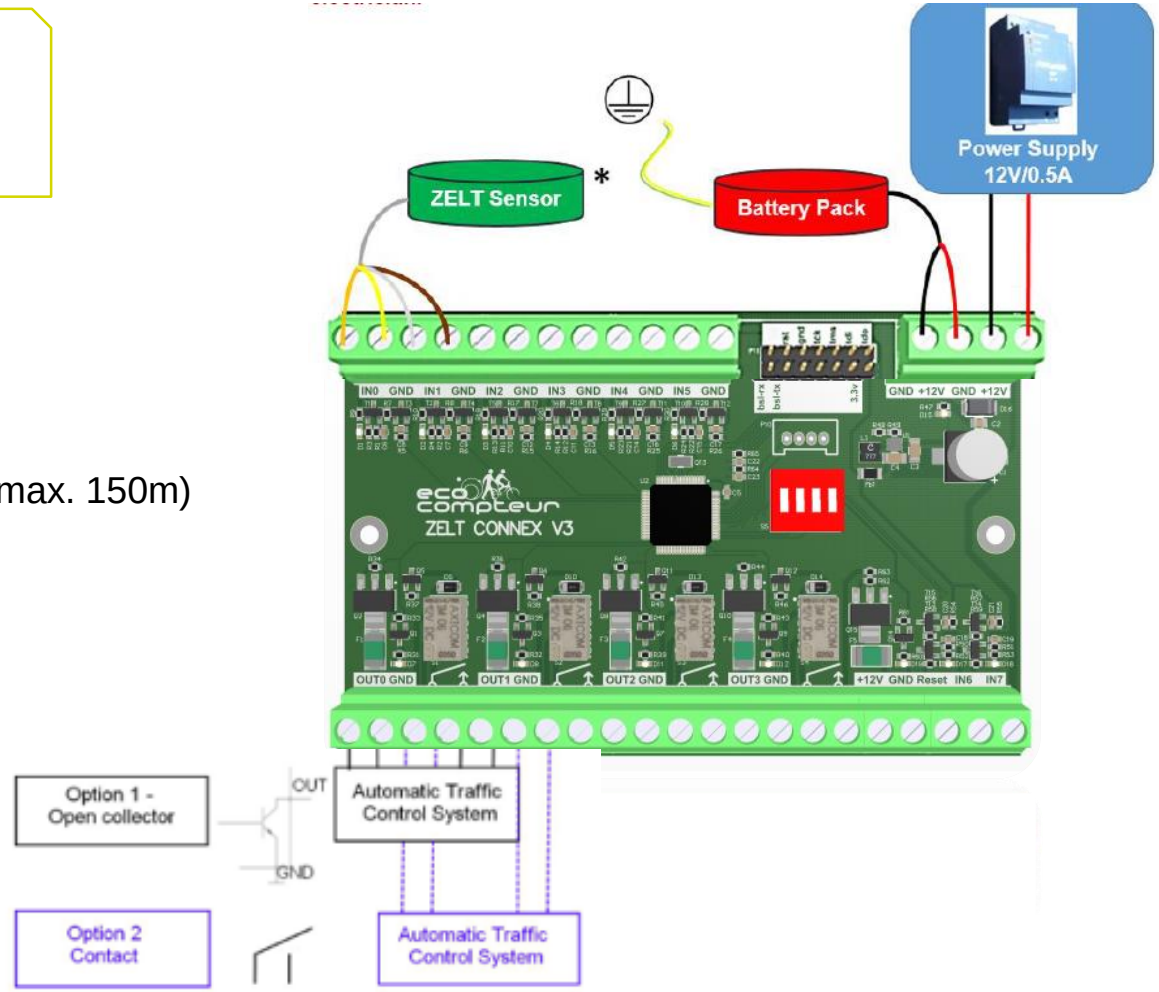



# Interfaccia elettronica Connex

## Prezzo

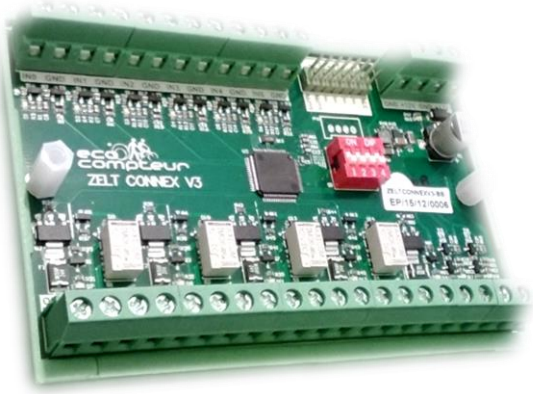
- Interfaccia Connex con Dry Contact + Trasformatore : **495€**

