

### DATA SHEET

- 94 direct and cross beams
- External control box
- Supply voltage 230VAC (or 110VAC on order)
- Relay output, both N.O. and N.C. are available to user (changeover).
- LED diagnostics.
- Pluggable cables



### Description

The SAR94 is used to protect passengers in elevators equipped with automatic doors. This protection is achieved by 94 **DISCRETE INFRARED BEAMS**, which are transmitted and received between two edges. When one or more beams are obstructed the buzzer is activated and the relay is de-energised. The output relay is a one-changeover relay with N.O. and N.C. contacts both available to the user.

The major system components are a transmitting edge, "TX", a receiving edge, "RX", and a control box. The edges are mounted to the car doors or strike posts and the control box is mounted to the car top. Each edge is connected to the control box via a 4.5 m robotic grade cable. The system is fail-safe, i.e. the output relay will de-energise if either of the following occurs:

1. System power is lost.
2. Edge cable is damaged.



### Housing

Aluminium powder coated housings 10mm wide

### External Control Box

The SAR94C41 operates with a control box powered from mains 230VAC (or 110VAC on order) The external control box contains a transformer, a buzzer, a 5A one changeover relay, a beam cancellation enable/disable switch and a buzzer enable/disable switch  
Green LED (D3) indicates that power is applied  
Red LED (D2) indicates interruption of one or more beams

