

E8013

6-function automatic opening detection controller (compatible with Visio screens)

Marking: « DPO 6 »

notice v5

Purpose

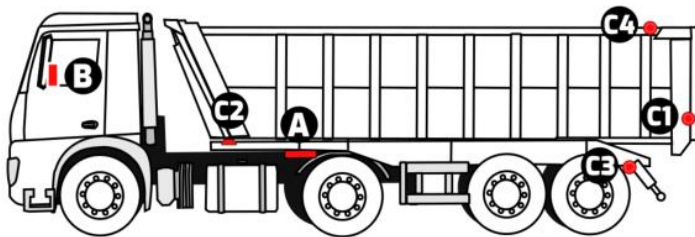
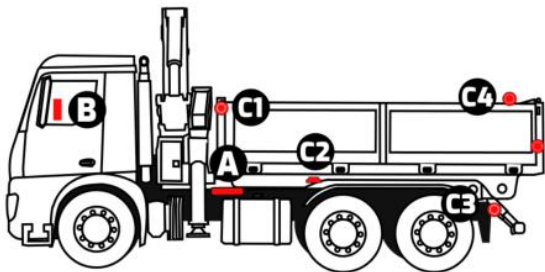
From 1 to 6 functions are fitted with a wireless magnetic sensor P MAG.

Can be fitted with: Side panels, Tipper lift, Underride bar, tarpaulin and rear door.

The vehicle is fitted with an Atlas Connect "DPO 6" (Entry Protection Device) receiver box (A) which is matched to the installed sensors.

The cabin can be fitted with a Visio display (B) which provides visual and audible alerts.

The first 3 functions are relayed to the 3 relays of the Atlas connect box, allowing the vehicle speed to be limited, a possible cabin buzzer to be activated and warning lights.



Learning detection

As the measurement conditions of the sensors are not the same in the workshop and on the road, the system automatically adjusts its parameters during the first 30 hours of operation and each time the sensors are replaced (a feature known as "dynamic Tnpc").

Kit Contents

- Atlas Connect DPO 6
- P MAG magnetic sensor paired
- One magnet
- 1 sensor holder
- 2 x 12-pin connectors (brown/green) + 20 pins
- Mounting instructions

Assignment of functions

The following functional placement is recommended:

- Single sided tipper truck

- Sensor 1: Side panel,
- Sensor 2: Tipper Lift
- Sensor 3: Undercutting bar,
- Sensor 4: Tarpaulin
- Sensor 5: Rear Door

- Double sided tipper truck

- Sensor 1: Side panel1,
- Sensor 2: Side panel 2,
- Sensor 3: Tipper lift,
- Sensor 4: Undercutting bar
- Sensor 5: Cover,
- Sensor 6: Rear door

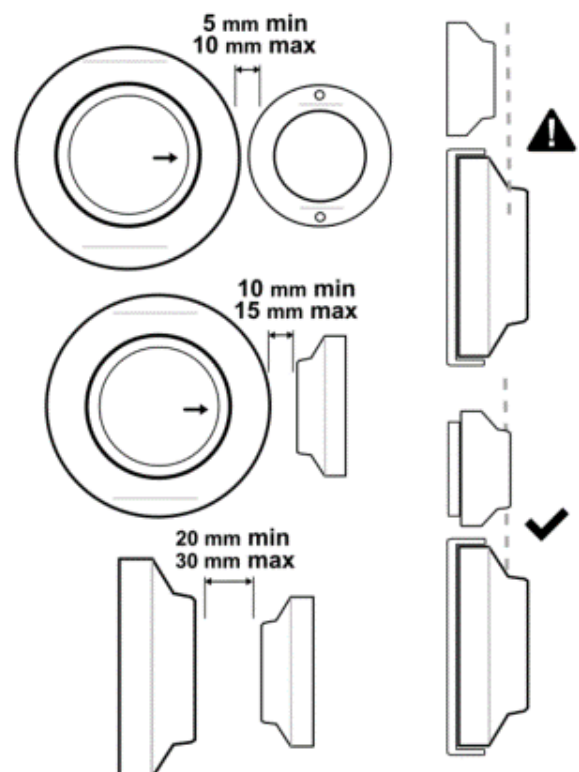
- Large Towable Skip truck

- Sensor 1: Rear door,
- Sensor 2: Tipper lift,
- Sensor 3: Undercutting bar,
- Sensor 4: Tarpaulin

It is advisable to note the sensor numbers for allocation in

Positioning of sensors

The MAG magnetic sensors and their magnetised counterpart must be mounted in one of the following 3 configurations:



Sensor/Device Distribution

To ensure proper operation of the wireless system, it is important to ensure the following good practices:

- Avoid isolating the radio emissions from a sensor in a metal beam or on a large reflective surface such as the rear of the vehicle.

