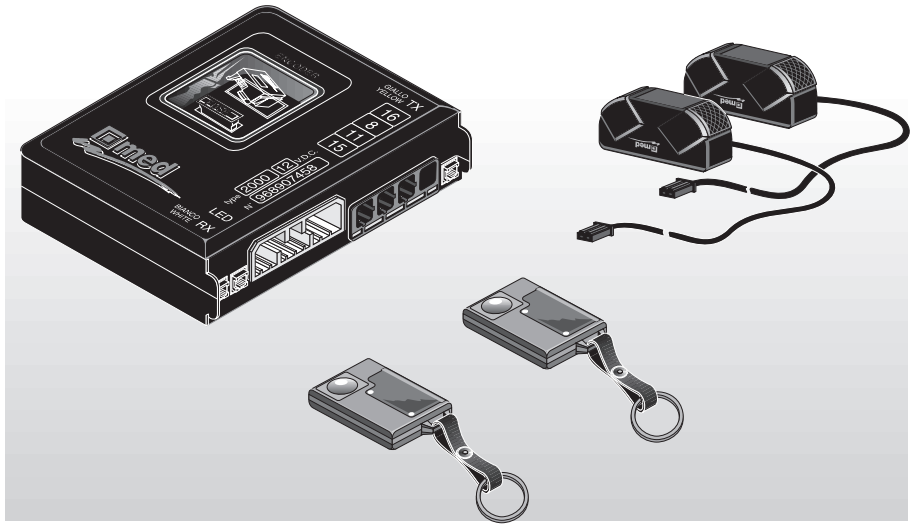
INSTALLER INSTRUCTION MANUAL

SERIES 2000 PROGRAMMABLE REMOTE CONTROL OPERATED ALARM CENTRAL UNIT



For further technical information on the operation of the Central Unit, its connections and on other **med** products, please contact our Technical Assistance Division at the following numbers:

phone ++ 39 522 / 511665

telefax ++ 39 522 / 514610

med s.p.a.
Via Raffaello, 33
42100 Reggio Emilia (Italy)

Cod. 082.316.255

INSTALLATION TO DOOR PILLAR WITH COVERING GLUED TO THE METAL

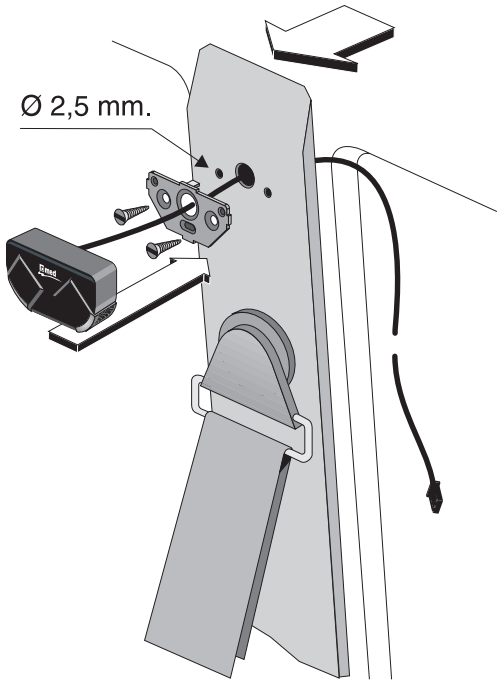
D

1. Make holes in the door pillar using the metal carrier plate as a template. Refer to the figure.

Drill a Ø 2,5 mm. hole for the two self-tapping fixing screws in the installation kit.

2. Fix the metal carrier plate.

3. Insert the cable and snap in the sensor.



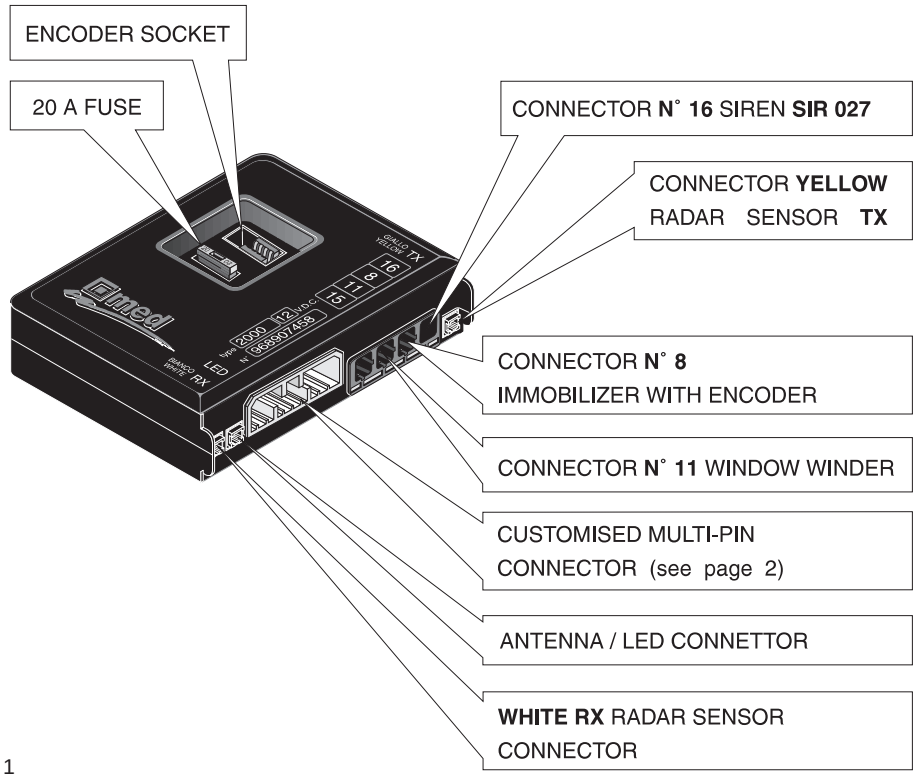
CONTENTS

page	CONTENTS
1 / 2	Overall layout of the **med 2000** Central Unit
3	Preliminary recommendations
4	Led / antenna assembly
5 / 6	Directional indicator command
7 / 8 / 9 / 10	Central lock remote control
11 / 12	Command for window winding COMFORT system
13	Universal window winder connection with **AZC 130**
14	Auxiliary relay connection
15 / 16	(-) connection to auxiliary relay for GREEN WIRE output
17 / 18	(-) connection to auxiliary relay for ALARM RELAY output
19	(-) connection to **SIR 020** siren
20 / 21 / 22	Button connections
23	Connecting to the **SIR 027** siren
24	Primary immobilizer protection
24 / 25	(-) connections with **med** immobilizer with encoder
26	(-) connections with **med 30** digital immobilizer
27	Power supply
28/29/30/31	Connections with **MTR 2000** radar sensors

References to vehicles and to the colours of the wires in depicted original systems are purely indicative. **med s.p.a.** reserves the right to make technical modifications or variations to the product at any moment. The layouts indicated refer to the completely installed system.

There may be differences i the type of Central Unit used and its functional status (refer to the annexed manual which details the precise functions of the system).

OVERALL med series 2000 CENTRAL UNIT LAYOUT



INSTALLATION ON TOP OF THE DOOR PILLAR COVERING

C

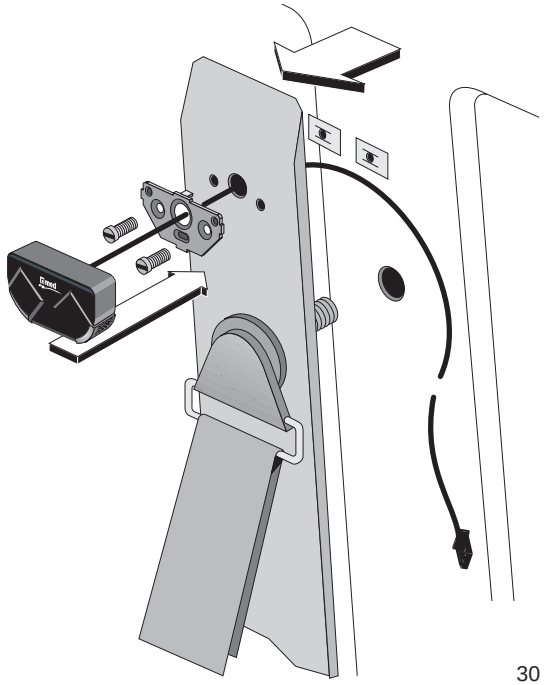
1. Remove door pillar covering.