### Control box model C41

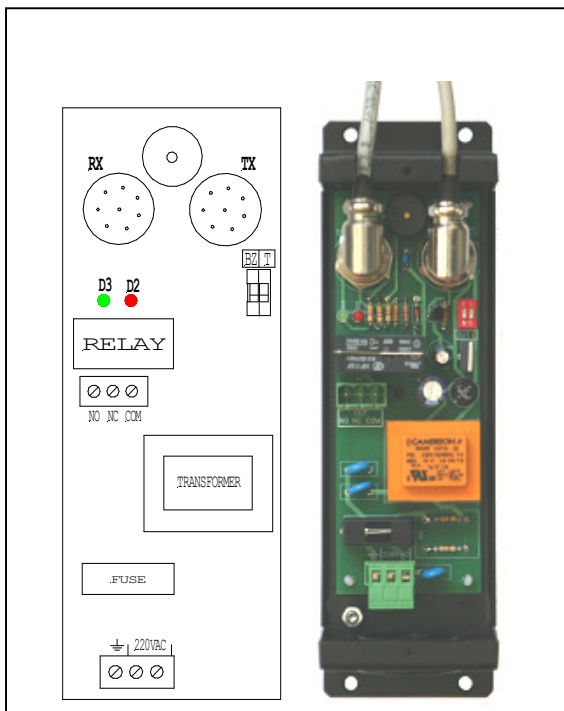


Fig. 5

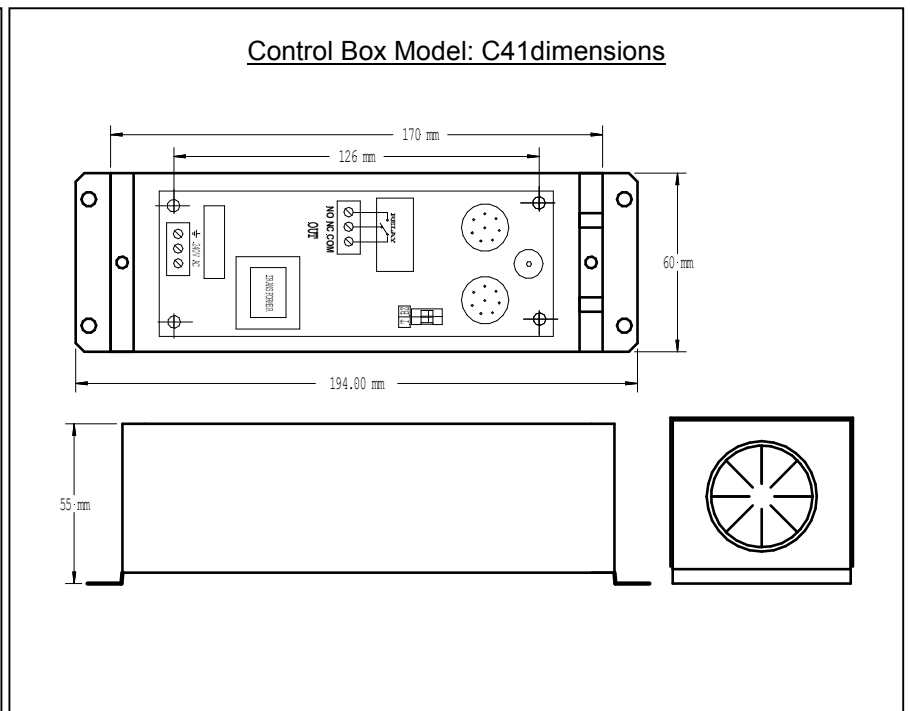
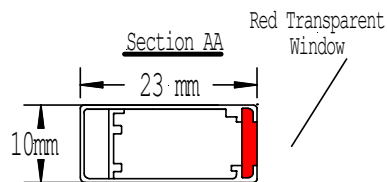
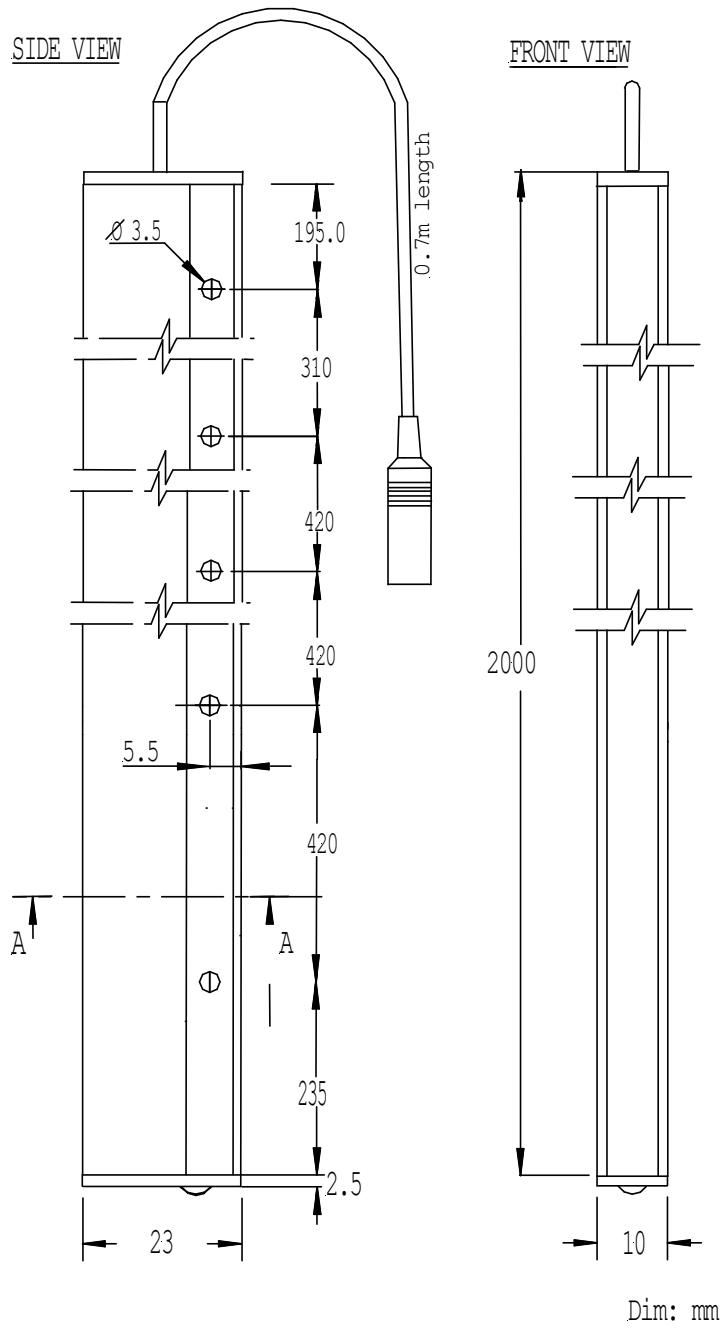
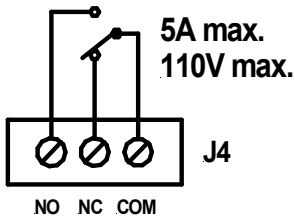