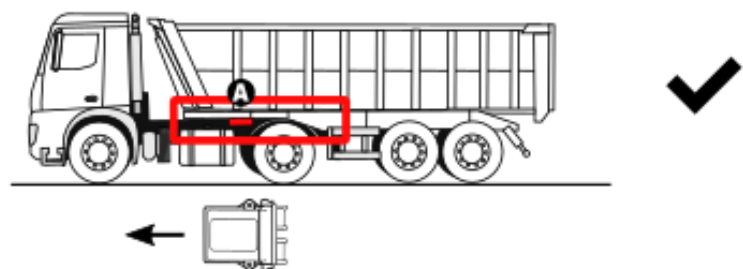
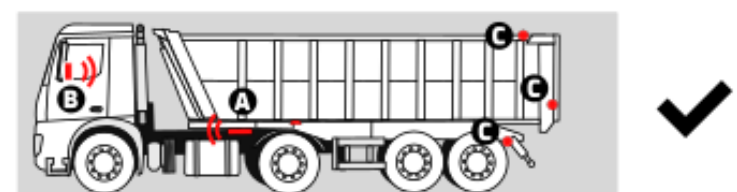
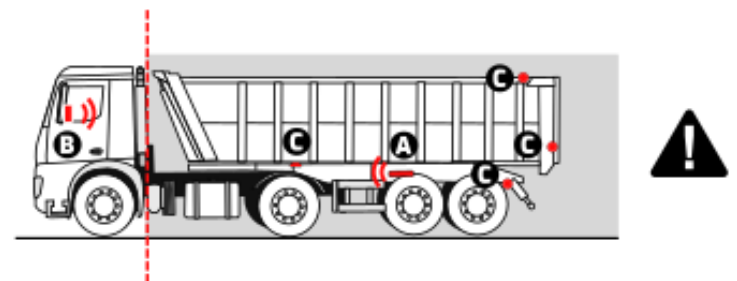
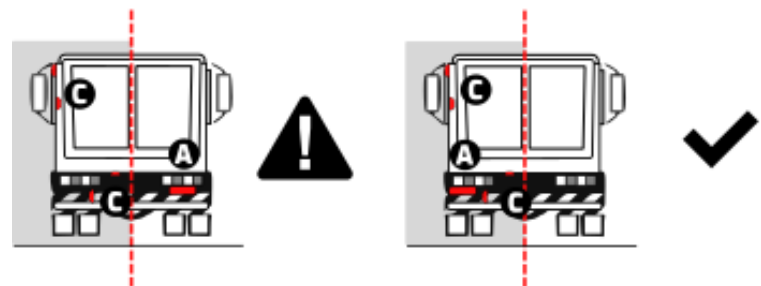
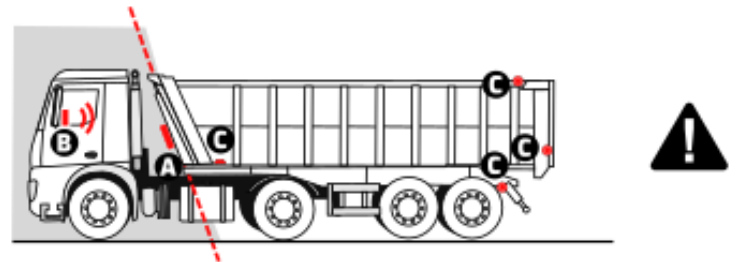
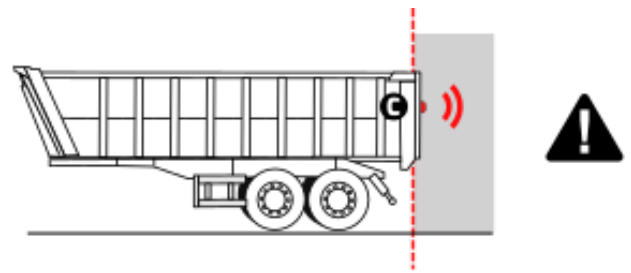
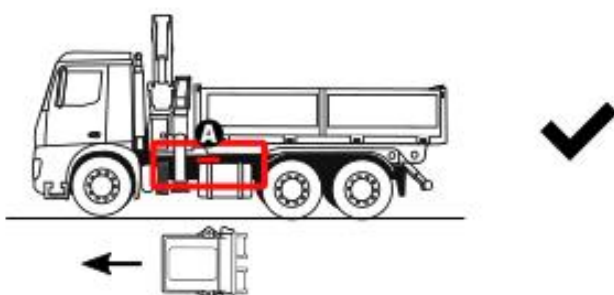
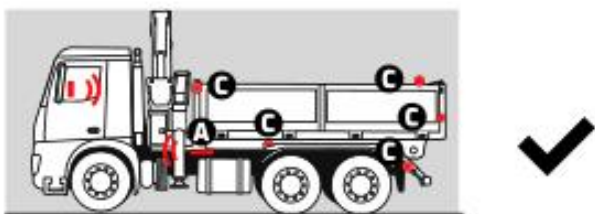
A rear door sensor should be positioned laterally.