2. Make holes in the door pillar covering using the metal carrier plate as a template. Refer to the figure.

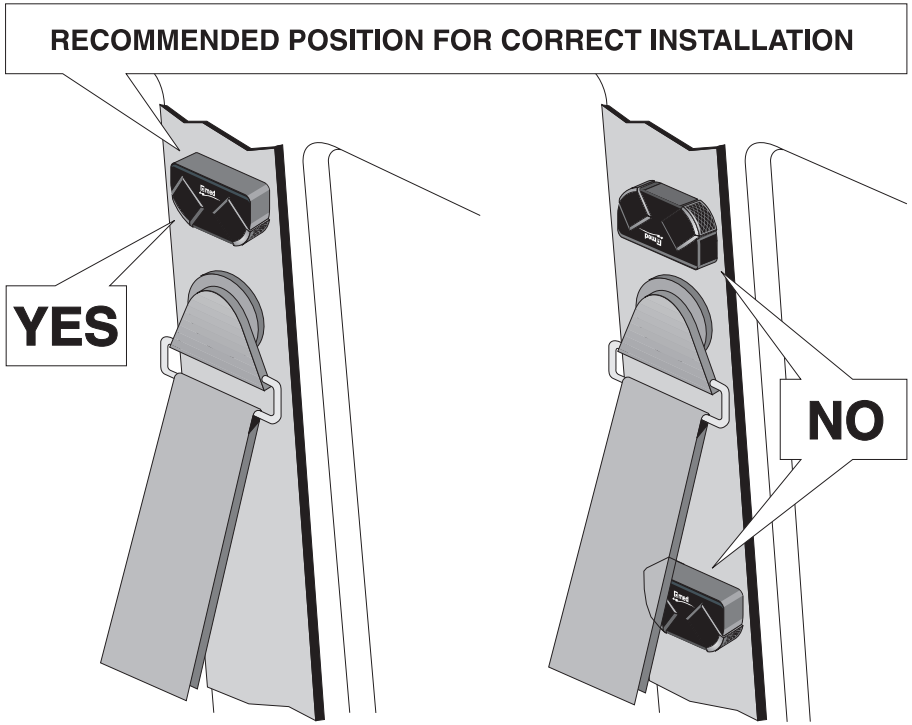
3. Fix the metal carrier plate.

4. Insert the cable and snap in the sensor.

5. Replace door pillar covering.



B



CUSTOMISED MULTI-PIN CONNECTOR

WIRE COLOUR	MARKED	FUNCTION	MAX CURRENT
BLACK	**GND**	POWER SUPPLY - **GROUND**	**20 A**
RED	**[+30]**	POWER SUPPLY - **POSITIVE**	**20 A**
ORANGE	**[+15]**	**[+15]** PERMANENT DURING START-UP	**-**
DARK BLUE	**MUX**	**SERIES 30** DIGITAL IMMOBILIZER CONTROL	**-**
LIGHT BLUE	**NO**	INSTANTANEOUS **NO** INPUT - DOOR BUTTONS	**-**
LIGHT BLUE	**NOD**	DELAYED NO INPUT - DOOR BUTTONS	**-**
GREY	**1**	**COMMON** - CONTACT FOR OPENING RELAY	**10 A**
GREY	**2**	**NC** - OPENING RELAY CONTACT	**10 A**
GREY	**3**	**NO** - OPENING RELAY CONTACT	**10 A**
GREY	**4**	**COMMON** - LOCKING RELAY CONTACT	**10 A**
GREY	**5**	**NC** - LOCKING RELAY CONTACT	**10 A**
GREY	**6**	**NO** - LOCKING RELAY CONTACT	**10 A**
GREY	**7**	**COMMON** - COMFORT RELAY CONTACT	**1 A**
GREY	**8**	**NO** - COMFORT RELAY CONTACT	**1 A**
GREEN	**9**	**POSITIVE** - OUTPUT FOR RH DIRECTIONAL INDICATOR	**10 A**
GREEN	**10**	**POSITIVE** - OUTPUT FOR LH DIRECTIONAL INDICATOR	**10 A**
WHITE	**11**	**COMMON** - ALARM RELAY CONTACT	**10 A**
WHITE	**12**	**NO** - ALARM RELAY CONTACT	**10 A**

Connector n° **15** **IS NOT USED**

PRELIMINARY PRECAUTIONS

1. Detach battery negative before making the electric connections.

2. Do not use "power tapping" devices for the connections, particularly to power the Central Unit.

3. Comply with the indicated maximum loads for the service outputs and fuse rating (see page 1 / 2).

4. Position the Central Unit in the passenger compartment, never in the engine compartment. Make sure that the harness is routed from below to prevent water or condensation from infiltrating and fix it in place with the Velcro supplied in the installation kit.

5. Position all the other parts of the system in the vehicle, then route the supplied basic harness in compliance with the main and specific layouts.

6. All door, bonnet and boot buttons must be connected.

7. Only power the system when the electrical connections have been made.

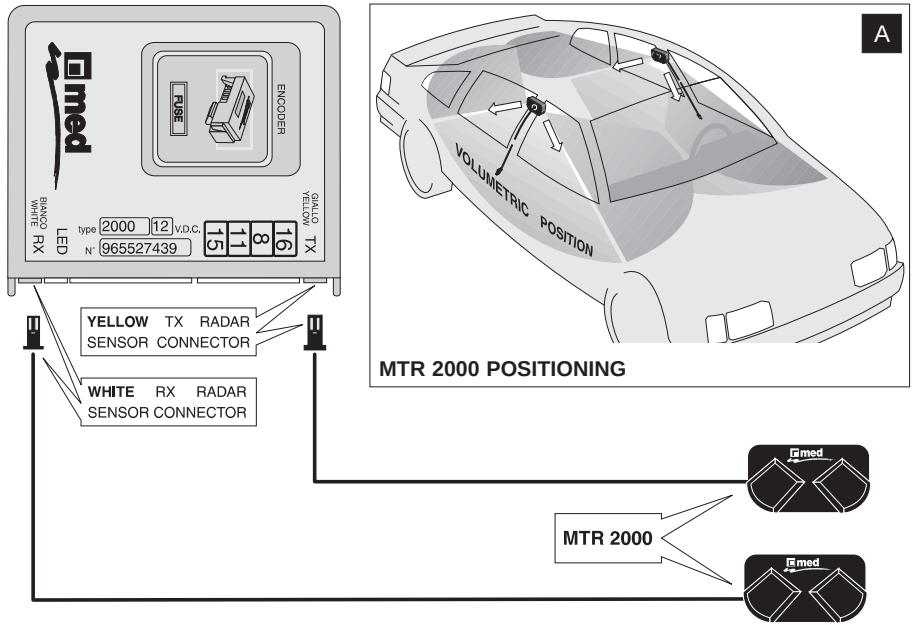
8. The following instructions refer to the completely installed and connected system. Functionality will be reduced if some of the parts have not been connected.

