



KORSMIT

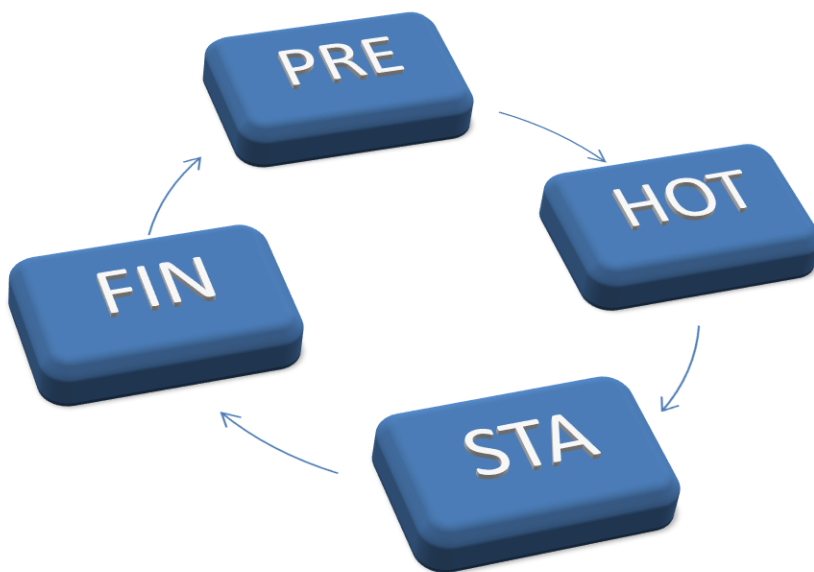
Rally Electronics

Installation Guide Alma 1 XL and GPS

Version 3.0.3

Korsmit Rally Electronics

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1.Installation

Mount Tripmeter mechanically:

- Loosen the four hexagonal screws on the corners of the tripmaster.
- Remove the front plate where all electronics. Go gently with a small screwdriver between the housing and the front plate or in the hole of a screw (not too deep) to the front plate. Or keep it upside down and let gravity do her job but do not forget to catch the front plate.
- Drill a hole in the case where you want to guide all the cables inside. Please note the higher components of the trip meter especially if you use 1 stiff cable.
- Nice is to use a standard cable gland. While the needed gland is different for every situation/amount of cables and type of cables used, they are not included. If everything goes nicely behind the dashboard, and there is not too much "pull" on the cables, just a hole with a ty-rap does the job also. For the off-road version you have to use a splashproof connection ofcourse.
- Use thinner cables. The power consumption is very low, so thick cables are not needed. A lot of thick cables makes it more difficult inside the enclosure. For the signals (all wires except the power supply and GND) at least 0,14 mm² and for the power supply (+ 12V and GND) minimum 0,36 mm². See for electrical instruction, paragraph: Electrical Setup.
- Attach the housing to the desired place. For this you can choose your own method and just drill holes in the housing where you want to mount it. Make sure that any bolt head inside the enclosure does not exceed 8 mm. In practice, one takes a M5 or M6 nut with a body ring. For the offroad version, you have to keep in mind that themounting method is splashproof.
- Guide your cables inside the housing and cut them at about 10 cm from where they enter the housing. (longer if you enter completely at 1 side)
- Strip the cables and attach the connectors to the cables according to the diagram below.
- Push the connectors gently to their sockets on the circuit board.
- Place the front back with the 4 hex screws in the corner
- Enjoy it...

Electrical Connections:

The tripmaster requires at least 3 connections to function properly:

12V (red) 24 V on request (colours applicable only to installation by KRE)		Connect to a constant power supply of 12Volt. If you have a main power switch that you cut off during the service, it may be helpful to connect the Tripmaster before this main switch. Place in this case a additional fuse as close as possible to the battery. Check this with your own rules and regulations if this is allowed!!
GND (Black)		Connect it to the ground in your vehicle. In most cases, this is the body of your vehicle.

