



CARDIN ELETTRONICA spa

Via del lavoro, 73 – Z.I. Cimavilla 31013 Codognè (TV) Italy

Tel: +39/0438.404011

Fax: +39/0438.401831

email (Italy): Sales.office.it@cardin.it

email (Europe): Sales.office@cardin.it

Http: www.cardin.it

SERIAL NUMBER	SERIES	MODEL	DATE
ZVL239.02	CDR	851	16.09.2009
This product has been tried and tested in the manufacturer's laboratory, during the installation of the product follow the supplied indications carefully.			

MODULATED INFRARED BARRIER

REMARKS

These instructions are aimed at professionally qualified "installers of electrical equipment" and must respect the local standards and regulations in force.

The use and installation of these appliances must rigorously respect the indications supplied by the manufacturer and the safety standards and regulations in force.



Attention! Only for EU customers - WEEE marking.

This symbol indicates that once the products life-span has expired it must be disposed of separately from other rubbish.

The user is therefore obliged to either take the product to a suitable differential collection site for electronic and electrical goods or to send it back to the manufacturer if the intention is to replace it with

a new equivalent version of the same product.

Suitable differential collection, environmental friendly treatment and disposal contributes to avoiding negative effects on the ambient and consequently health as well as favouring the recycling of materials. Illicitly disposing of this product by the owner is punishable by law and will be dealt with according to the laws and standards of the individual member nation.

DESCRIPTION

Modulated infrared barrier consisting of a transmitter and a receiver. The equipment is housed in a shockproof and waterproof plastic casing. The lenses can be adjusted through **180°** horizontally and **plus or minus 30°** vertically. These adjustments permit lateral fitting and installations where the transmitter and receiver are at different heights (see detail e-d, fig.2)

USE

The infrared barrier constitutes an efficient safety system for the protection of passageways or spaces which are equipped with automatic door or gate systems. It is suitable for systems which have a passing room of not more than **60m**.

VERSIONS

CDR851: The package contains the components required for surface installations

- 1 Transmitter + 1 Receiver in a basic container
- 2 Glass enclosing covers for externally located photoelectric cells
- 2 Fast-fitting wall mounting brackets
- Set of screws and gaskets

KIT841VEI The package contains the components required for embedding

- 2 Embedding containers
- 2 Glass enclosing covers for embedded photoelectric cells
- Set of screws and gaskets
- 2 Galvanized metal hooks (for embedding installations on columns)

OPTIONAL ACCESSORIES

CDR841ABC Shock-proof plastic protection (for surface flush fitting)

TECHNICAL SPECIFICATIONS

- Infrared emission obtained through the use of a double emitter **GaAs** (Gallium Arsenide) diode with continuous modulation at **6,75 KHz**.
- Infrared emission wavelength: **950 nm**.
- Power supply: **12 - 24Vac/dc**.
- Command: double relay with serial exchange.
- Maximum commutable power of relay with resistive load:
28W in **dc/60VA** in **ac** - Max. voltage **40V ac/dc**
- Power consumption:
12V ac/dc, 45 mA for the receiver + **50 mA** for the transmitter
24V ac/dc, 50 mA for the receiver + **58 mA** for the transmitter
- Operating temperature: **-10...+55°C**.
- Red led indicating that the transmitter is receiving power.
- Red led (photocells out of alignment or the beam is interrupted) for the receiver.
- Test point (for fine tuning) on the receiver.
- Sensitivity regulation trimmer.
- Adjustable lens on self lubricating and self locking ball joint.
- Protection grade **IP55**.
- Range: **60 m** under all weather conditions such as thick fog, rain, dust etc.

INSTALLATION

Note: In cases where the installation consists of more than one device the following must be taken into account. Two receivers installed on the same side can be operated by one single transmitter on the opposite side without compromising the correct functioning of the system. If this situation occurs unintentionally (i.e. two receivers installed on one side and a transmitter, which has to operate only one of the

receivers, on the other side) then care must be taken to maintain the correct distance between the transmitters and the receivers (minimum **600m**). The transmitter and receiver are normally positioned frontally on the same geometrical axis and at the same height from the ground.

Surface mounted installation CDR851 (fig. 4)

- Installation is possible on all types of structure. Other than the standard aligned positioning the device can also be positioned both laterally (moving the device out of the passageway) and at different heights in order to solve problems posed by different structures (detail a-b-c-d, fig.2).
- Choose the points at which the devices are to be surface mounted, according to the requirements of the system.
- Work out the run of the cables from the structure to the point of connection.
- Fix the fast-fitting brackets at the chosen points (detail 1, fig. 4).
- Pass the connecting cables through the hole in the base of the case.
- Move the p.c.b. card slightly then wire up and connect the cables.
- Once the device has been wired up, snap the case to the fast-fitting bracket, remembering to place the waterproof seal between the case and the bracket. The joint between the case and the bracket is guaranteed to be waterproof (detail 2, fig. 4).
- Insert the sealing gasket into its seat on the case, carry out any eventual adjustments and then fit the glass enclosing cover into place (detail 5-6, fig. 4).
- If required fit the optional protective covering which is available on request (detail 7, fig. 4).