- L’uscita del contatto secco si trova sempre nel sensore
- Interfaccia Connex inserita nel pannello a messaggio variabile (max. 150m)
- Batteria di Backup e trasformatore Dry Contact inclusi



# ELECTRONIC INTERFACE FOR AUTOMATIC TRAFFIC CONTROL SYSTEM

# INITIAL SET-UP




V2.0

# I. CONTENTS

# II. INTRODUCTION

You have ordered an option for real-time traffic count information.
This option makes it possible to connect ZELT Inductive Loops directly to an automatic traffic control system.

Please refer to:

1. The **"ZELT Inductive Loops" installation guide** to know how to install your ZELT Inductive Loops.
2. This **initial set-up sheet** to know how to connect your ZELT Inductive Loops to the automatic traffic control system.

**ZELT systems with direction detection:** you can define the way directional counts are managed using the switch on the CONNEX Box. **You will need to open the CONNEX Box in order to access the switch: make sure to bring a flat-head screwdriver with you.**
For more information, see page 9.

# III. WARNING

**Risk of electric shock!**

All electric connections inside the cabinet must be made by a qualified electrician.

# IV. OPERATION OF YOUR COUNTING SYSTEM


1. The ZELT Inductive Loops detect the wheels of a bicycle and send a signal to the CONNEX Box. 
2. The CONNEX Box analyses the signal and sends it to the automatic traffic control system.
3. The automatic traffic control system converts the signal sent by the CONNEX Box.

# V. TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **Power supply** | 12 V (+/- 10 %) |
| **CONNEX Box no load power consumption** | 1,1 mA |
| **CONNEX Box power consumption with ZELT Loops connected** | 1 or 2 ZELT Loops: 2,6 mA<br>3 or 4 ZELT Loops: 4,1 mA |
| **CONNEX Box dimensions** | 113 x 83 x 43 mm (4.5'' x 3'' x 1.5'') |
| **Max distance between cabinet and ZELT Sensor** | 150 m* (492') |

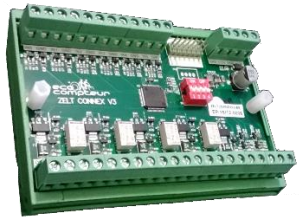
*The standard cable is 80 cm (2.5') long. If you want to install the ZELT Sensor at a higher distance, make sure that you use a stranded wire.

Recommended cable: Number of conductors: 8 / Conductor diameter: 24AWG.

We recommend to double the black and red power supply wires after 70 m (230') in order to avoid potential voltage drops.

# VI. EQUIPMENT DELIVERED

- A **CONNEX Box**



- A **12V Power Supply**

- A **CONNEX Battery Pack**

Specifically designed for the real-time traffic count information option, the CONNEX Battery Pack is powered by the 12V Power Supply delivered.

- In case of a Power Supply failure, an internal battery inside the CONNEX Battery Pack will supply power to the ZELT Dry Contact Sensor.

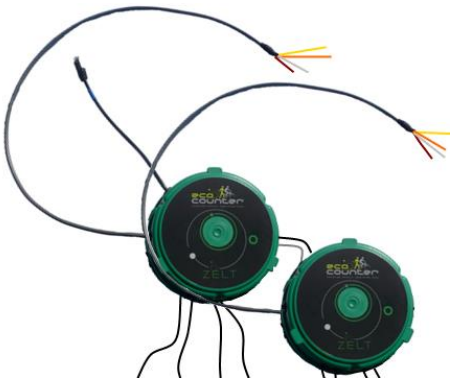
- In case of a Power Supply failure, if you have an Eco-Combo equipped with an active data transmission option, you need to know that the modem will not be powered by the CONNEX Battery Pack.