9. Consign the PIN - CARD to the user in its sealed packet - **DO NOT OPEN.**

10. Send the correctly filled out warranty card to **med s.p.a.** .

MTR 2000 RADAR SENSOR CONNECTIONS

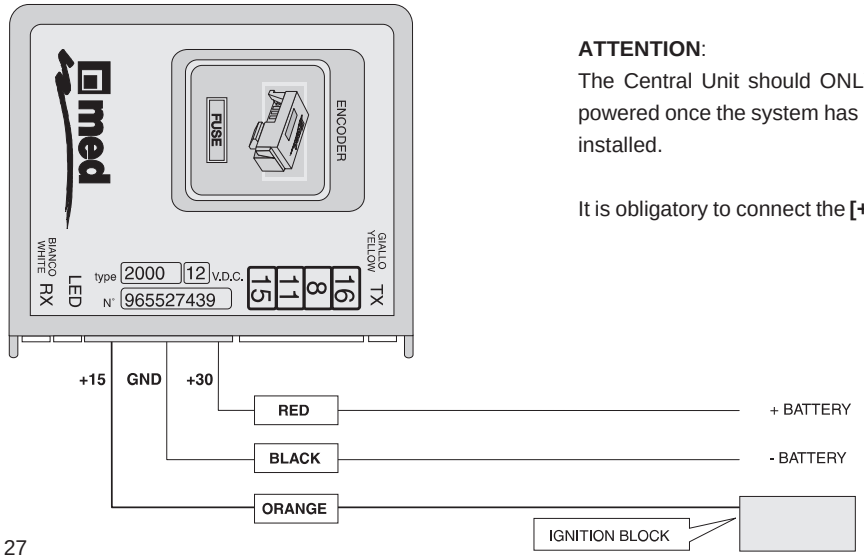
CONTINUED▶



NOTE: if the radar is used with the Anti-blinding and Anti-masking functions, the radar sensors must be matched up with them.

POWER SUPPLY

- **POSITIVE** power supply: RED wire marked **[+30]**, to connect to the most suitable 20A source point (e.g. fuse box or battery). This type of powering is also used for the direction indicators (pages 5 / 6).
- **NEGATIVE** power supply: BLACK wire marked **GND** to connect to the negative battery terminal or to a ground point of the chassis provided by the vehicle manufacturer.
- **POSITIVE** under the ignition key: ORANGE wire marked **[+15]** permanently activated during the ignition phase.

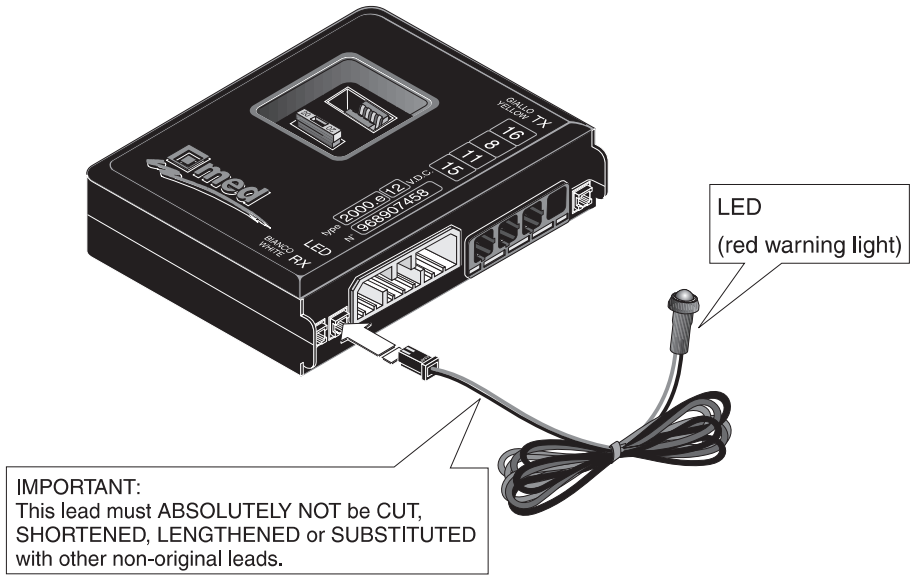


ATTENTION:
The Central Unit should ONLY be powered once the system has been installed.

It is obligatory to connect the **[+15]** .

LED / ANTENNA INSTALLATION

Make an easily visible Ø 10 mm. hole in the dashboard to mount the Led. Connect this lead to the Central Unit connector marked LED, keeping it flat and separate from all the other harness to achieve better reception.

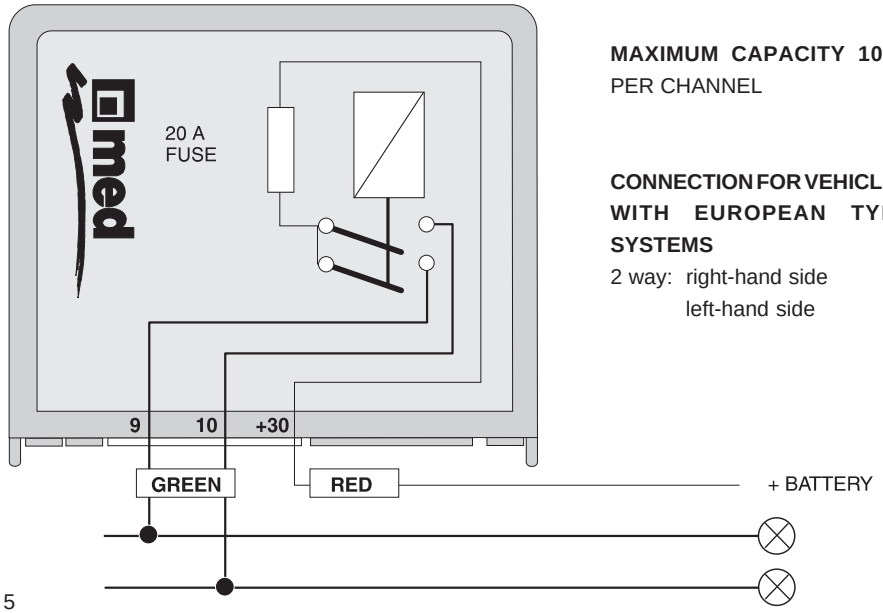


DIRECTIONAL INDICATOR COMMAND

CONTINUED▶

The GREEN wires marked **n° 9** and n°**10** directly transmit a POSITIVE command (max. 10A per channel) to pilot the direction indicators.
The RED wire **[+30]** is the same as that used to power the Central Unit.

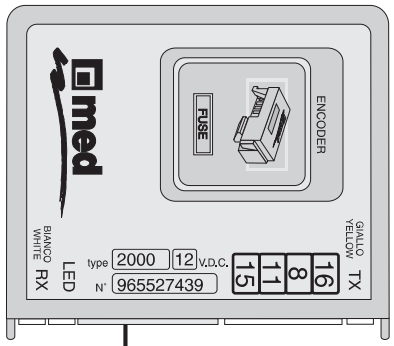
A



MAXIMUM CAPACITY 10 A PER CHANNEL

CONNECTION FOR VEHICLES WITH EUROPEAN TYPE SYSTEMS

2 way: right-hand side
left-hand side

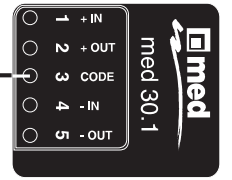


DARK BLUE "MUX"

B. CONNECTIONS TO THE med 30 SERIES DIGITAL IMMOBILIZER

Connect the immobilizer to the DARK BLUE wire marked **"MUX"**, following the specific Installation Instructions supply with immobilizer system.

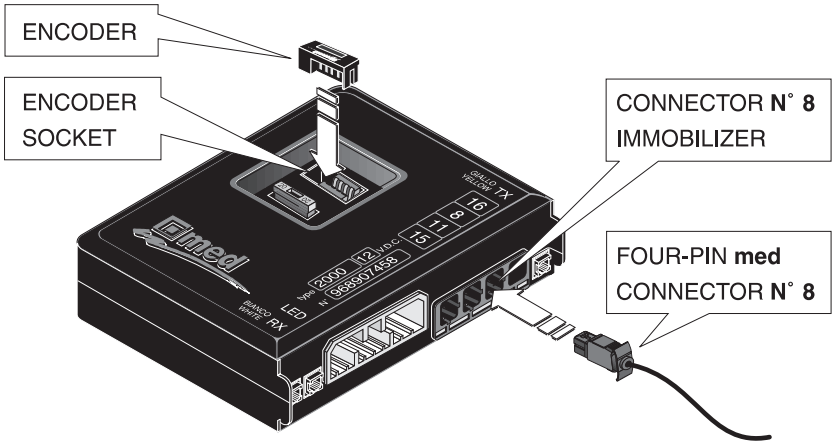
SERIES 30 - med 30.1
to be connected following the specific installation instructions supplied.



