

# Ditec GOPAV

Manuale di installazione per sistema radio per bordi sensibili GOPAV.  
 Installation manual for GOPAV radio system for use with sensitive edges.  
 Manuel d'installation pour système radio pour bords sensibles GOPAV.  
 Bedienungsanleitung für Funksystem für Kontaktleisten GOPAV.  
 Manual de instalación para sistema vía radio para burletes sensibles GOPAV.  
 Manual de instalação para sistema rádio para bordas sensíveis GOPAV.

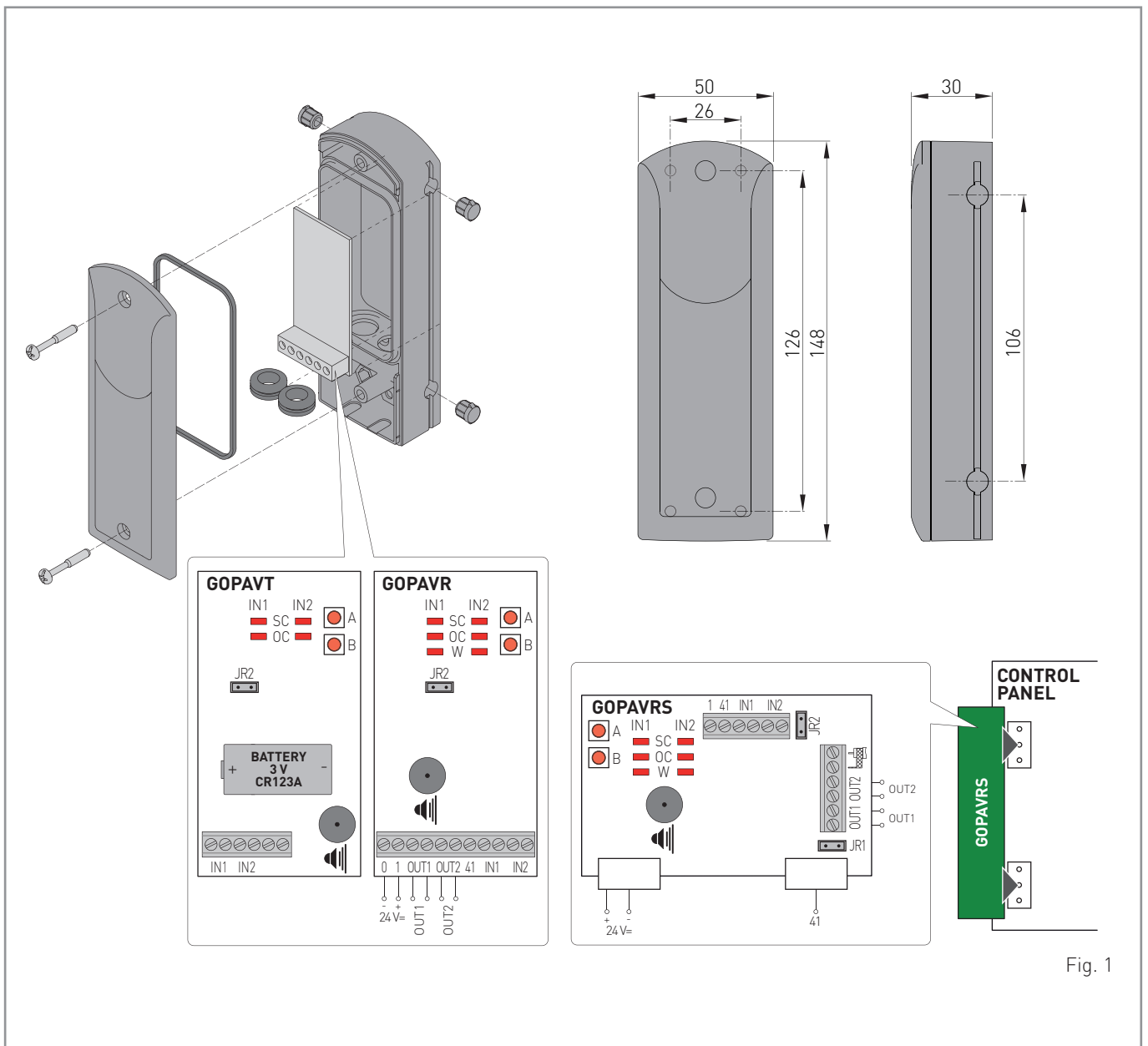


Fig. 1

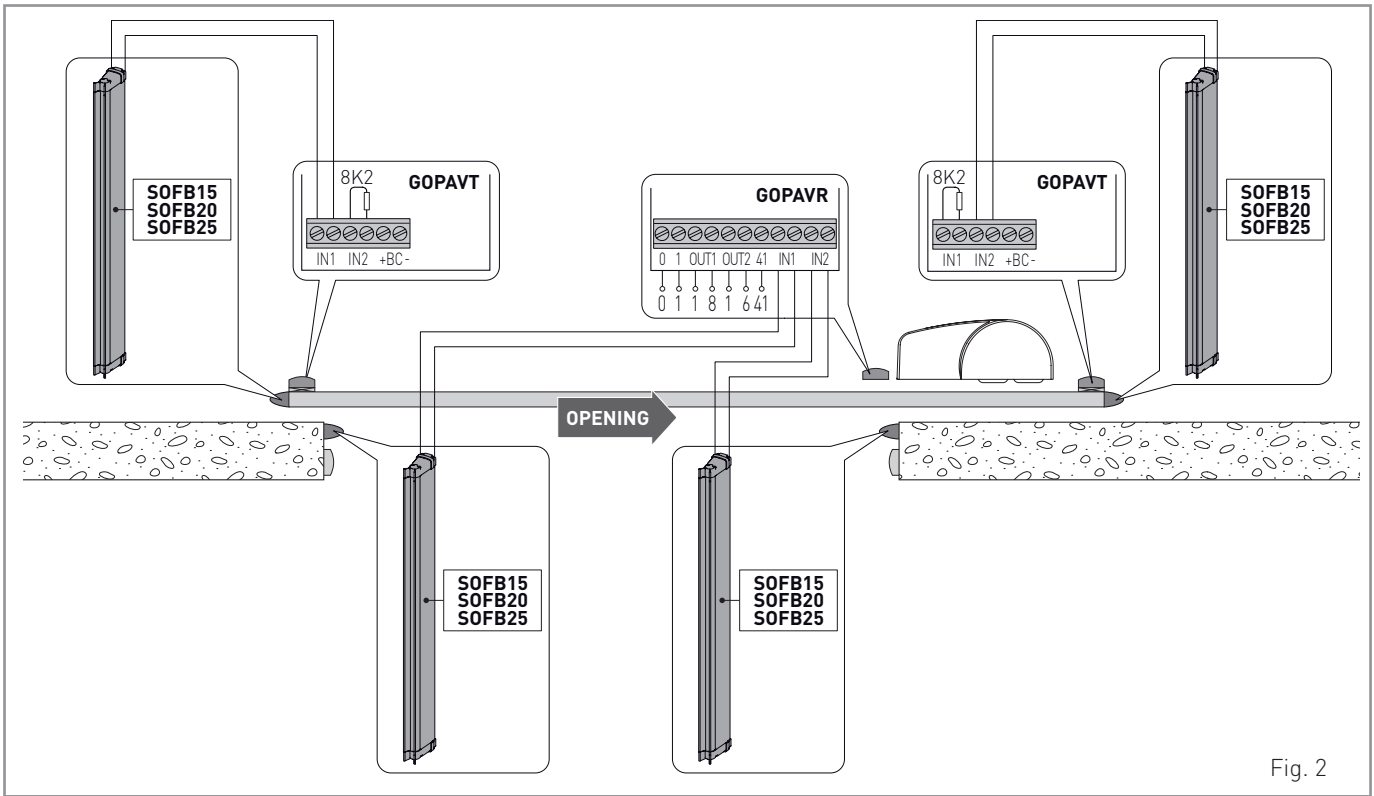


Fig. 2

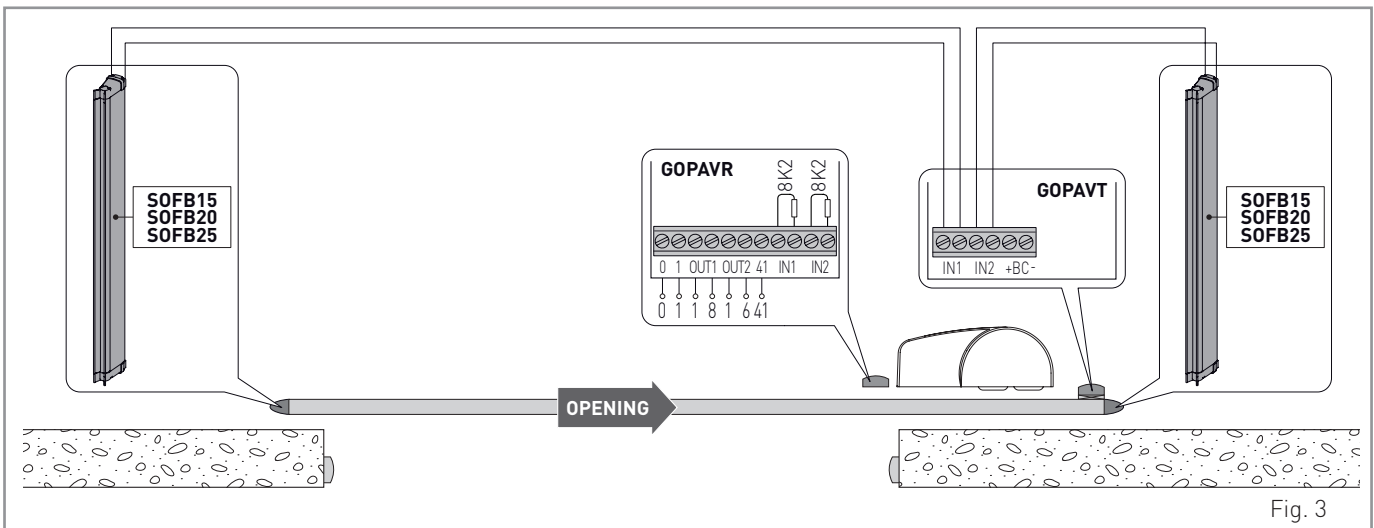


Fig. 3

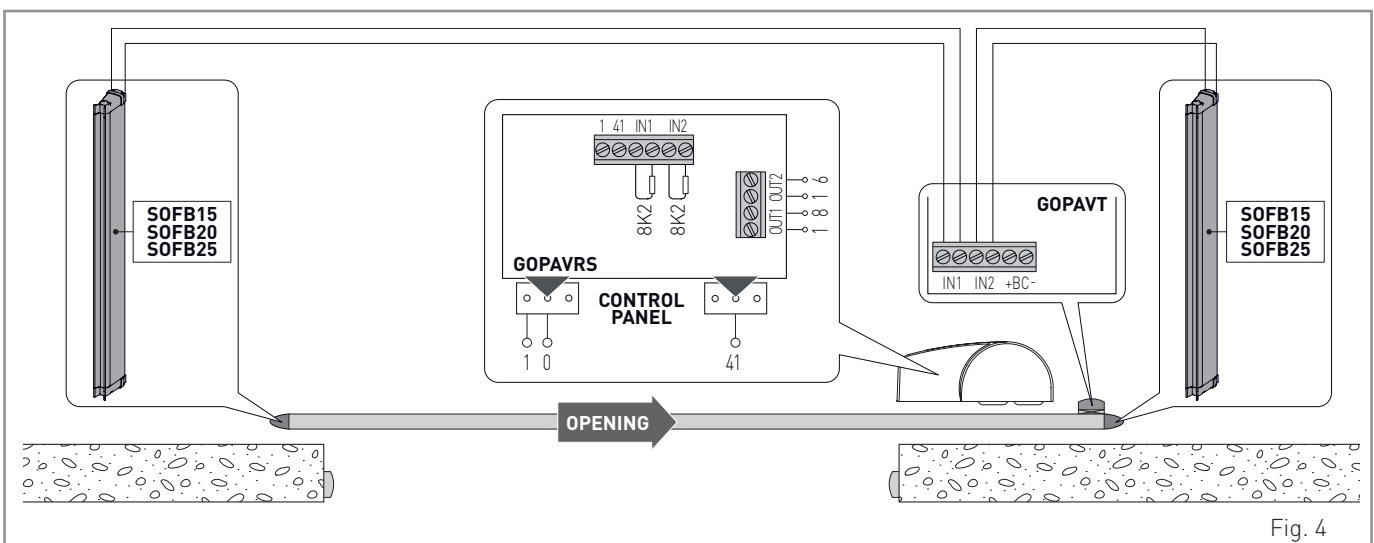


Fig. 4

## General safety precautions

**!** This installation manual is intended for professionally competent personnel only. Read the instructions carefully before beginning to install the product. Incorrect installation may be a source of danger. Packaging materials (plastic, polystyrene, etc.) must not be allowed to litter the environment and must be kept out of the reach of children for whom they may be