- The internal battery inside the CONNEX Battery Pack has a one-year battery life in continuous use and it is not rechargeable.

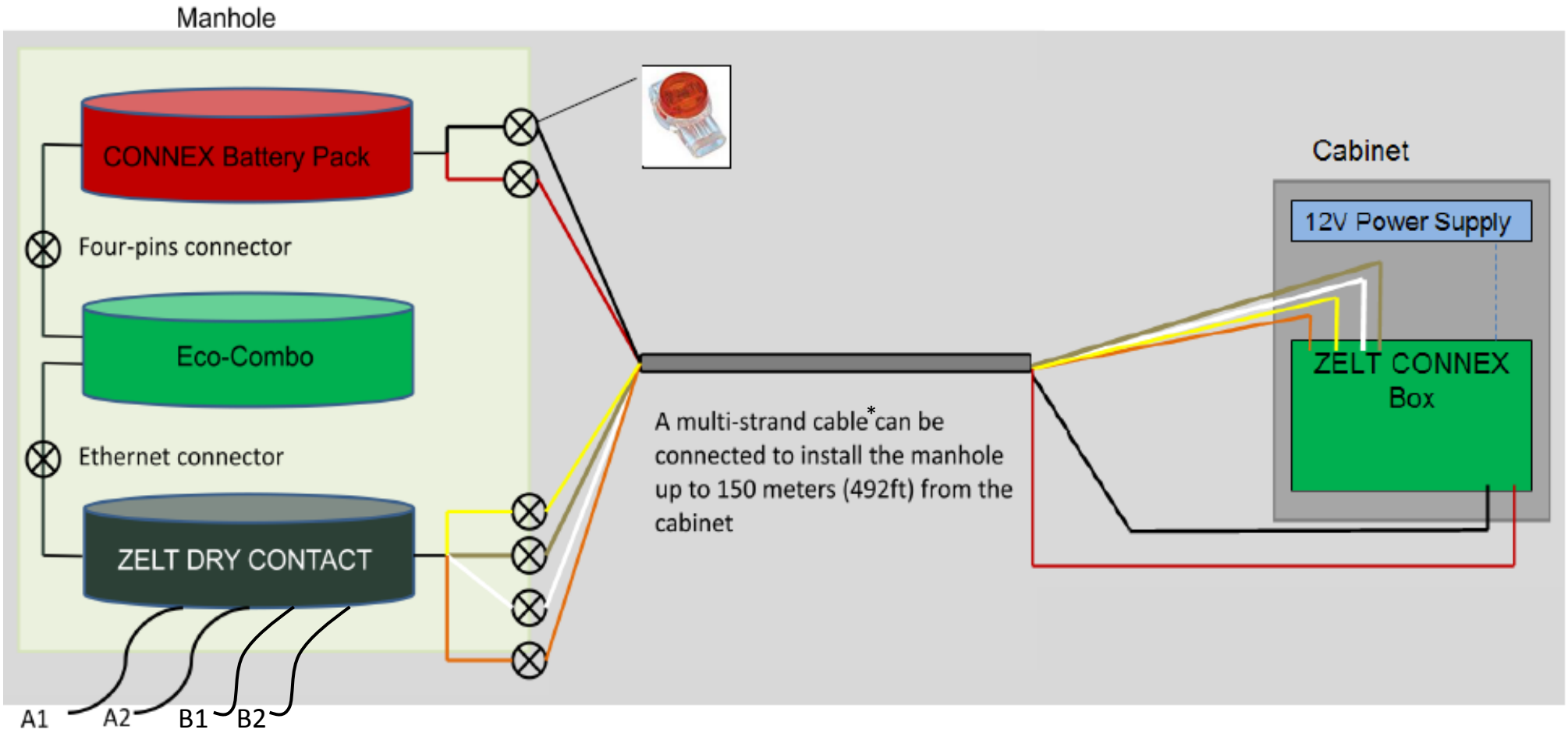
- A **ZELT Dry Contact Sensor**

The ZELT Dry Contact Sensor is equipped with a cable ended with four wires to be connected to the CONNEX Box.