1. Fit the immobilizer Encoder into the socket in the top part of the Central Unit, protecting it with the adhesive label.

2. Fit the four-pin connector n° **8** of the immobilizer into the socket marked n° **8** on the front of the Central Unit.

3. Connect the power harness of the immobilizer and the GREEN wire in compliance with the specific instructions of the immobilizer system.



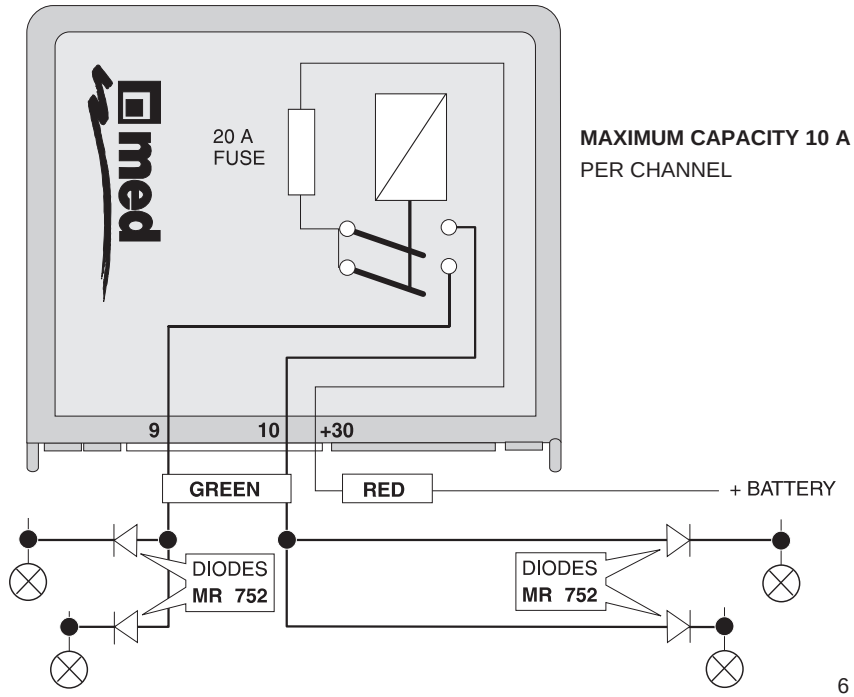
IMPORTANT:
The electronic keys and socket key supplied with the immobilizer will not be used.

NOTE: med immobilizers from the vehicle line are also available in the **"R"** version without electronic keys for specific use the **med** series **1000** and **2000** Central Units.

CONNECTION FOR VEHICLES WITH AMERICAN TYPE SYSTEMS WITH DIODES

4 way: front right-rear right
front left - rear left

B

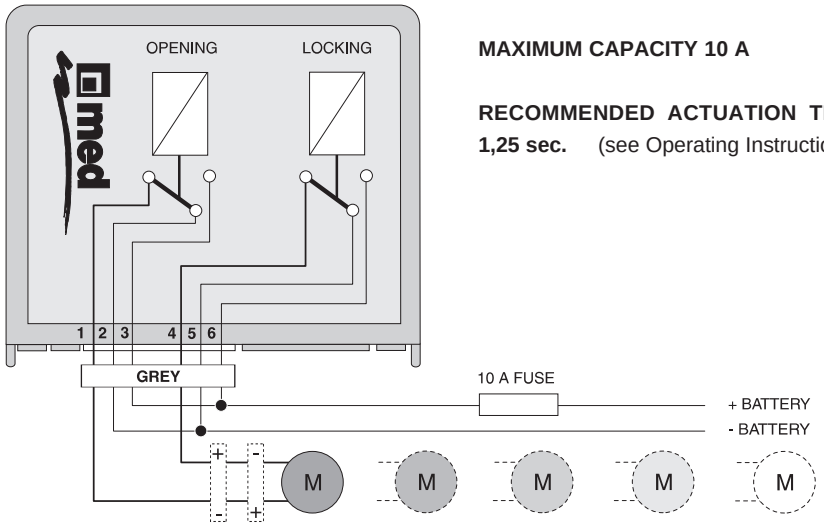


MAXIMUM CAPACITY 10 A
PER CHANNEL

CENTRAL LOCK REMOTE CONTROL

CONNECTIONS TO PILOT ONE OR MORE SUPPLEMENTARY ACTUATORS:

- For vehicles without central lock system for the doors. The Central Unit can pilot up to 5 additional actuators (max. permitted current: 10A).
- For vehicles without actuator in the driver's door. Use the lock on the passenger's side or the button inside the passenger compartment to find out if the lock on the driver's side is piloted.

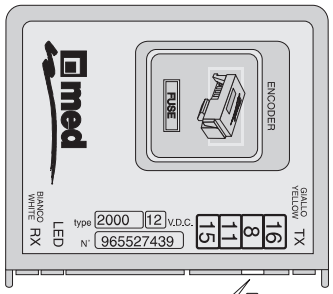


MAXIMUM CAPACITY 10 A

RECOMMENDED ACTUATION TIME: **1,25 sec.** (see Operating Instructions).

IMMOBILIZER PRIMARY PROTECTION

CONTINUED▶

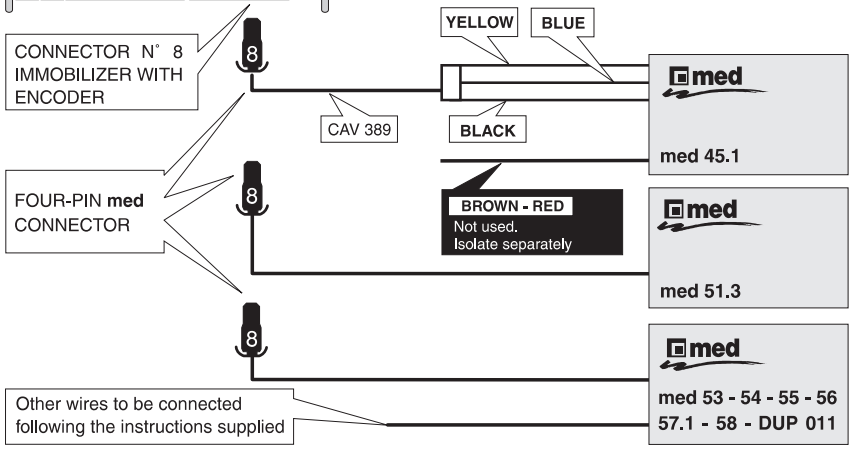


The Central Unit is preset to pilot all types of **med** 12 Volt immobilizers in the vehicle line:

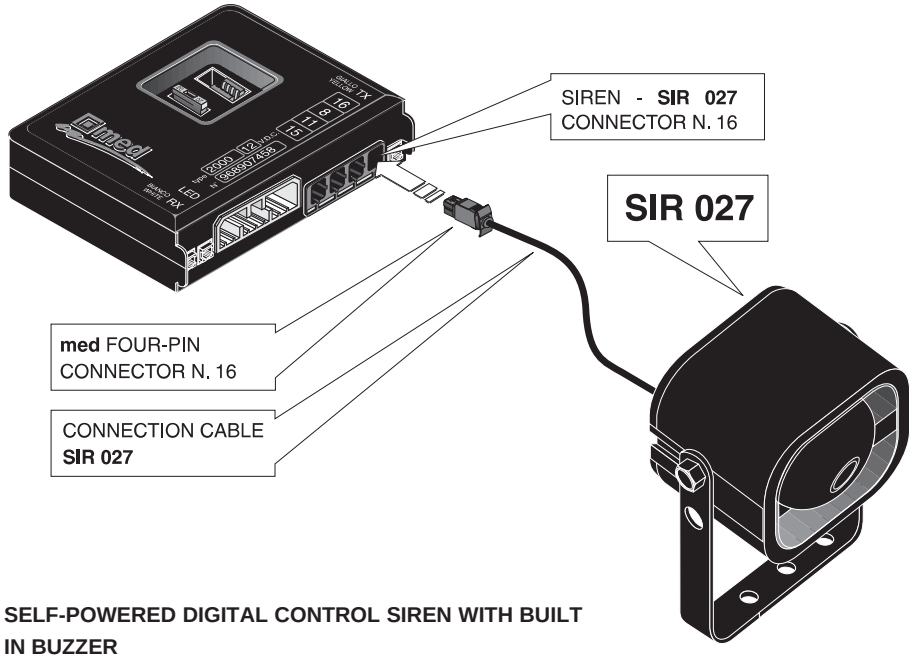
A. Version with ENCODER: **med 45** (+ **CAV 389** optional) **51** - **53** - **54** - **55** - **56** - **57.1** - **58** - **DUP 011**

B. med 30.1 version with DIGITAL command on the **"MUX"** line:

A. CONNECTION TO med IMMOBILIZER EQUIPPED WITH ENCODER.



CONNECTIONS TO THE SIR 027 SIREN



SELF-POWERED DIGITAL CONTROL SIREN WITH BUILT IN BUZZER

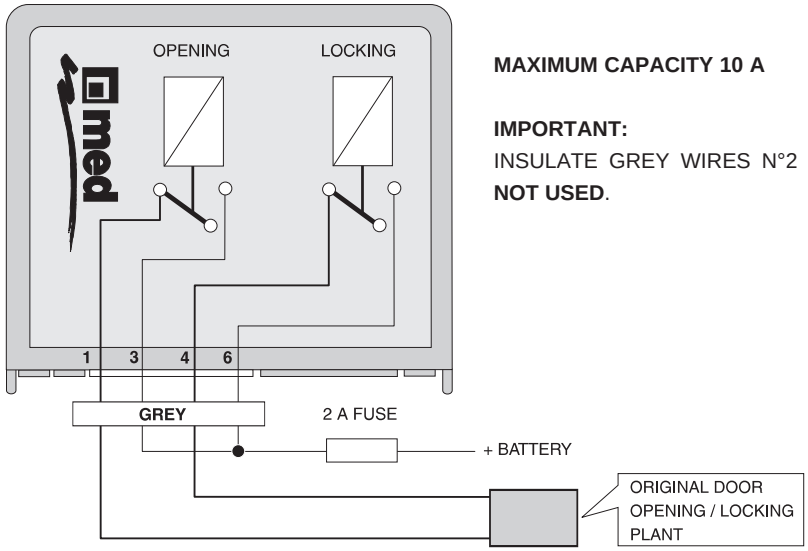
NOTE: Connect Siren connector n° **16** to the Central Unit only after the system has been tested for the first time.

CENTRAL LOCK REMOTE CONTROL

CONNECTIONS WITH POSITIVE CONTROLS:

- For vehicles already equipped with central lock system for the doors, piloted by POSITIVE commands.

NOTE: if the vehicle has a COMFORT system actuated by the same wire as the central lock, consult Operating Instructions in order to enter an adequate actuation time.



MAXIMUM CAPACITY 10 A

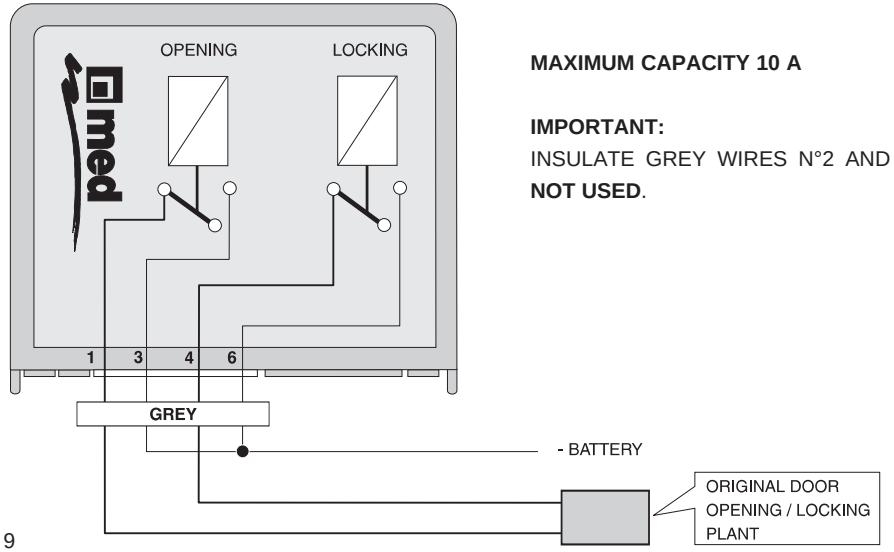
IMPORTANT:
INSULATE GREY WIRES N°2 AND 5 **NOT USED**.

CENTRAL LOCK REMOTE CONTROL

CONNECTIONS WITH NEGATIVE COMMANDS:

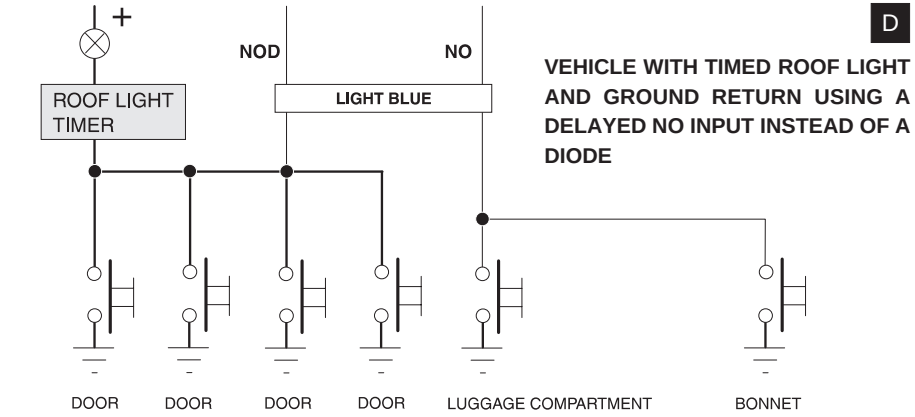
- For vehicles already equipped with central lock system for the doors, piloted by NEGATIVE commands.

NOTE: if the vehicle has a COMFORT system actuated by the same wire as the central lock, consult Operating Instructions in order to enter an adequate actuation time.



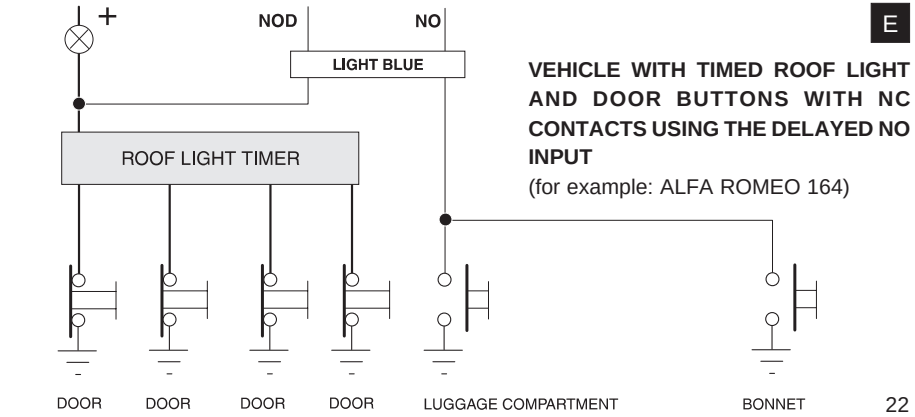
MAXIMUM CAPACITY 10 A

IMPORTANT:
INSULATE GREY WIRES N°2 AND 5 **NOT USED**.