a source of danger. Before beginning the installation check that the product is in perfect condition. For repairs or replacements of product only original spare parts must be used. These instruction must be kept and forwarded to all possible future user of the system.

## EC declaration of conformity

The manufacturer Entrematic Group AB, with headquarters in Lodjursgatan 10, SE-261 44 Landskrona, Sweden, declares that the safety device GOPAVR, GOPAVRS, GOPAVT, SOFA15, SOFA20, SOFA25, SOFB15, SOFB20, SOFB25 is compliant to the following european directives and regulations: EN12978, EN12453, EN12445; Directive 1999/5/EC R&TTE; EMC directive 2004/108/EC.

Landskrona, 2015-05-05

Marco Zini  
(President & CEO)

## 1. Technical data

<b>GOPAVR-GOPAVRS power supply</b>	24 V $\overline{=}$
<b>GOPAVT power supply</b>	3 V type CR123A lithium battery
<b>GOPAVR-GOPAVRS absorption</b>	60 mA max
<b>GOPAVT absorption</b>	<100 $\mu$ A (average value)
<b>Frequency</b>	868,95 MHz (JR2=ON) 869,85 MHz (JR2=OFF)
<b>Power</b>	<10 mW
<b>Range</b>	20 m max
<b>Output contact</b>	24 V $\overline{=}$ / 1A (resistive load)
<b>Termination resistance</b>	8,2 k $\Omega$
<b>Operating temperature</b>	-20° C - +55° C
<b>Degree of protection</b>	IP55

## 2. Applications

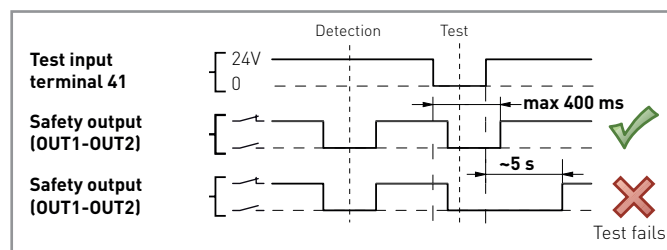
The GOPAV radio system for sensitive edges is intended for use as a safety device for motorized vertical doors or gates in conjunction with SOF sensitive edges. The system can be connected to the IN1 and/or IN2 inputs which can be found both on the fixed GOPAVR-GOPAVRS unit as well as on the mobile GOPAVT unit.

The fixed GOPAVR-GOPAVRS unit can manage up to 5 mobile GOPAVT units. The fixed unit's OUT1 and OUT2 outputs are respectively activated by the IN1 and IN2 inputs, which can be found on both the fixed unit itself, as well as on each mobile unit associated with it.

The fixed GOPAVR-GOPAVRS unit is also equipped with SAFETY TEST terminal 41. The mobile GOPAVT units are equipped with batteries and do not have to be connected to a control panel. Whenever the sensitive edges connected to each mobile GOPAVT unit are activated, due to the presence of an obstacle during opening or closing operations, the event is transmitted by radio to the fixed GOPAVR-GOPAVRS unit.

## 3. Installation conditions

- The product must be used together with sensitive edges of a sufficient height to guarantee the respect of the force limits provided for by the EN12453-EN12445 standards.
- After every activation of the safety device, the gate control panel must cause a motion reversal for at least 0.5 s.
- In order to comply with EN12453-EN12445 standards the product must be tested at least once per monouvre cycle applying a negative polarity impulse to terminal 41 as indicated in the figure.  
NOTE: when terminal 41 is not connected to the relative terminal on the control panel, LED indicators SC and OC on the fixed unit remain lit.
- The time until the door or gate leaves the same end position again shall be more than 20 s.
- A normal door or gate movement shall not start if a safety output is not switched on within 5 s after the test input is switched on again.