Puls counter (Yellow)		This can be connected to different puls generators:
	Electronic	<ol style="list-style-type: none"> 1. Connect this to the cable connection between the speedometer unit and the Speed sensor. 2. Very modern cars might have a special speedo signal output (for audio, cruise control, etc)
	Mechanical cable rotation sensor.	<ol style="list-style-type: none"> 1. Install the sensor as described in its manual 2. Connect its red wire to 12 Volt exit at tripmaster (see tripmaster connections). 3. Connect the black wire to the GND at tripmaster (see tripmaster connections). 4. Connect the white sensor wire to the tripmaster sensor input. (see tripmaster connections).
	Pulssensor-sensor M8	<p>This 3 wire sensor is connected to detect the wheel rotations</p> <p>Connections:</p> <ul style="list-style-type: none"> - GND = Blauw (see tripmaster connections). - Connect the Black sensor wire to the tripmaster sensor input (see tripmaster connections) - 12 Or 24 volt. = Bruin (see tripmaster connections). <p>The sensor should be mounted at 2 mm distance of rotating metal (a head of a bolt or something similar)</p> <p>For more than 2 pulses in 1 wheel rotation, we have the High Resolution version.</p>
	Snelheids-sensor M12	<p>This 3 wire sensor is connected to detect the wheel rotations</p> <p>Connections:</p> <ul style="list-style-type: none"> - GND = Blauw (see tripmaster connections). - Connect the Black sensor wire to the tripmaster sensor input (see tripmaster connections) - 12 Or 24 volt. = Bruin (see tripmaster connections). <p>The sensor should be mounted at 4 mm distance of rotating metal (a head of a bolt or something similar)</p> <p>For more than 1 pulse in 1 wheel rotation, we have the High Resolution version.</p>

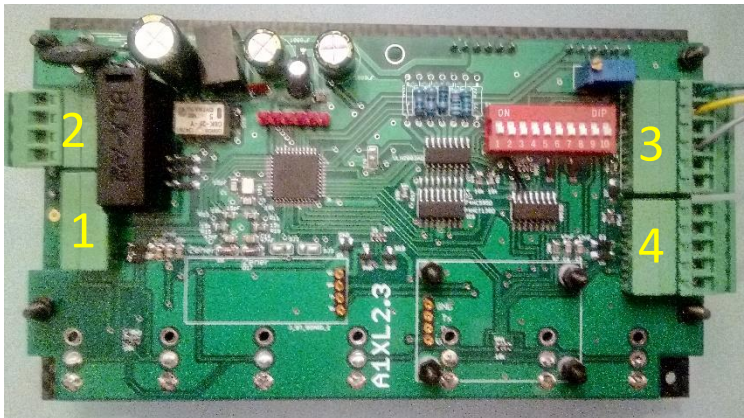
Extra Connections:

Reset Trip (groen)		<p>Connect this connection to 1 or several foot pedals or push buttons. Every Normally Open puls button will do the job.</p> <p>Sluit deze draad aan op een drukknop of voetpedaal. Elke willekeurige NO (Normally Open) puls-schakelaar voldoet. Meerdere kunnen parallel worden aangesloten.</p> <p>Sluit deze draad aan op een positie van de schakelaar. Verbind de andere pool van de schakelaar met de GND. (carrosserie van het voertuig)</p>
Stop Stopwatch (blauw)		(zie Reset trip)
Achteruit 1		<ol style="list-style-type: none"> 1. Tap het achteruitrijlichtsignaal af tussen de schakelaar en het achteruitrijlicht. 2. Sluit deze aan op de achteruitrijpoort.
Achteruit 2		<ol style="list-style-type: none"> 1. Plaats een schakelaar. Een tuimelschakelaar of moment schakelaar

(overbodig, kan ook in software)		<ol style="list-style-type: none"> 2. Sluit 12 Volt aan op een contact van de schakelaar. 3. Sluit het andere contact aan op deze de achteruitrijpoort.
Extern Display (s)		<ol style="list-style-type: none"> 1. Sluit de rode draad van het externe display op de 5Volt uitgang van de tripmeter 2. Sluit de zwarte draad aan op de GND van de tripmeter (of desnoods elke willekeurige GND) 3. Sluit de signaaldraad van het extern display op het extern display uitgangssignaal van de tripmeter 4. Indien meerdere externe displays worden aangesloten worden deze draden parallel op deze 3 uitgangen aangesloten.

