RAMAR DEVIL UNIT A0-2E

DESCRIPTION AND SPECIFICATION

In vehicle storage and security systems
Distributed in Europe by OPTIMX Ltd
+44(0)2081 233346

The RAMAR DEVIL is a vehicle anti-theft device that allows the engine to be left running safely, with the key removed from the ignition. Ideal for law enforcement and emergency services where the engine provides the primary source of power. The engine cuts out as soon as someone attempts to drive away without re-inserting the key in the ignition, e.g. when the handbrake is disengaged or the foot-brake is activated (or car "in gear" for automatic transmission).

A running engine keeps the battery charged and provides adequate power to lights (headlights, warning, blue and other scene lights), radios, air conditioning (can be left for dogs) and other ancillary equipment or electrical accessories.

The RAMAR DEVIL can be configured to operate with most vehicles in use today: cars, motorbikes, commercial vehicles or trucks/lorries used by the police, ambulance, emergency and breakdown assistance services.

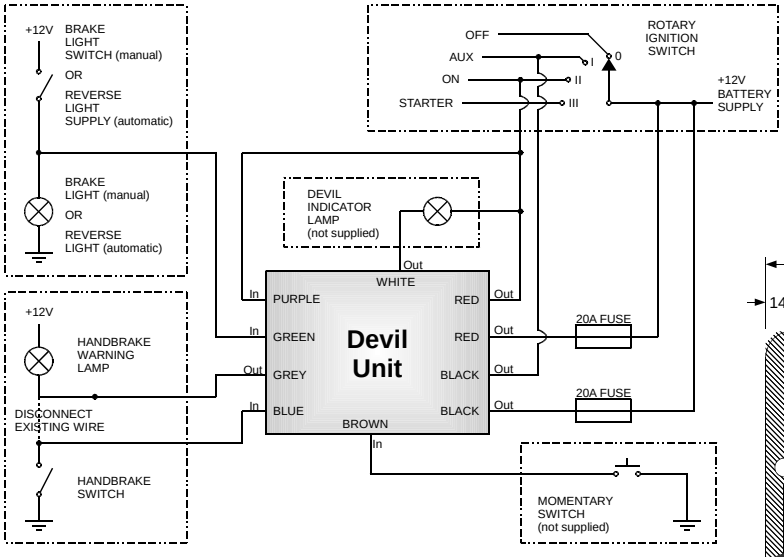
The RAMAR DEVIL has a long track record as a robust reliable cost effective way of ensuring vehicle security whilst in operation, simple yet effective. RAMAR also offer a bespoke service to configure the RAMAR DEVIL to match customer's requirements.

Compliance: The RAMAR DEVIL is approved for Emergency Vehicle Use by the Home Office VIDG, complies with directive 89/336/EEC and is 'E'-marked compliant to 95/54/EC.

This product must be used in accordance with the Highway Code and current legislation effective in your country relating to road vehicles.

NOTES :

- Fully encapsulated
- Simple installation
- Momentary "push-to-make" switch and optional runlock indicator lamp/LED not supplied: customer or vehicle specific
- End of line rig test: all units fully validated
- Generic wiring schematics guidelines, installation recommendations and functional validation instructions supplied
- Made in UK



OPERATION:

When the vehicle is stationary, in neutral/park gear, engine idling and handbrake applied, the DEVIL unit requires a +12V power supply to be operational.

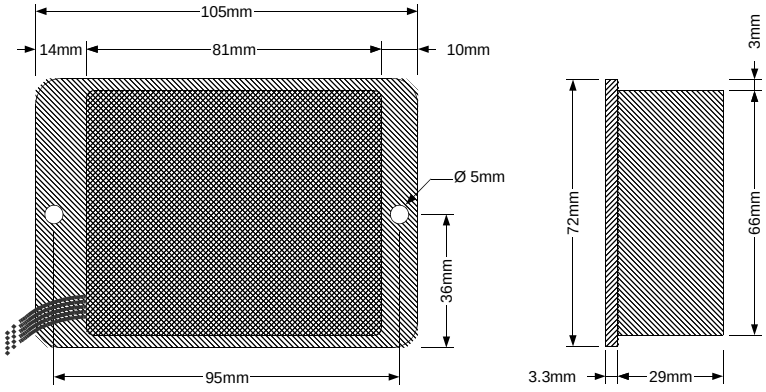
The device activation is carried out with a "push-to-make" switch, which creates a momentary connection to ground:

- the ignition by-pass is triggered;
- power is provided to an ancillary output; and
- the optional indicator lamp is switched on (or another ground connection is provided to drive an additional ancillary equipment).