On systems with more than four loops, the ZELT Sensor is as shown:



# VII. CONNECTIONS – OVERALL DIAGRAM



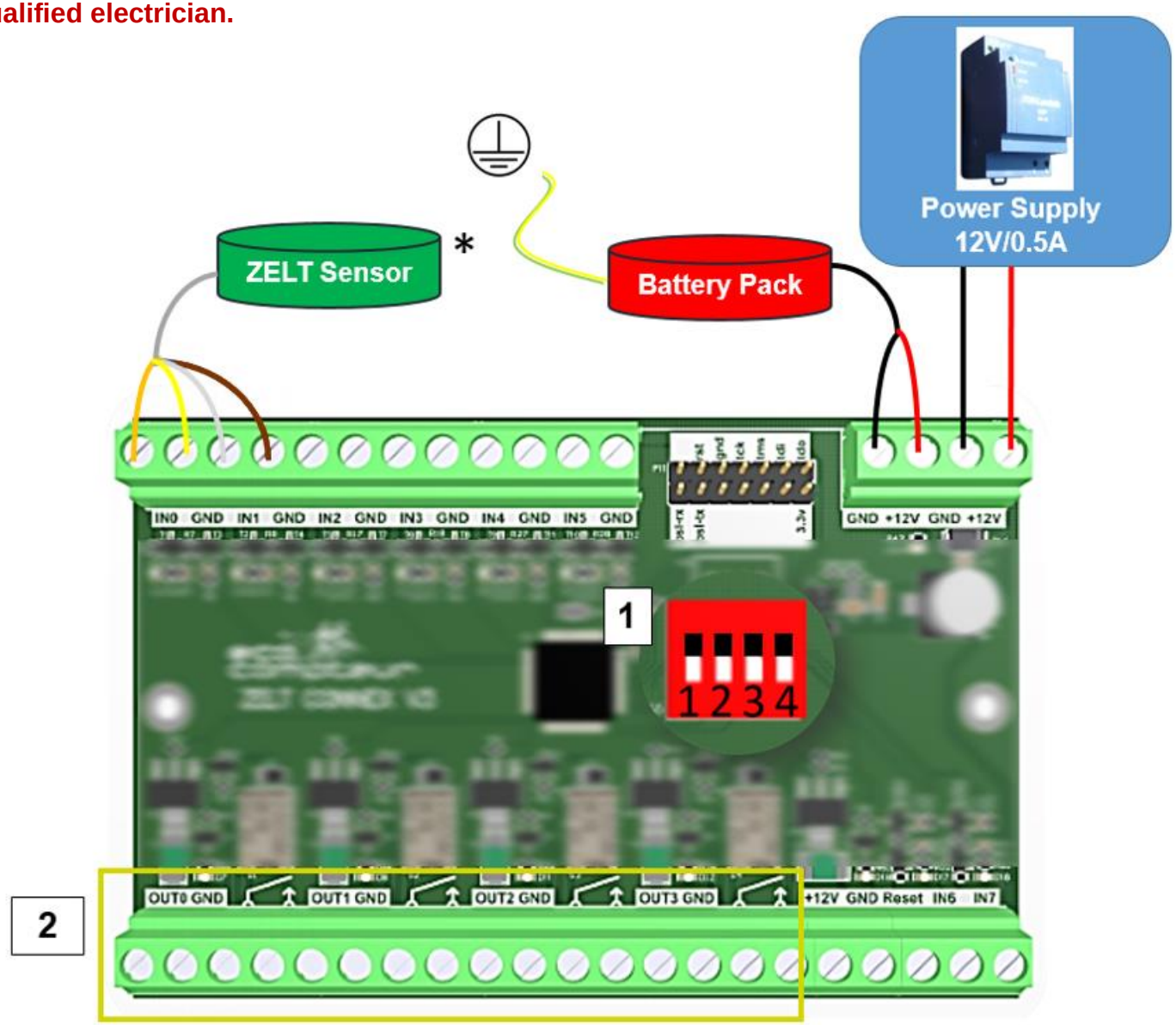

* Recommended cable: Number of conductors: 8 / Conductor diameter: 24AWG. We recommend to double the black and red power supply wires after 70m (230') in order to avoid potential voltage drops.