Electrical connections:

A1XL2.3 (Latest version):



Wire Connections:

Connector 1 => 5 pole



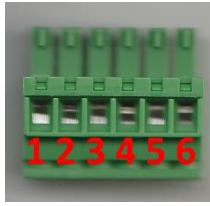
1	2	3	4	5	
GND	12 V	12 V	GND	Speed puls signal	
(Supply) obligatory	(Supply) obligatory	Optional for sensor	Optional for sensor	obligatory	

Connector 2 => 4 pole



1	2	3	4
Stop Stopwatch	Reset trip	GND	Reverse 12V
Optional	Optional	Optional	Optional

Connector 3=> 6 pole



1	2	3	4	5	6
5V (Switched)	Signal to external display	GND	Configurable	Configurable	Configurable
Optional for external display(s) and Bluetooth	Optional for external display(s)	Optional for external display(s), GPS (Black Wire) and Bluetooth	Optional	Optional	Optional

Connector 4=> 5 pole



1	2	3	4	5	
GND	12 V	Speed puls signal	5 V (Constant)	Configurable	
Optional for sensor	Optional for sensor	Optional for sensor	Optional for GPS red wire	Optional	


Previous versions:


The version has NO separate GPS anymore. The GPS receiver can be connected to the Tripmeter and the GPS can be selected in the software. This version has the same hardware number as the previous. Everybody with this hardware number can send his tripmeter back for this setup/update.

A1XL2.1 :



Wire Connections:

Connector 1 => 5 pole				
				
1	2	3	4	5
GND	12 V	12 V	GND	Speed puls signal
(Supply) obligatory	(Supply) obligatory	Optional for sensor	Optional for sensor	obligatory

Connector 2 => 4 pole			
			
1	2	3	4
Stop Stopwatch	Reset trip	GND	Reverse 12V
Optional	Optional	Optional	Optional

Connector 3 => 6 pole



1	2	3	4	5	6
5V (Switched)	BT/ Tx	GND	Reset Button	Rx	2nd Reverse 12 V
Optional for external display(s) and Bluetooth	Optional for Bluetooth or GPS (green or blue? wire)	Optional for external display(s), GPS (Black Wire) and Bluetooth	Optional	Optional for Bluetooth or GPS (white or Yellow Wire)	Optional

Connector 4 => 5 pole




1	2	3	4	5	
GND	12 V	Speed puls signal	5 V (Constant)	Signal to external display	
Optional for sensor	Optional for sensor	Optional for sensor	Optional for GPS red wire	Optional for external display(s)	

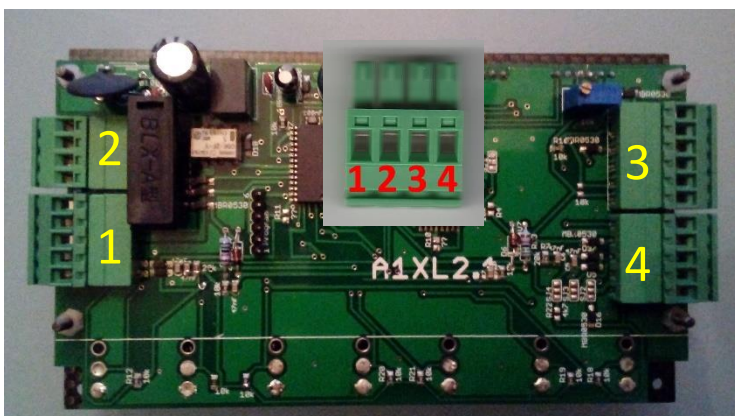
Pay Attention: This section is only valid for Hardware Alma XL 1.3 and up. For older tripmeters, see our old manual. You can find the hardware version on your printed Circuit Board inside the tripmaster.

The GPS Version has some different connections. Please make sure to use the connection for your version: GPS or Non-GPS.


A1XL2.1 Q:


Wire Connections Non GPS Version:

Connector 1 => 5 pole					
					
1	2	3	4	5	
GND	12 V	12 V	GND	Speed puls signal	
(Supply) obligatory	(Supply) obligatory	Optional for sensor	Optional for sensor	obligatory	



3


Connector 3 => 6 pole					
					
1	2	3	4	5	6
5V	Signal to external display	GND	Reset Button	Rx	2nd Reverse 12 V
Optional for external display(s)	Optional for external display(s)	Optional for external display(s)	Optional	Optional	Optional