- Also, do not use the area between the tractor and trailer in the centre of the awning to isolate the tarpaulin and ABS sensors.

- The ideal installation area for the DPO box is around the battery box or towards the front of the chassis of a towed trailer, on the right or left side.

- The sensors should be positioned as high as possible on the same side of the chassis as the DPO unit.

- In order to optimise the radio transmissions to the wireless Visio display, if any, located in the cabin, the DPO box should always be positioned head forward.

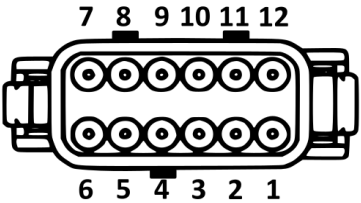


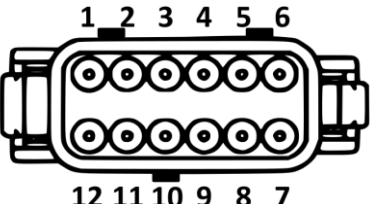
- (A) Atlas connect box
- (B) Visio display
- (C) Sensor

Connecting the electronic board

Note: This section can be simplified by using a Visio screen in the cabin. If you have a Visio display, see the next section.

The Atlas Connect DPO 6 has two 12-pin connectors with the following inputs/outputs:

GREEN Connector		
		
Pin	Atlas DPO + Skip + Undercutting bar	
V6	+VCC	Power supply +12V/24V
V5	GND	Ground
V11	R1 IN	Relay 1 input
V10	R1 NO	Relay 1 output NO
V1	R1 NF	Relay output 1 NC
V2	R2 IN	Relay input 2
V12	R2 NO	Relay output 2 NO
V3	R2 NF	Relay output 2 NC
V8	R3 IN	Relay input 3
V7	R3 NO	Relay output 3 NO
V9	R3 NF	Relay output 3 NC

BROWN Connector		
		
Pin	Atlas D DPO + Skip + Undercutting bar	
M10	E1	Input 1 (dry contact)
M11	E2	Input 2 (dry contact)
M12	E3	Input 3 (dry contact)
M9	GND Out	Transferred ground

The power supply of the +VDC / GND card must be connected to a + after contact.

Relay 1 (R1 NO) raises an open side panel warning conditioned by the deactivated hydraulics (see E1). This relay is fitted with a 2-second anti-bounce to filter out any vibration of the side panel on the road. It can be made common to the first 3 functions if "Or on R1" is activated in the setting mode.

Relay 2 (R2 NO) and relay 3 (R3 NO) are used to monitor the status of sensor 2 (bucket lift) and sensor 3 (underride bar) respectively.

According to the output polarity requirements, The relay inputs **R1 IN**, **R2 IN** and **R3 IN** can be wired to a power supply or to a ground, e.g. in the case of a connection to the bodywork interface.