- Up to 5 moving units can be installed in one system.
- To comply with legal requirements concerning occupation of the radio transmission band, according to the number of moving units in the system, the trigger limits for the installed safety edges must be complied with as in the values in the table below.

Mobile units	Max. number safety edge operations per hour
1	360
2	360
3	360
4	240
5	120

- It is very important to ensure there is good communication between the various moving units and the corresponding fixed unit. The values shown in the table refer to optimum communication conditions. If communication is disturbed or inefficient, the maximum number of operations allowed may be lower than the values shown in the table.
- In order to ensure sufficient radio capacity, the GOPAV devices must not be installed within any type of metallic casing.

## 4. Installation

- The fixed GOPAVR unit must be either wall-mounted or otherwise mounted on upon an appropriate support near the control panel.
- The GOPAVRS fixed unit must be inserted in one of the AUX ports on the control panel or in the CONT1 card-holder base.
- One or more mobile GOPAVT units must be mounted directly upon the wing of the gate or door and each must be connected to one or two SOF sensitive edges, as shown in fig. 2-3-4.

## 5. Electrical connections

Perform the electrical connections as indicated in fig. 2-3-4. Remove the terminating resistor from the IN1 or IN2 terminal to be used and connect the relative SOF sensitive edges to the terminal. The terminating resistors must not be removed from any inputs which are not being used.

**!** WARNING: the use of the SAFETY TEST function through terminal 41 is obligatory for compliance with the EN12453-EN12445 standards. Control panels without terminal 41 can be used by making a jumper for terminals 1-41 on the GOPAVR-GOPAVRS fixed unit and opening the JR1 jumper on the GOPAVRS unit only. In this case, however, the system **WILL NOT BE COMPLIANT WITH THE EN12453-EN12445 STANDARDS.**

## 6. Configuration

**!** WARNING: remove the batteries from all of the mobile units before proceeding with the configuration.

Configure the devices as indicated:

- connect the fixed GOPAVR-GOPAVRS unit to its electrical power supply, normally W LEDs will flash and output contacts OUT1 and OUT2 will be open;
- check terminal 41 is correctly connected to the corresponding terminal of the control panel;
- insert the mobile GOPAVT unit's battery into its appropriate lodging, all of the LED indicators on the mobile unit will flash;
- press button A on the fixed GOPAVR-GOPAVRS unit, the W LED indicators on the fixed unit with turn on and the OC LED indicators on the mobile unit will flash;
- press button A on the mobile GOPAVT unit, the LED indicators on the mobile unit and the fixed unit will turn off;
- check for proper configuration by activating the sensitive edge in question: check that the fixed GOPAVR-GOPAVRS unit's W LED indicator turns on and check that the mobile GOPAVT unit's IN LED indicator turns on in relation to the output to which the sensitive edge is con-

nected;

- repeat the same procedure for each moving unit in the system.

NOTE: it can take up to 20 s after power-on until the safety outputs are switched on.

In case of using the GOPAVR-GOPAVRS unit just with the safety edges connected to it (with no GOPAVT units memorized) perform the RESET procedure described below and then simultaneously press buttons A and B for 3 s. W LEDs will turn off and the system will be ready for operation with local edges.

If any device is replaced, all the installed devices must be RESET and the configuration procedure repeated.

To RESET each device, do the following:

- press button B for 3 s. Both of the SC LED indicators will flash;
- press button B again for 3 s. Both of the SC LED indicators will flash.

Once the LED indicators have finished flashing, the unit has been reset.

 **WARNING:** you must first RESET the fixed GOPAVR-GOPAVRS unit and then RESET all the mobile GOPAVT units.

## 7. Setting frequency

If you need to use an operating frequency which is different from the factory set frequency, you must open jumper JR2 before configuring all the devices (see chapter 6).

If the frequency has to be changed on a system already operating with the factory frequency, first **all** its moving units and the fixed unit must be reset (see chapter 6).