Four pins connector: 

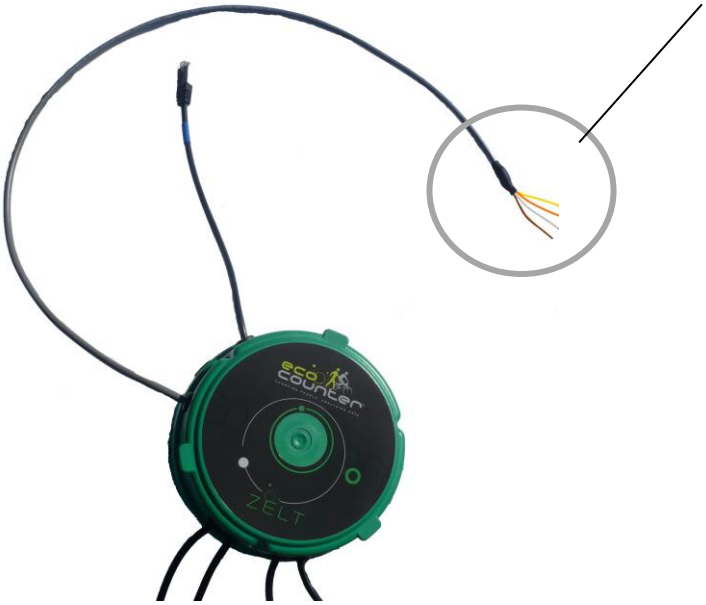
Ethernet connector: 