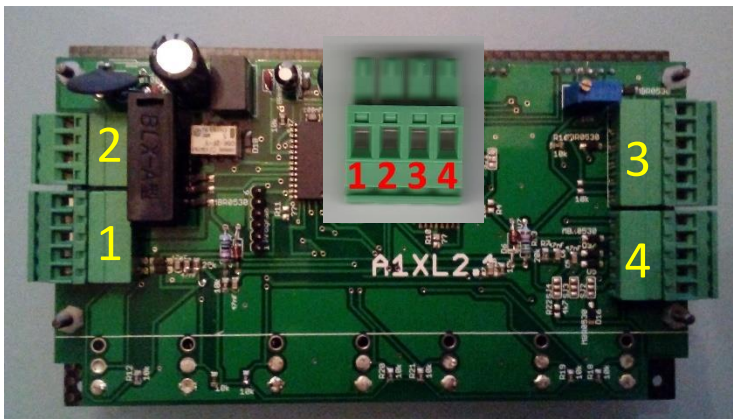
Connector 1 => 5 pole					
					
1	2	3	4	5	
GND	12 V	Speed puls signal	5 V	Future Brake light input	


Optional for sensor	Optional for sensor	Optional for sensor	Optional	Optional	
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A1XL2.1 Q:

Wire Connections **GPS Version:**

Connector 1 => 5 pole					
					
1	2	3	4	5	
GND	12 V	12 V	GND	Speed puls signal	
(Supply) obligatory	(Supply) obligatory	Optional for sensor	Optional for sensor	obligatory	



Connector 3 => 6 pole					
					
1	2	3	4	5	6
5V (Switched)	Signal to external display	GND	Reset Button	GPS Signal	2nd Reverse 12 V
Optional for external display(s)	Optional for external display(s)	Use for GPS Black wire	Optional	Use for GPS White or yellow wire	Optional


Connector 1 => 5 pole					
					
1	2	3	4	5	


GND	5V (Switched)	Signal to external display	5 V (Constant)	Future Brake light input	
Optional for external display(s)	Optional for external display(s)	Optional for external display(s)	Use for GPS red wire	Optional	

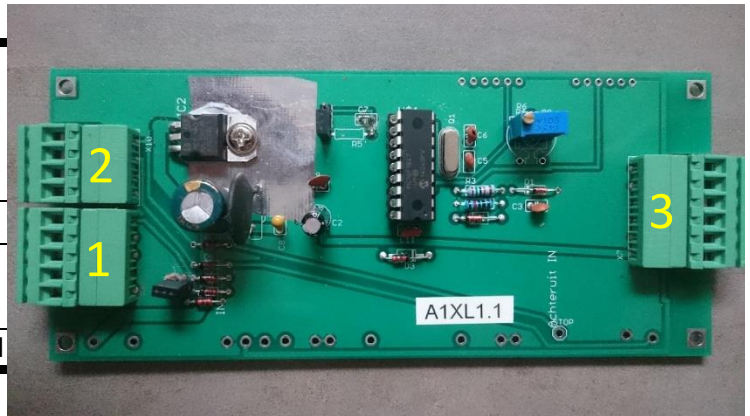
A1XL1.1 , (Alma 1 XL Off-Road):


Pay Attention to the direction of the connectors and position number 1.

Wire Connections:

Connector 1 => 5 pole					
					
1	2	3	4	5	
Reset/Ok	12 V	5 V	GND	Speed puls signal	
Optional	(Supply) obligatory	Optional	(Supply) obligatory	obligatory	

Connector 2 => 4 pole			
			
1	2	3	4
Stop Stopwatch	Reset trip	GND	Reverse 12V
Optional	Optional	Optional	Optional





Connector 3 => 6 pole					
					
1	2	3	4	5	6
5V	Signal to external display	GND	GND	5V	2nd Reverse 12 V
Optional for external display(s)	Optional for external display(s)	Optional for external display(s)	Optional	Optional	Optional

A1XL1.3:


Pay Attention: This section is only valid for Hardware Alma XL 1.3 and up. For older tripmeters, see our old manual. You can find the hardware version on your printed Circuit Board inside the tripmaster.

Wire Connections:

Connector 1 => 5 pole					
					
1	2	3	4	5	
GND	12 V	12 V	GND	Speed puls signal	
(Supply) obligatory	(Supply) obligatory	Optional for sensor	Optional for sensor	obligatory	

Connector 2 => 4 pole			
			
1	2	3	4
Stop Stopwatch	Reset trip	GND	Reverse 12V
Optional	Optional	Optional	Optional



Connector 3 => 6 pole					
					
1	2	3	4	5	6
5V	Signal to external display	GND	GND	5V	2nd Reverse 12 V
Optional for external display(s)	Optional for external display(s)	Optional for external display(s)	Optional	Optional	Optional

2. Technical information

Dimensions:

Housing: See drawing

Electrical:

Power consumption:

Input Voltage