The design of the undercutting bar may require that the information is processed in reverse to the other functions. In this case, the **output R3 NC** can be used instead of **R3 NO**.


The E1 input defines the status of the hydraulic activation, limiting the alerts of the side panel when the vehicle is working at low speed. This input can only be controlled by a ground.

The E2 input defines the operating mode of the board. A bridge must be made **between E2 and GNDout** to ensure the correct operation of the system (see section " Setting mode ").

The E3 input is the optional connection for a wired undercutting bar sensor that can be activated by the "parameter mode".

Example of minimum wiring for a warning buzzer and 2 indicator lights installed in the cabin:

V6	+VCC	+24V
V5	GND	GND
V11	R1 IN	+24V
V10	R1 NO	+ Buzzer (Side panel)
V2	R2 IN	+24V
V12	R2 NO	+ Indicator light (Tipper lift)
V8	R3 IN	+24V
V9	R3 NO	+ Buzzer (Tipper lift)
M10	E1	PTO status
M11	E2	(Ground = hydraulic activated)
	- buzzer	Bridged to M9 GNDout
	- Indicator light	GND

 We recommend the addition of 1A fuses on all powered inputs.

For your convenience, you can use our 6m pre-wired harness reference E1281 (refer to the harness documentation to make the connections).

Simplified mounting with Visio display



Your Visio display (or Visio2 for large trailers) shows the status of the monitored functions

Example of minimum wiring for a Visio display installed in the cabin:

V6	+VCC	+24V
V5	GND	GND
M10	E1	PTO status
M11	E2	(Ground = hydraulics activated)


You should consult the documentation for your Visio monitor for installation and setup.

Setting mode

The **E2 input** determines the operating mode of the Atlas Connect unit at the time of power up.

- **If E2 is not connected:** The parameterisation mode is active. Sensor analysis is disabled. The Atlas Connect becomes visible to the mobile setup application.

- If a ground is present on E2: **Setup mode** is disabled. Sensor analysis is effective.

 To ensure proper operation of the system, it is imperative to bridge E2 to GNDout on the brown connector.

On this version, the parameters available in the mobile application are as follows:

- **Sensor 1 to 3**
Identification of the sensors paired to the system (1 sensor paired by default).
- **Tnpc**
Distance tolerance between the receiver and the opening sensor. (5 by default for a dynamic Tnpc on ON, 60 for a dynamic Tnpc on OFF).

visually and audibly.

- **Or on R1 (on/off)**

Systematic activation of relay 1 on request of sensor 1 or 2 allowing a speed backtrack (OFF by default).

- **Dynamic Tnpc (on/off)**

Activation of the learner mode (ON by default).

- **Input 3 (on/off)**

Activates the taking into account of input 3 (E3) instead of sensor 3 (OFF by default).

- **Plate**

Vehicle registration or fleet number (7 characters max) allowing pairing with a Visio screen.

The DPO CONFIG mobile application is available for Android at the following address



<https://www.electromaintenance.fr/dpoconfig>

1. Switch to "Setup" mode, disconnect the brown connector before powering the unit,
2. In DPO Config, connect to the desired Atlas box. The security PIN code is 123456,
3. Apply the new settings before disconnecting,
4. Reconnect the brown connector.

Accessories

6m pre-wired harness for buzzer and cabin light	E1261
Magnetic sensor	E6818
Visio cabin screen kit for tipping trailer	E1929
Visio2 cabin screen kit for large tipper	E1933

Technical features

Atlas Connect

Power supply voltage.....from 9V to 30VDC
Operating temperature range.....-40°C to +85°C
Water Resistance.....IP69K
Dimensions.....119x133x35mm
2 mounting holes Ø 7mm, centre distance 101mm

Sensors

Frequency 2.4 Ghz-Bluetooth Low Energy 4.0/4.2
Battery life.....Up to 5 years
Transmission time.....2 seconds
Water Resistance.....IP67
Dimensions
P MAG / P IDØ 57mm / Height 18mm
Magnet.....Ø 40mm - Height: 15mm

Homologations

CE (Europe): EN ECE R10/ EN 60947-5-2
RoHS