Fig. 6

**HOUSING**

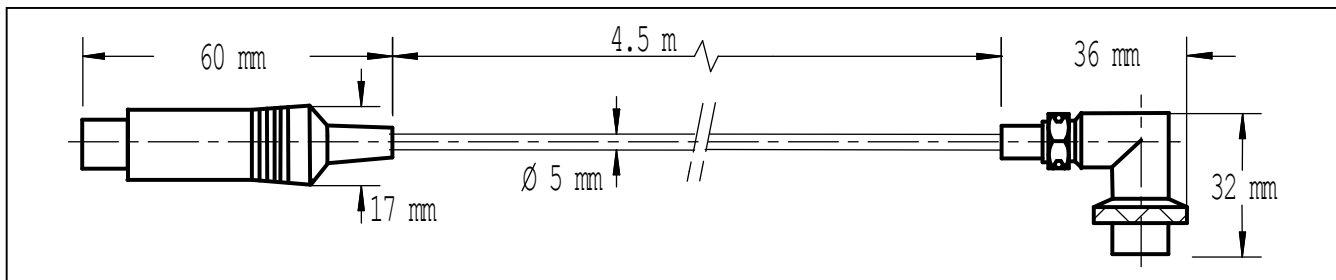


Dim: mm

**Output relay details**

Both N.O. and N.C. contacts are available to user.  
Each contact can handle 5 Amp. @ 110V, resistive load.

**ATTENTION!** If the output relay is driving a non resistive load some protection mean should be taken to protect contact ( varistor or diode or RC).

**Cable Details****Specifications**


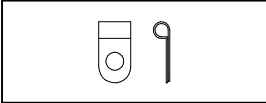
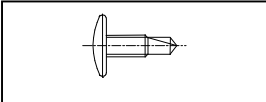
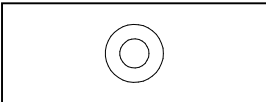
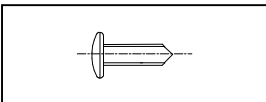
Supply Voltage	230VAC (110VAC on order)
Power Consumption	4VA max.
Output	Relay, dry contact, N.O. and N.C. 5A @ 110V, both contacts are available to user. The relay is energized during operation when no beam is interrupted.
Range	min.: 0m      max.: 4.5m
Edge height	2000mm      (78.75")
Highest beam height	1841mm      (65.4")
Lowest beam height	20 mm      (0.78")
Total no. of beams	94
No. of direct beams	17
Buzzer	On Edge buzzer activated after 10sec of interruption, plus a buzzer on the control box, enabled/disabled by a Dip switch.
Indicators	LED, to indicate that beam is obstructed.
Faulty beams cancellation	Automatic beam cancellation, after one minute of not responding. Flashing Red LED indication
Cable	Flexi, 4 x 0.35
Cable length	4.5m each      (14.76 ft)
Mounting arrangements	Five holes of 3.2mm diameter
Edge case material	Aluminium, black powder coated.
Packed weight	3 Kg      (6 Lbs)
Ambient temp.	-10° C to 50° C
Control box	Power coated steel box, IP 20
Edges sealing	IP 51
Ambient light	Full sunlight (40 Klux), full dark.
External text	Special input ("TEST") for testing unit by elevator computer.
Approvals	CE

**Faulty beam cancellation**

If the system senses an obstruction of one beam for a period of around one minute, it will designate the beam as faulty and cancel that beam, the system will continue to operate normally. Up to four non-adjacent beams can be canceled. When one or more beams are canceled the red LED on the RX edge is flashing to indicate the beam cancellation. If the system senses that a faulty beam is restored it will after one minute null out the cancellation and the beam will be back in operation.

**Note:** If the Red Led on the RX is flashing early replacement of the SAR94C41 is required

**Mounting Hardware**

Self-drilling screws 8x1" included in the set. Only for model SAR94 -S (slim housing).	10x	
P-clips: p-clips 3/16" (cable holders) .	6x	
Self-drilling, wide-headed screws.	6x	
Washers.	6x	
Sheet metal screws.	6x	

**Ordering information**

SAR94C41 -  110V  
 230V

**Example for ordering.**

Part No.	Description
SAR94C41 – 110V	SAR94C41, 110V control box
SAR94C41 – 230V	SAR94C41, 230V control box

**Limitations and warnings**

The SAR94C41 light curtains will not detect the followings objects:

- Transparent objects.
- Chains, ropes, ribbons and similar objects with a small cross-section.
- Small or thin objects.

**WARNING**

SAR94C41 light curtain is not a safety system and must not be used as such.  
SAR94C41 is not designed for personnel safety, and must not be used as a stand-alone personnel safety system.  
SAR94C41 light curtain is for elevator use only.

Talinor (UK) Ltd. Engineering reserves the right to change specifications without notice.

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