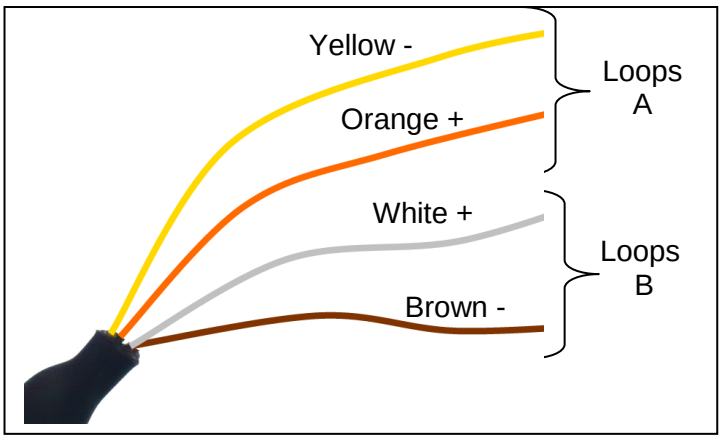
# I. CONNECTIONS INSIDE THE CABINET

**Risk of electric shock! All electric connections inside the cabinet must be made by a qualified electrician.**

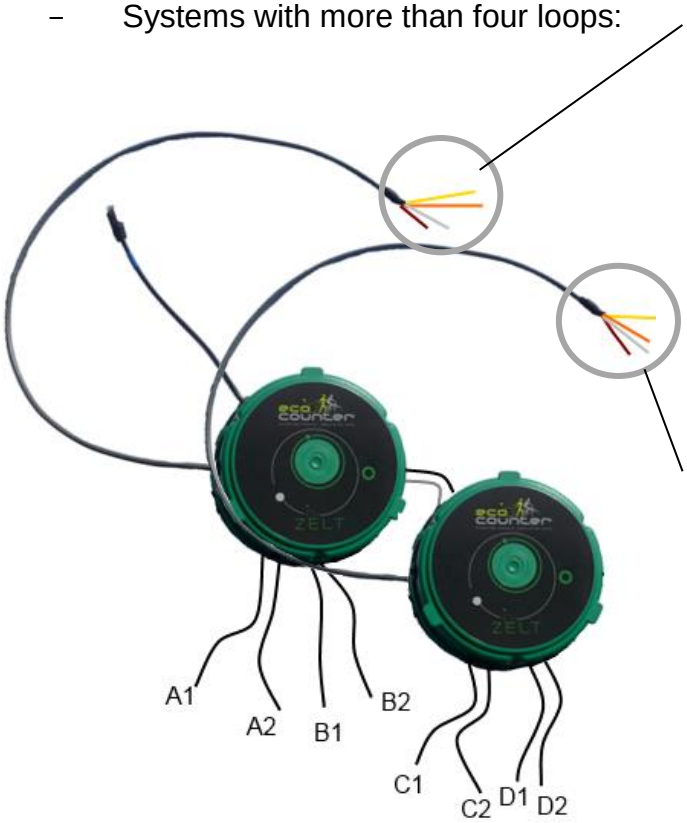


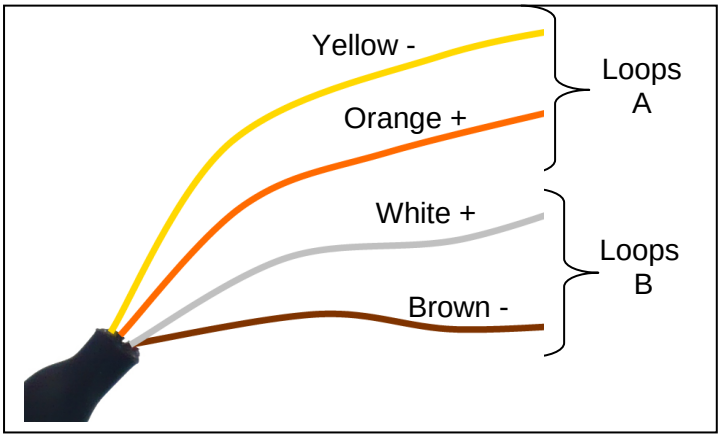
- * Systems with one to four loops:




- Systems with more than four loops:




1

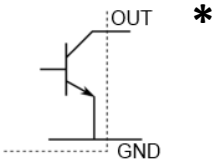
## ▪ Choosing the way directional counts are managed using the switch:

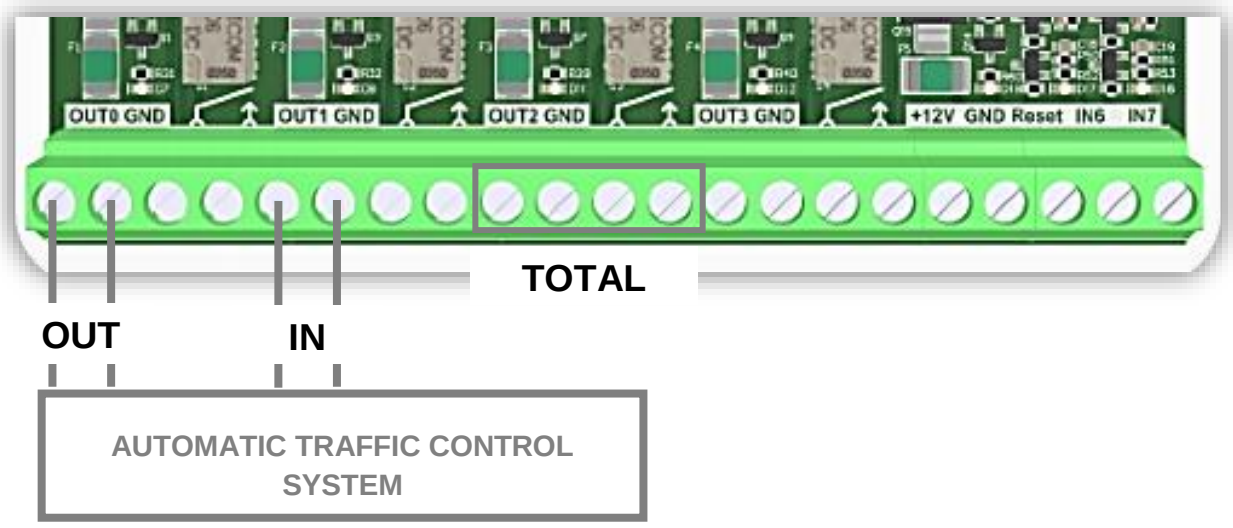
**This section applies only if the ZELT System detects the direction users are moving in.**

| Directional Counts Management | Switch Position |
|---|---|
| **Standard Position**<br>The CONNEX Box outputs IN, OUT and TOTAL counts |  |
| The CONNEX Box inverts IN and OUT output signals |  |
| ZELT Systems with more than 2 ZELT Loops: the CONNEX Box triggers a different output for an IN count on loops A than for an IN count on loops B, and for an OUT count on loops A than for an OUT count on loops B. |  |