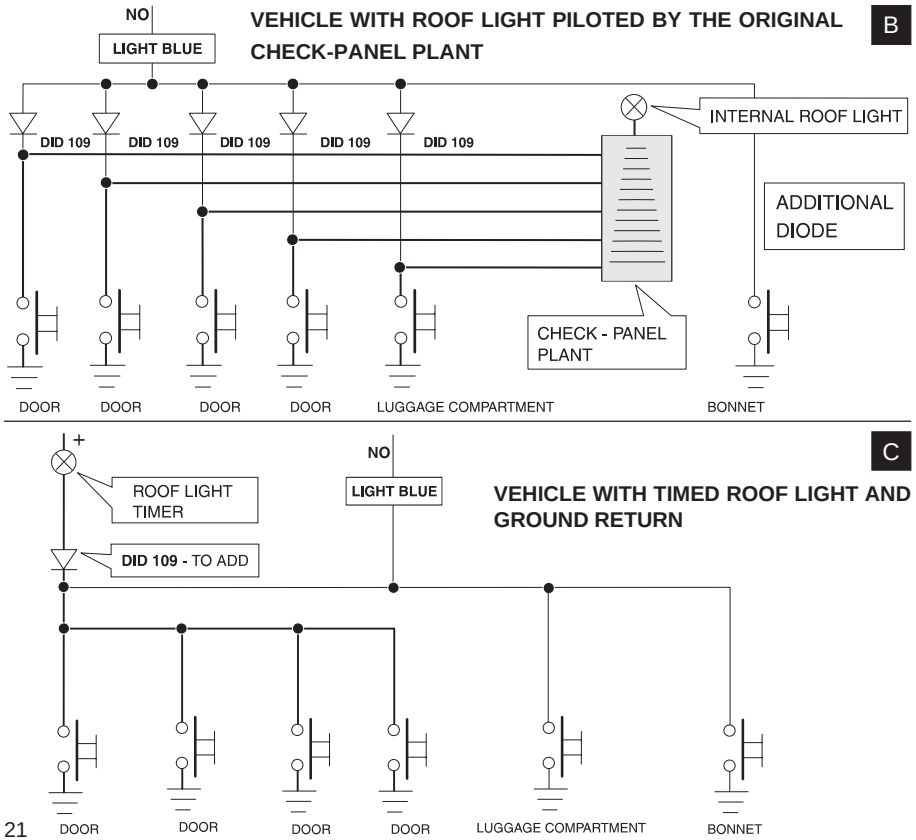
D

VEHICLE WITH TIMED ROOF LIGHT AND GROUND RETURN USING A DELAYED NO INPUT INSTEAD OF A DIODE



E

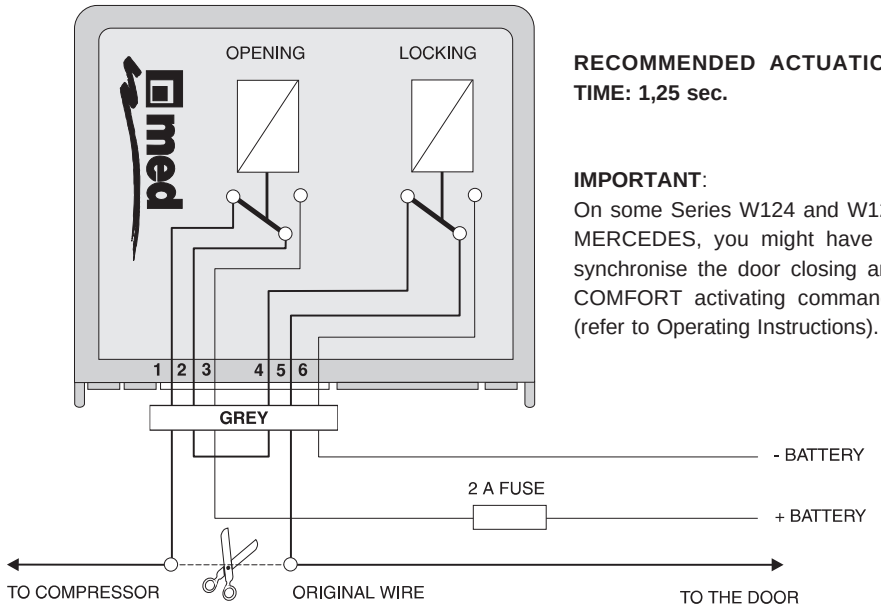
VEHICLE WITH TIMED ROOF LIGHT AND DOOR BUTTONS WITH NC CONTACTS USING THE DELAYED NO INPUT
(for example: ALFA ROMEO 164)



CENTRAL LOCK REMOTE CONTROL

CONNECTIONS FOR VEHICLES WITH COMPRESSOR (type AUDI 80 and MERCEDES series W 124 and W 129):

- For vehicles equipped with central lock system for the doors, with electro-air operated central unit piloted by POSITIVE pulses on opening and NEGATIVE during the locking phase.



RECOMMENDED ACTUATION TIME: 1,25 sec.

IMPORTANT:
On some Series W124 and W129 MERCEDES, you might have to synchronise the door closing and COMFORT activating commands (refer to Operating Instructions).

COMMAND FOR WINDOW WINDING COMFORT SYSTEM

CONTINUED▶

The **COMFORT** system is a function of the original system installed in numerous vehicles. It simultaneously closes the electric windows and roof from the door locks.

- For vehicles with extended POSITIVE or NEGATIVE commands via the central lock piloting wire, just connect the door opening and locking commands (pages 8/9), selecting the most suitable locking time from 10, 20 or 30 sec. (see Operating Instructions).

- For vehicles with extended POSITIVE or NEGATIVE commands to transmit via a COMFORT control wire separate from the one that pilots the central lock use one of the following layouts, selecting the most suitable COMFORT actuation time from 10, 20 or 30 sec. (see operating instructions).

- For vehicles with SPECIAL systems, comply with the instructions in the enclosed additional instructions, selecting the most suitable COMFORT actuation time from 10, 20 or 30 sec. (see operating instructions).

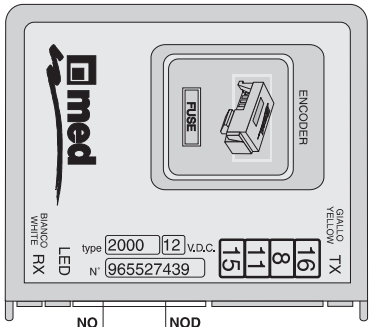
BUTTON CONNECTIONS

CONTINUED▶

The Central Unit has two inputs for NO (Normally Open) button connections towards GND. The only difference is how they are inserted into the circuit.

- **INSTANTANEOUS NO**: the input is immediately recognised by the Central Unit.
- **DELAYED NOD**: the input is recognised by the Central Unit after about 30 seconds.

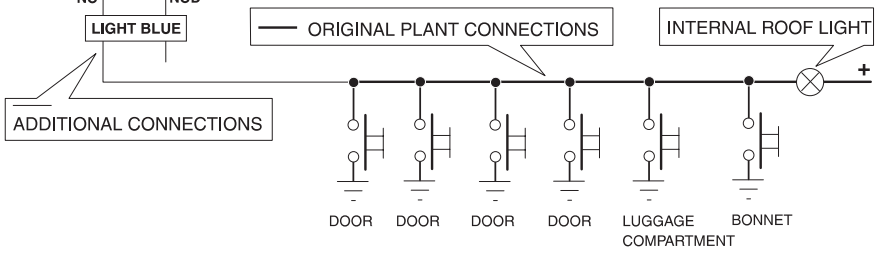
It is good standard operating practice to use the NO input that supplies the system arm refusal signal when a door is open (see Operating Instructions).



The delayed NO input should be used ONLY if there is a ceiling light with a delayed return to GND unless a diode (fig. **C**) is used or in special systems, such as the ALFA ROMEO 164, which has two NC buttons on the doors (fig. **E**).