## 8. Checking operation and radio connection

To check the operating, give an opening or closing command and press each of the SOF sensitive edges. Check whether the movement of the gate/door is arrested or reversed (for mobile edges, check the switching on of SC LED on the moving unit in question and the W LED or acoustic signal on the fixed unit; for fixed edges, check that the relative SC LED on the fixed unit turns on). Once these operations have been successfully completed, make sure that the wing's operational forces comply with that which is prescribed by the EN12453-EN12445 directives.


In order to operate efficiently, the radio connection between the various devices in an installation must be of a good quality.

You can check the quality of the radio connection between a GOPAVT moving unit and the corresponding fixed unit by doing the following:

















- simultaneously press button A and button B, until 1 beep is emitted (for about 3 s), on the GOPAVT moving unit to be checked;
- the GOPAVT moving unit performs 1 to 5 transmissions to the GOPAVR-GOPAVRS fixed unit every 15 s. If a SOF safety edge is pressed, these transmissions are signalled by a proportional number of acoustic signals:
  - 1x BEEP: optimum radio connection
  - 5x BEEPs: problematic radio connection (the position or form of the antenna must be adjusted)
- if the quality of the radio connection is poor, the position of the devices or the form of the antennas must be adjusted to find the configuration that gives the best radio connection;
- repeat the procedure for all the GOPAVT units in the installation;
- the same function is useful for constantly displaying alarm conditions on the GOPAVT unit in question;
- the check function is automatically deactivated after 3 minutes.




If you cannot get a good quality radio connection using the above procedure, check the disturbance level in the communication channel by doing the following:

- simultaneously press button A and button B for about 3 s on the GOPAVR/GOPAVRS fixed unit;
- the LED indicators on the fixed unit come on. The number of lit LEDs is proportional to the quality of the communication channel:
  - 0 lit LEDs: very disturbed channel
  - 6 lit LEDs: excellent channel

 **WARNING:** if the channel is very disturbed, it is advisable to try changing the operating frequency, see chapter 7.

## 9. Signals

Signal	Description	State of relay contacts			
SC 	IN1 	Safety edge triggered or short-circuited.	OUT1 and/or OUT2 OPEN		
	IN2 				
OC 	IN1 	Alarm (interruption of the circuit) of the safety edge.	OUT1 and/or OUT2 OPEN		
	IN2 				
W 	IN1 	Safety edge triggered, short-circuited or alarm emitted (interruption of circuit) near a GOPAVT unit.	OUT1 and/or OUT2 OPEN		
	IN2 				
	IN1 	Missing GOPAVT unit, battery removed from GOPAVT unit or on-going remote unit presence verification.	OUT1 and OUT2 OPEN		
	IN2 				
	IN1 				
	IN2 				
Buzzer 	IN1 	No GOPAVT units memorized.	OUT1 and OUT2 OPEN		
	IN2 				
	Safety edge triggered (1 beep per second until pressed safety edge is released).			OUT1 and/or OUT2 OPEN	
	Malfunctioning alarm for 1 or more fixed or mobile safety edges (1 beep per second until fault is cleared).			OUT1 and/or OUT2 OPEN	
	Battery removed on 1 or more GOPAVT mobile unit alarms (1 beep per second).			OUT1 and OUT2 OPEN	
GOPAVT mobile unit malfunctioning alarm (1 beep every 3 seconds).		OUT1 and OUT2 OPEN			
Low transmitter battery level alarm (1 beep every 20 seconds).		OUT1 and OUT2 CLOSED			

Signal	Description
SC 	Safety edge intervention or short-circuit.
OC 	Alarm (interruption of the circuit) of the safety edge.
Buzzer 	Low battery.
	Transmission to the GOPAVR-GOPAVRS fixed unit (with transmission check function activated, 1 to 5 beeps).

NOTE: signalling of malfunctioning on GOPAVT moving units takes place briefly at 15 s intervals. To display them constantly, use the check function described in chapter 8.

## 10. Maintenance program (every 6 months)

For the correct working:

- keep the inside of the SOF safety edge clean and dry;
- check operation as indicated in chapter 8;
- replace the GOPAVT transmitter battery every 24 months or whenever the flat battery alarm signal sets on.

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