2

## ▪ Interfacing with the automatic traffic control system

**Option 1 – Open collector** 

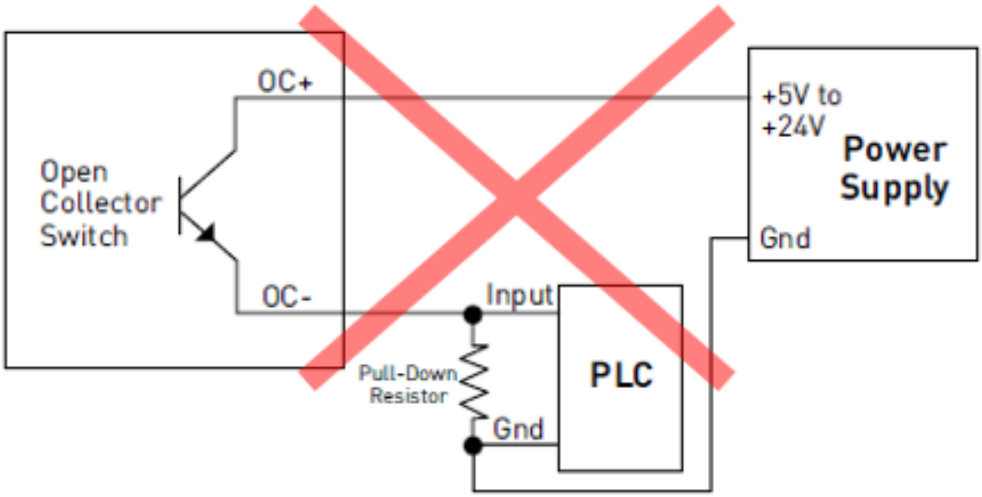



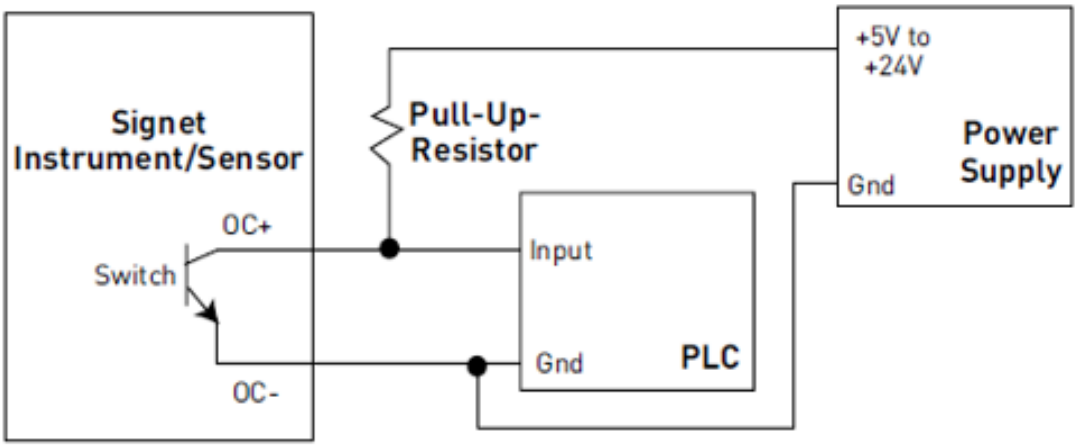

* Make sure to check the polarity of the open collector outputs.