NOTE: The buttons of doors, luggage compartment and bonnet, have to be **always** connected.

VEHICLE WITHOUT CHECK-PANEL AND WITH ROOF LIGHT AND NO GROUND RETURN **A**



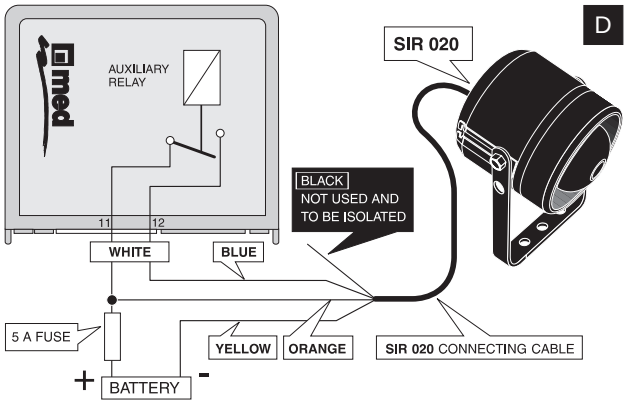
CONNECTING TO THE SIR 020 WITH A POSITIVE COMMAND

ALARM RELAY CONFIGURATION WITH AN INTERMITTENT OUTPUT

(see Operating Instructions)

MAX CAPACITY 10 A

D



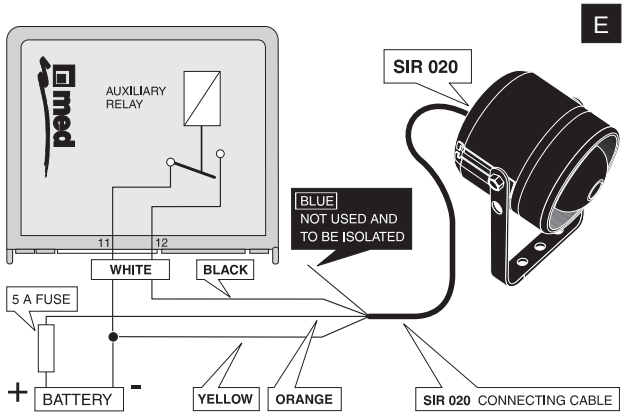
CONNECTING TO THE SIR 020 WITH A NEGATIVE COMMAND

ALARM RELAY CONFIGURATION WITH AN INTERMITTENT OR PERMANENT OUTPUT

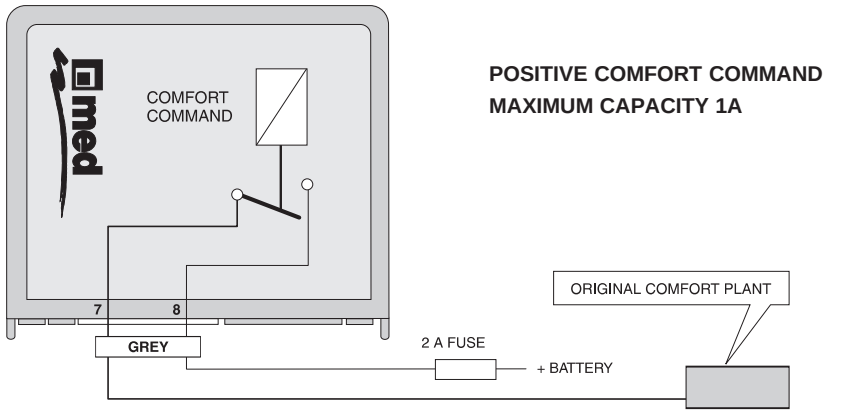
(see Operating Instructions)

MAX CAPACITY 10 A

E

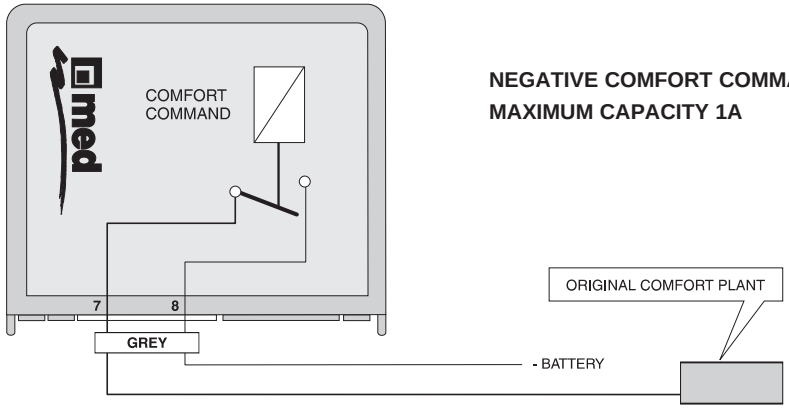


A



POSITIVE COMFORT COMMAND MAXIMUM CAPACITY 1A

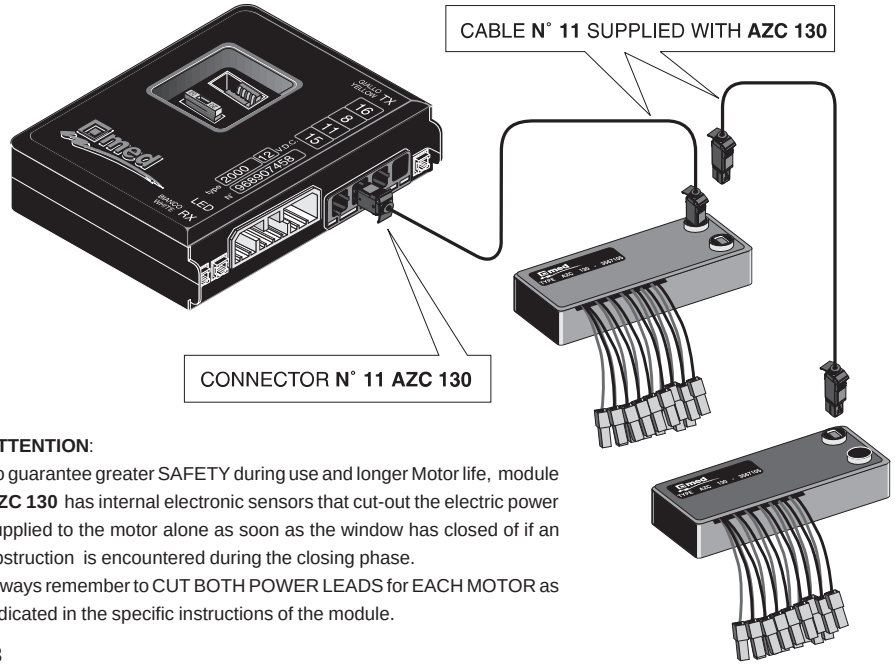
B



NEGATIVE COMFORT COMMAND MAXIMUM CAPACITY 1A

UNIVERSAL WINDOW WINDER CONNECTION

Connector **n° 11** for window winders is available on the Central Unit for vehicles with electric windows but without a COMFORT system. This can connect up to 2 universal **med AZC 130** modules in series.



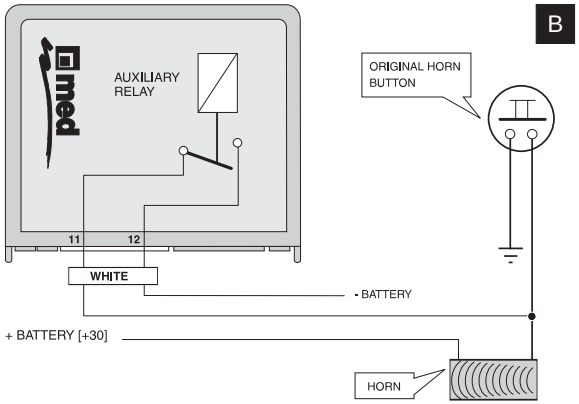
ATTENTION:
To guarantee greater SAFETY during use and longer Motor life, module **AZC 130** has internal electronic sensors that cut-out the electric power supplied to the motor alone as soon as the window has closed of if an obstruction is encountered during the closing phase.
Always remember to CUT BOTH POWER LEADS for EACH MOTOR as indicated in the specific instructions of the module.