Embedded installation CDR851+KIT841VEI (fig. 5)

- Installation is possible on all types of structure.
- Choose the points at which the devices are to be surface mounted, according to the requirements of the system.
- Excavate the seat for embedding according to the dimensions of the case (detail 1, fig. 5).
- Work out the run of the cables from the structure to the point of connection.
- Pass the cables through the wall and fasten down.
- Pass the connecting cables through the hole in the base of the case.
- Move the p.c.b. card slightly then wire up and connect the cables.
- Once the device has been wired up, insert the base case into the embedding case and press the two together until the reference pins coincide with the corresponding holes (detail 1-2, fig.5).
- Insert the sealing gasket into its seat on the case, carry out any eventual adjustments and then fit the glass enclosing cover into place (detail 4-5, fig. 4).

ADJUSTMENT AND FINE TUNING

The appliance is fitted with a trimmer for sensitivity adjustment "A" fig. 6.

Note: The appliance is supplied with the sensitivity set to minimum.

A reduction in sensitivity is obtained by rotating the trimmer clockwise. An increase in sensitivity is obtained by rotating the trimmer anticlockwise. Normally an increased working distance requires greater sensitivity. Bear in mind that at reduced distances a high sensitivity level will delay the tripping of the relay. This could mean that a relatively small object travelling rapidly and crossing the beam may not activate the security relay. Therefore the sensitivity should be adjusted when centring the photo-electric cells and considering the following:

- The operating distance.
- The relay trip speed.
- The exact centring of the system.

CONNECTIONS AND CENTRING

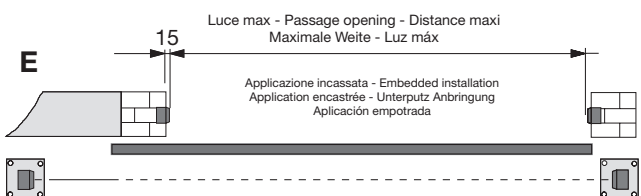
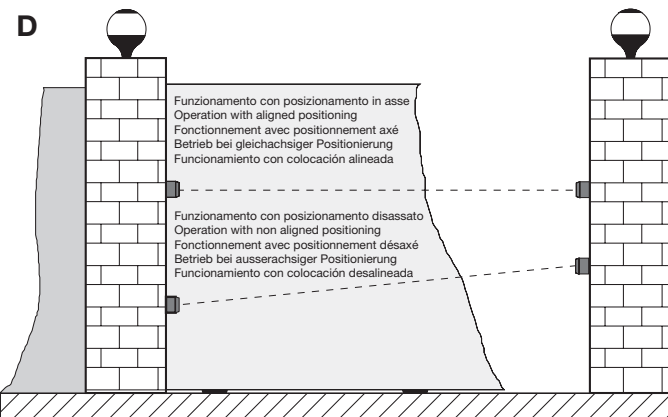
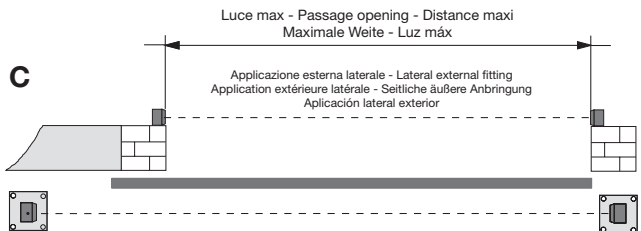
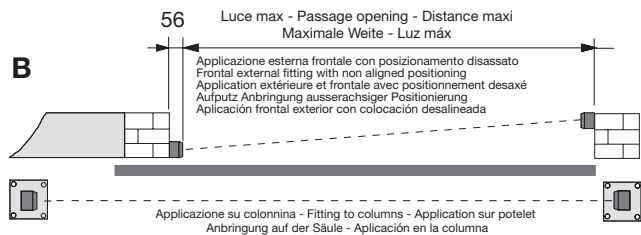
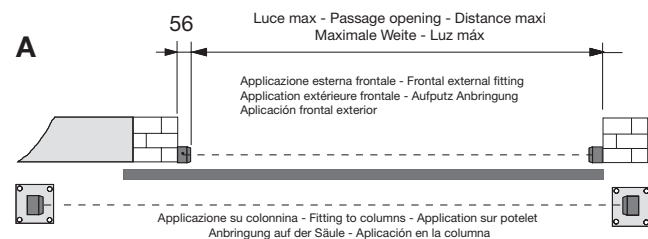
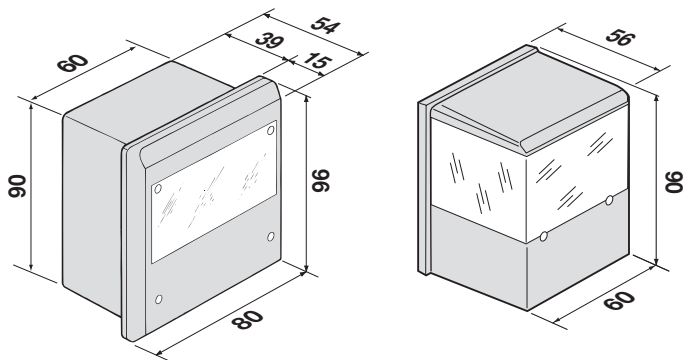
- Wire up the device according to the indications shown in fig.3. Remove the p.c.b. card slightly to facilitate this operation.
- Replace the p.c.b. card.
- Once the power has been turned on the following will occur:
the transmitter led will remain permanently lit and, if the receiver is not aligned, the receiver led will also be lit.
- The minimum cable cross section area for the transmitter/receiver = **0.2 mm²** (**AWG #24**)