The ignition key can be removed whilst the engine is left running.

The unit is switched off when the footbrake is applied, the handbrake is removed or its power supply is interrupted. One of these 3 inputs will deactivate the ignition by-pass and stall the engine.

OUTLINE DRAWING



3-YEAR MANUFACTURER WARRANTY:

The DEVIL unit is warranted to be free of defects of material or workmanship. Liability is limited to the replacement of the unit without charge if found to be defective in normal use within 36 months from the date of despatch.

Any unit returned under warranty must be agreed with OPTIMX Ltd beforehand, once an initial investigation has been made.

Condition for the warranty: All the labels on the unit must be intact as supplied when the unit is returned under warranty.

The manufacturer RAMAR Ltd or their distributor OPTIMX Ltd shall have no liability for damages of any kind to associated equipment arising from the installation and/or use of the DEVIL unit. The purchaser, by the acceptance of the device, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or their employees or others.

- **Voltage:** 12V DC operation (24V version also available)
- **Outputs:**
  - 2 separate 20A by-passes
  - 1 ground output, which can be used for an Indicator Lamp/LED, or to drive another 10A ancillary
- **Inputs:**
  - 2 battery +12V supplies (power supply to runlock and brake light switch)
  - 1 ground input (handbrake)
  - momentary switch input to ground
- **Dimension:** 105 x 72 x 32.3 mm^3
- **Weight:** 320gr
- **Temp range:** -30°C to 85°C

OPTIMX Storage Solutions & Security Systems

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GENERIC WIRING SCHEMATICS GUIDELINES

COLOUR Thickness	In / Out	ROLE	CONNECTION	OPERATION
PURPLE 0.5 mm	In	DEVIL Unit Supply	usually connected to the RED wire at the switched ignition supply.	- if ignition is ON: +12V @ PURPLE wire ⇒ the DEVIL unit can be activated. - if ignition is OFF: 0V @ PURPLE wire ⇒ the DEVIL unit cannot be activated.
BLUE 0.5 mm	In	Handbrake Switch	connect directly to the handbrake switch.	- if the handbrake is ON: 0V @ the BLUE wire ⇒ the by-pass stays latched. - if the handbrake is OFF: open circuit @ the BLUE wire ⇒ unlatches the by-pass.
GREY 0.5 mm	Out	Handbrake Warning Lamp	disconnect existing handbrake wire and connect to the GREY wire	- if the handbrake is ON: 0V @ the GREY wire ⇒ the handbrake warning light is ON. - if the handbrake is OFF: open circuit @ the GREY wire ⇒ the handbrake warning light is OFF.
BROWN 0.5 mm	In	DEVIL Unit Activation Switch	- connect to momentary switch. - connect the other side of the switch to GND.	Once the PURPLE wire is +12V and the BLUE wire is 0V, the DEVIL unit can be activated by connecting the BROWN wire momentarily to ground: the relays are latched. [This is an ON-switch only, it doesn't switch the DEVIL unit off.]
GREEN 0.5 mm	In	Brake Light Switch Reverse Light Switch	- Manual transmission: connect to the rear brake light switch. - Automatic gearbox: connect to the reverse light supply.	- if the brake pedal is OFF: 0V @ the GREEN wire ⇒ the by-pass stays latched. - if the brake pedal is ON: +12V is supplied to the wire ⇒ unlatches the by-pass. - if shift lever on 'Park': 0V @ the GREEN wire ⇒ the by-pass stays latched. - if shift lever move away from 'Park': +12V is momentarily supplied to the wire ⇒ unlatches the by-pass.
WHITE 0.5 mm	Out	DEVIL Unit Indicator Lamp or 2nd Ancillary Driver	- connect to runlock indicator lamp (this is -ve pin if a LED is used) - connect to the GND side of the ancillary.	This output is driven to ground when the unit is operating. Max current: 10A. Lamp/LED: indicator illuminates when ignition switch is by-passed. The other side of the lamp must be connected to +12V (this is +ve pin if a LED is used). Ancillary: is operating when ignition switch is by-passed. Its 12V supply must be provided separately.
RED 2x 2.5 mm	Out	Ignition By-Pass	connect one wire to the +12V vehicle supply and the other to the switched ignition supply	This by-pass stays ON as long as all the inputs are TRUE. Max current: 20A.
BLACK 2x 2.5 mm	Out	2nd Ignition By-Pass or Ancillary By-Pass	ditto RED wire for a secondary ignition supply; or connect across the auxiliary circuit supply and the +12V supply to the ignition switch.	This by-pass stays ON as long as all the inputs are TRUE. Max current: 20A.