CONNECTING TO ORIGINAL VEHICLE HORN WITH A NEGATIVE COMMAND

ALARM RELAY CONFIGURATION WITH INTERMITTENT OUTPUT
(see Operating Instructions)

MAX CAPACITY 10 A

B



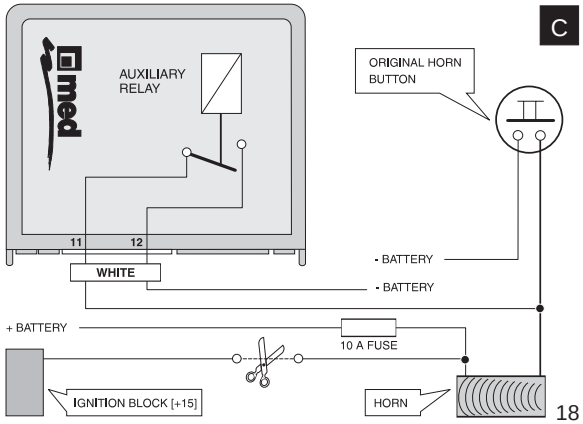
CONNECTING TO ORIGINAL VEHICLE HORN WITH A POSITIVE AND NEGATIVE COMMAND UNDER THE IGNITION KEY [+15].

ALARM RELAY CONFIGURATION WITH INTERMITTENT OUTPUT

(see Operating Instructions)
MAX CAPACITY 10 A

Connect the horn **[+15]** to a permanent **[+30]** output using a 10A fuse.

C



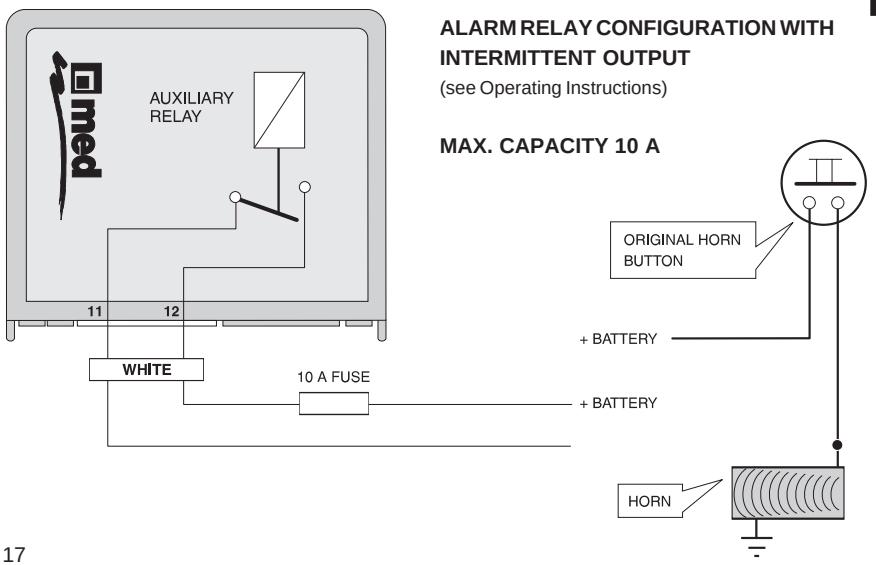
CONNECTING TO THE AUXILIARY AS AN ALARM RELAY

CONTINUED▶

When configured as an alarm relay, this output can directly pilot the original vehicle horn (INTERMITTENT command for the duration of the alarm cycle) or one or more additional **SIR 020** sirens (INTERMITTENT or PERMANENT command) - see Operating Instructions.
Use the requisite layout from the following possibilities:

CONNECTING TO ORIGINAL VEHICLE HORN WITH A POSITIVE COMMAND

A



ALARM RELAY CONFIGURATION WITH INTERMITTENT OUTPUT
(see Operating Instructions)

MAX. CAPACITY 10 A

AUXILIARY RELAY CONNECTIONS

The auxiliary relay has an NO (Normally Open) contact with a maximum capacity of 10A and two WHITE wires marked **11** and **12**. The output can supply the command with a POSITIVE or NEGATIVE polarity.

It can be programmed to carry out ONE OF THE TWO FOLLOWING PROGRAMS:

GREEN WIRE OUTPUT: *STANDARD setting*

This can pilot an additional NC (Normally Closed) contact with a rating of at least 30A such as, for example **BOSCH 0 332 204 125** to cut off the starting motor **[+50]** or any other circuit when the **med** immobilizer installed trips.

This connection, already pre-engineered or a number of med immobilizers such as the **med 56.1V**, the **med 58.0V** and the **med 58.5V** combines with the action of the **med** immobilizer to offer an additional electric shut down for immobilizer systems that do NOT have a GREEN WIRE such as, for example, the **med 30.1** and the **med 57.1** .

OUTPUT AS AN ALARM RELAY:

This output can be INTERMITTENT (*standard setting*) or PERMANENT for the entire alarm cycle depending on the programming used.

The INTERMITTENT OUTPUT is designed to pilot directly any TYPE OF ACOUSTIC ALARM SIGNAL DEVICE including the vehicle's original horn.

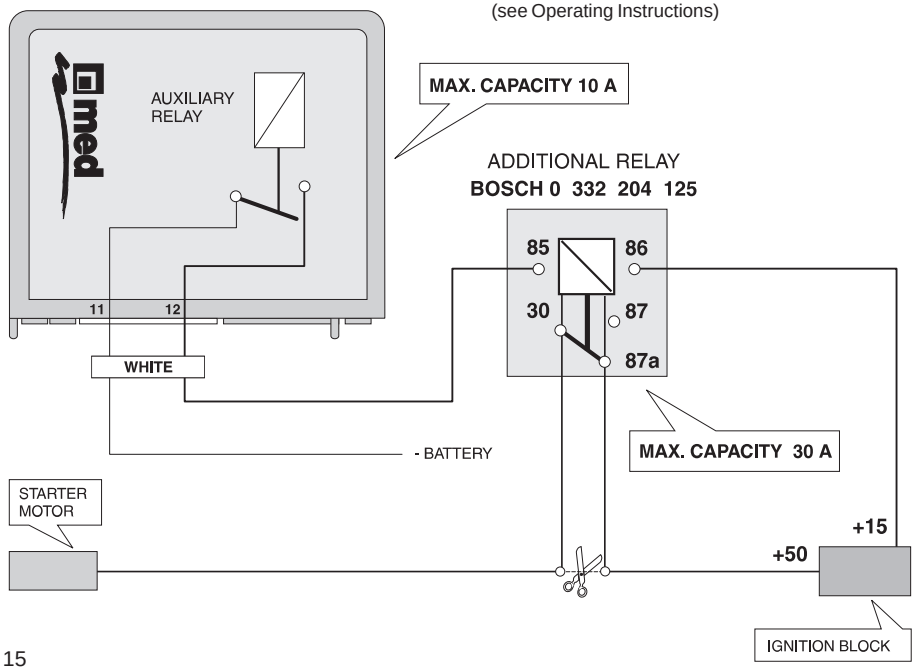
The PERMANENT OUTPUT is designed to pilot directly any TYPE OF ACOUSTIC ALARM SIGNAL DEVICE except the vehicle's original horn.

CONNECTING TO THE AUXILIARY RELAY FOR A GREEN WIRE OUTPUT

Connection to the **BOSCH 0 332 204 125** relay to cut off the **[+50]** on the starter motor:

GREEN WIRE OUTPUT CONFIGURATION

(see Operating Instructions)



CONNECTING TO THE AUXILIARY AS AN ALARM RELAY

Connection to the **BOSCH 0 332 204 125** relay to cut off POSITIVE **[+15]** power to original Central Unit (e.g. of injection pump on diesel vehicles with electronic control pump).

GREEN WIRE OUTPUT CONFIGURATION

(see Operating Instructions)