Centring should be carried out as follows

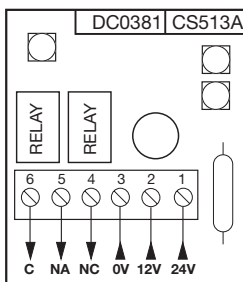
- 1) Place the probes over the test point (fig. 6) maintaining the correct polarity as indicated on the p.c.b. card (lowest setting **2 Vdc**).
- 2) Set the sensitivity adjustment trimmer to a level which registers minimum tension on the tester.
- 3) Orientate the lens so as to obtain the maximum signal deviation.
- 4) Compensate for the excess or lack of sensitivity by adjusting the trimmer until the maximum signal deviation falls between **1** and **- 1,5 Vdc**.

KIT841VEI

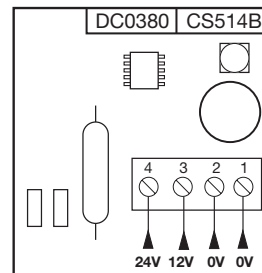
CDR851



Recevitore-Receiver
 Recepteur - Empfänger - Receptor

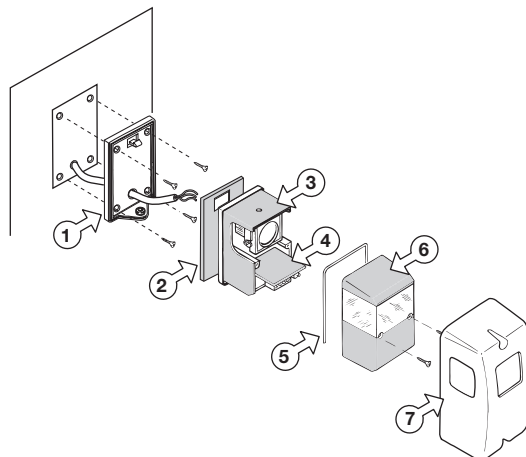


Proiettore-Projector
 Emetteur - Sender - Projector



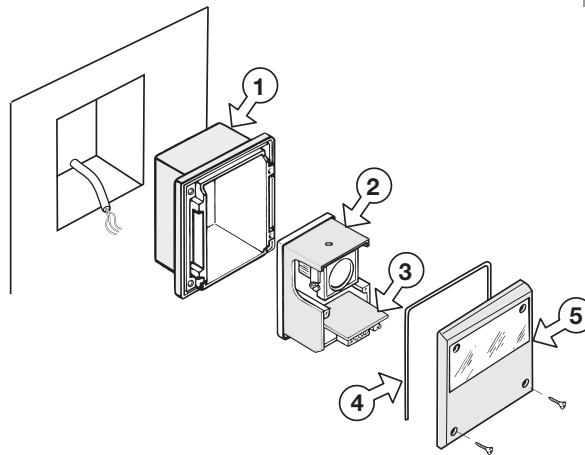
CDR851

Montaggio - Assembly - Montage - Montage - Montaje



CDR851+KIT841VEI

Montaggio - Assembly - Montage - Montage - Montaje



Centratatura - Centring - Centrage - Zentrierung - Centraje