- **OUT outputs specifications:**

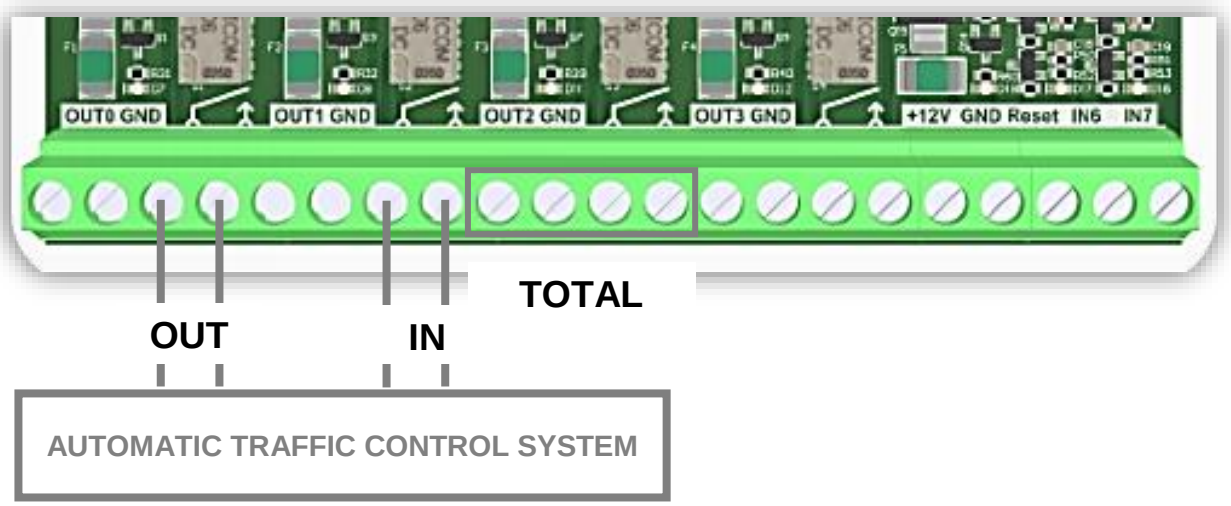
- Voltage: Max 24V
- Current: Max 160mA

- **Electrical connections:**



- **Option 2 – Contact**

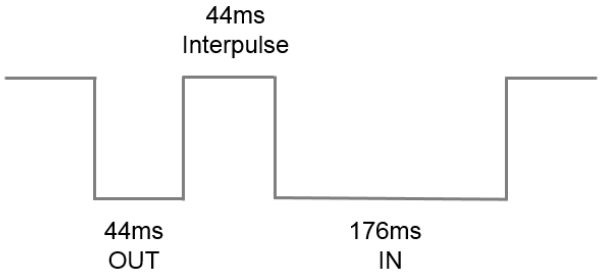



- **Contacts specifications:**

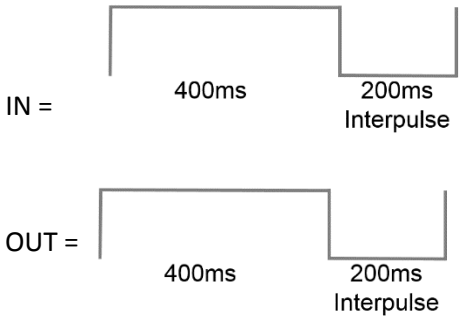
- Voltage: Max 30V
- Current: Max 5A
- MTBF: Minimum $2*10^6$ operations

## ▪ Timing of output signals

Output signals from the ZELT Sensor




Output signals from the Connex Box



## ▪ LEDs triggered by each type of count

- **Switch Position:** 


| Count | Output(s) triggered | | |
|---|---|---|---|
| **IN** | OUT 0 | OUT 1 | OUT 2 |
| **OUT** | OUT 0 | OUT 1 | OUT 2 |

- **Switch Position:** 


| Count | Output(s) triggered | | |
|---|---|---|---|
| **IN** | OUT 0 | OUT 1 | OUT 2 |
| **OUT** | OUT 0 | OUT 1 | OUT 2 |

- **Switch Position:** 


| Count | Output(s) triggered | | | |
|---|---|---|---|---|
| **IN on Loops A** | OUT 0 | OUT 1 | OUT 2 | OUT 3 |
| **OUT on Loops A** | OUT 0 | OUT 1 | OUT 2 | OUT 3 |
| **IN on Loops B** | OUT 0 | OUT 1 | OUT 2 | OUT 3 |
| **OUT on Loops B** | OUT 0 | OUT 1 | OUT 2 | OUT 3 |

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